Consultants' Training Institute
5217 South State Street, Suite 400
Salt Lake City, Utah 84107
(801) 486-0600
E-mail: info@theCTI.com
Website: www.theCTI.com

Business Valuations:

Fundamentals, Techniques, and Theory

Co-Sponsored by:
National Association of Certified Valuators and Analysts
Institute of Business Appraisers

2015.v1

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Business Valuations: Fundamentals, Techniques and Theory

Contributing Authors

Mel Abraham
Marc Bello
Shelley Brown
Janae Castell
Brian Davidson
Rick Gray
Bob Grossman
Chris Hamilton
Mark Kucik
T.J. Liles-Tims
Derald Lyons
Pat Perzel
Jason Pierce
Garth Tebay
Frank Wisehart

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CTI
INSTRUCTOR/COURSE EVALUATION FORM

COURSE TITLE: BV: Fundamentals, Techniques & Theory—Monday ________ LOCATION: ________________________

INSTRUCTOR: ____

Your assistance will allow us to continue to provide you with the highest quality learning experience and to more closely satisfy your professional needs and expectations in the future. Thank you!

INSTRUCTOR	N/A	Poor	Fair	Good	Very Good	Excellent
How would you rate the instructor's overall presentation/teaching skills?	0	1	2	3	4	5
How would you rate the instructor's knowledge of the subject matter?	0	1	2	3	4	5
If applicable, were individual instructors effective?	0	1	2	3	4	5

COURSE	N/A	Poor		Fair		Good		Very Good		Excellent	
Were stated learning objectives met?	0	1	2	3	4	5	6	7	8	9	10
Were stated prerequisite requirements appropriate and sufficient?	0	1	2	3	4	5	6	7	8	9	10
Were program materials accurate?	0	1	2	3	4	5	6	7	8	9	10
Were program materials relevant and did they contribute to the achievement of the learning objectives?	0	1	2	3	4	5	6	7	8	9	10
Was the time allotted to each learning activity appropriate?	0	1	2	3	4	5	6	7	8	9	10
Were the handouts or advance preparation materials satisfactory?	0	1	2	3	4	5	6	7	8	9	10

Comments: ____

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____

Would you recommend this course to your colleagues and/or other professionals? ❑ Yes ❑ No

If no, explain why? ____

____

In what other ways could this course be improved or made more valuable to you? ____________________

____

Which aspect(s) of this course did you enjoy / value the most? ______________________________

____

Rate your experience in this field. ❑ None ❑ Nominal ❑ Modest ❑ Seasoned ❑ Extensive

What can we do in the future to assist you in your career/professional development? ____________________

____

May we use your comments? ❑ Yes ❑ No If yes, please provide your member number ________________

We are unable to use your comments without knowing who you are.

CTI
INSTRUCTOR/COURSE EVALUATION FORM

COURSE TITLE: BV: Fundamentals, Techniques & Theory—Tuesday________ LOCATION: ________________________

INSTRUCTOR: ____

Your assistance will allow us to continue to provide you with the highest quality learning experience and to more closely satisfy your professional needs and expectations in the future. Thank you!

INSTRUCTOR	N/A	Poor	Fair	Good	Very Good	Excellent
How would you rate the instructor's overall presentation/teaching skills?	0	1	2	3	4	5
How would you rate the instructor's knowledge of the subject matter?	0	1	2	3	4	5
If applicable, were individual instructors effective?	0	1	2	3	4	5

COURSE	N/A	Poor		Fair		Good		Very Good		Excellent	
Were stated learning objectives met?	0	1	2	3	4	5	6	7	8	9	10
Were stated prerequisite requirements appropriate and sufficient?	0	1	2	3	4	5	6	7	8	9	10
Were program materials accurate?	0	1	2	3	4	5	6	7	8	9	10
Were program materials relevant and did they contribute to the achievement of the learning objectives?	0	1	2	3	4	5	6	7	8	9	10
Was the time allotted to each learning activity appropriate?	0	1	2	3	4	5	6	7	8	9	10
Were the handouts or advance preparation materials satisfactory?	0	1	2	3	4	5	6	7	8	9	10

Comments: ____

____

____

Would you recommend this course to your colleagues and/or other professionals? ❑ Yes ❑ No

If no, explain why? ____

____

In what other ways could this course be improved or made more valuable to you? ____________________

____

Which aspect(s) of this course did you enjoy / value the most? ______________________________

____

Rate your experience in this field. ❑ None ❑ Nominal ❑ Modest ❑ Seasoned ❑ Extensive

What can we do in the future to assist you in your career/professional development? ____________________

____

May we use your comments? ❑ Yes ❑ No If yes, please provide your member number ________________
We are unable to use your comments without knowing who you are.

CTI
On-Site Support Evaluation Form

CTI ON-SITE REPRESENTATIVE______________________________DATE:____________________

LOCATION:____

Your assistance will allow us to continue to provide you with the highest quality learning experience and to more closely satisfy your professional needs and expectations in the future. Thank you.

	N/A	Poor	Fair	Good	Very Good	Excellent
Representative's availability (at sign-in table each morning, at breaks, at CTI sponsored lunches, at class end):	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
Attitude and professionalism:	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
Ability to respond adequately to questions/concerns (including follow-up if research was required):	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
Daily introductory comments and explanations:	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
Ability of CTI representative to interface with hotel personnel on room set-up/amenities/problems:	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
To what degree did the training location meet with your overall expectations:	0	1	2	3	4	5

COMMENTS: ____

____

	N/A	Poor	Fair	Good	Very Good	Excellent
To what degree were the software preview(s) useful:	0	1	2	3	4	5

COMMENTS: ____

____

May we use your comments? ❑ Yes ❑ No
If yes….Name______________________ NACVA/IBA #:____________________

CHAPTER ONE

INTRODUCTION TO BUSINESS VALUATION

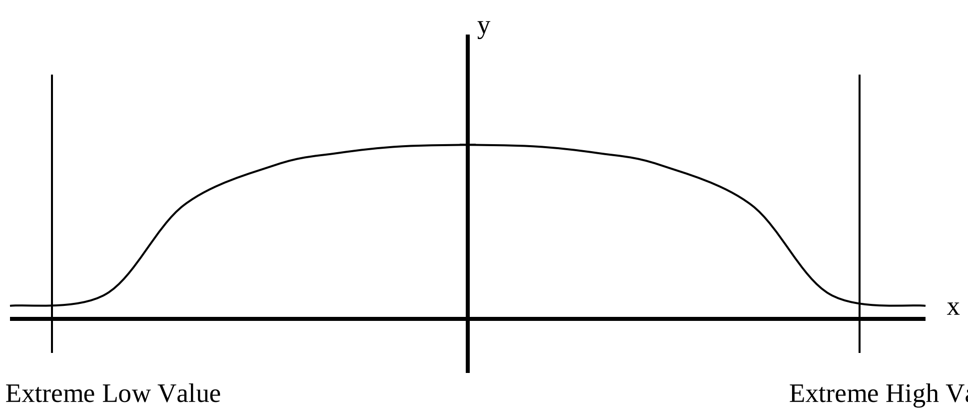
"Everybody is ignorant, only on different subjects."
Will Rogers (1879–1935)
American Philosopher, Author

I. EVOLUTION OF BUSINESS VALUATION

"How much is this business interest worth?" This question is not one that is easily answered. The answer depends on 1) economic factors (these can be local, regional, national, and international); 2) the premise and standard of value selected; 3) appropriate valuation method applied; and, 4) interest being valued, to name just a few factors. In this course, all of the above factors are discussed in detail.

Historically, the valuation of a closely held company was more of an art than a science; there was some guidance provided by the IRS and minimal reporting standards. Accordingly, many in the business valuation profession served as advocates for the client, rather than as an expert (or advocate for the conclusion of value). The growth and diversity within the valuation profession, improvement in software, growing sophistication of the judiciary[1] and availability of data through the Internet has transformed the profession and practice. There is now less guesswork and more scrutiny.

If the value of a company were determined by a sample of inexperienced or unqualified valuation professionals, the distribution of Conclusions of Value (terms defined in NACVA's Professional Standards) can be illustrated by the following bell curve. This bell curve depicts a wide range of values demonstrating valuation as more of an art than science:



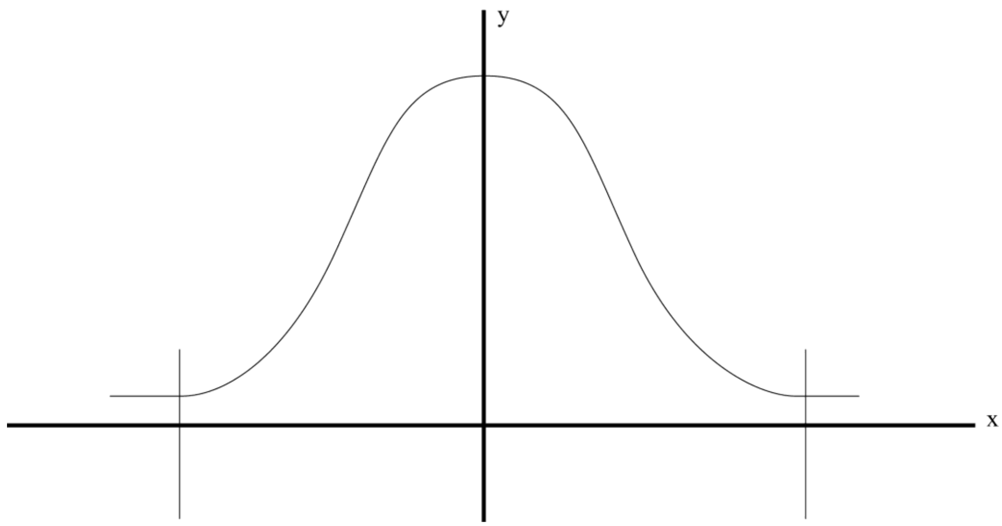
[1] See *Daubert et. ux. v. Merrell Dow Pharmaceuticals, Inc*., 509 U.S. 579 (1992) (Court held that the Federal Rules of Evidence, not Frye, provide the standard for admitting expert scientific testimony in a federal trial; nothing in the rules gives any indication that "general acceptance" is a necessary precondition to the admissibility of scientific evidence. The trial judge has the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand) and *Kumho Tire C. v. Carmichael*, 526 U.S. 137 (1999) (Daubert standard applies to scientific, technical or other specialized knowledge; Rule 702 imposes a special obligation upon the trial judge to ensure testimony is relevant and reliable; reliability assessed by considering if methodology has been tested, subject to peer review, has error rates, and/or is "acceptable" in the relevant scientific or technical community). A summary of both cases is included in Appendix One.

The distribution of values, obtained from a sample of experienced valuation professionals, illustrates two important things:

- The curve is relatively flat, indicating a broad range of opinions of values
- The range or spread between the highest and lowest conclusion of value would be relatively large

A vast difference in values is considered detrimental to the credibility of professionals involved in business valuation activities. Consequently, valuation analysts must attempt to explain the difference between their different conclusions of value (the term conclusion of value is an important term defined in NACVA's Professional Standard 2.1). One of the primary purposes in this course is to place more emphasis on the science of performing valuations of closely held companies. That said this does not mean the course is intended to teach a prescribed format or preferred methodology.

As valuation theory and practice evolve, one expects the bell curve to evolve and appear as follows:



This illustration reflects a situation where the various "conclusions of value" are more similar and the range between the highest and lowest value is smaller.

NOTE: During the first two or three days of this program you may find studying this topic more than a little frustrating compared to other financial disciplines with which you've been involved. We urge you to remain patient. As the program is fully laid out you'll begin to see the "big picture" of the topic.

Observation

Business valuation is not for the faint at heart!

II. REGULATORY BODIES

Business valuation practice and theory have evolved significantly in the last decade, but many believe this field is still in its relative infancy. Valuation theory in the areas of intellectual property, venture capital, and limited partnerships is still emerging. A strong theoretical foundation is essential in any field, and the valuation professional can look to the following professional and regulatory bodies for guidance.

A. INTERNAL REVENUE SERVICE (IRS)

1. Catalyst in the Development of Standards

The Internal Revenue Service has substantially contributed to valuation theory and is regarded by many as a primary theoretician in the field of valuation of closely held businesses. The IRS has issued numerous rulings and pronouncements on this subject, and in 2002 the IRS issued new Business Valuation Guidelines, which were updated in 2006 (see Appendix III).

Revenue Rulings do not have the force of law, but they do present the position of the IRS on specific tax matters, such as the valuation of businesses or equity interests. Beginning in the 1920's, the IRS published Appeals and Revenue Memorandum 34 (ARM 34, see Appendix III) in response to the Eighteenth Amendment, which enacted Prohibition laws. The purpose of ARM 34 was to establish guidelines and methodologies for determining the amount of loss sustained by a taxpayer as the result of the new laws on Prohibition. Since then, many positions taken by the IRS in Revenue Rulings were rooted in legal disputes. The resolution of these disputes by the courts has established case law precedent.

Some of the most important Revenue Rulings (RR) related to business valuations are:

a) RR 59–60 Valuing Closely held Stock
b) RR 68–609 Formula Method
c) RR 83–120 Valuation of Preferred Stock
d) RR 93–12 Allowance of Minority Interest Discount in Family Owned Business

Any discussion of valuation theory must include an analysis of IRS pronouncements to understand some basic regulatory premises. IRS pronouncements began with the issuance of ARM 34 in 1920 and continue to the present day.

Observation

The Internal Revenue Service (IRS) was and remains an important body in the development and transformation of valuation theory.

Rev. Ruling 59- 60 is among the most important and often cited revenue rulings; participants are urged to read and understand this revenue ruling.

In this section the evolution of business valuation theory, as developed in various Revenue Rulings, is introduced.

IRS pronouncements are discussed in the following text as they relate to business valuation theory. It is extremely important for the valuation analyst to become knowledgeable of the relevant issues in these pronouncements. It is highly recommended that you take the time to study these pronouncements carefully (copies of the following IRS pronouncements are provided in Appendix III of this manual).

a) 1920—ARM 34 (See Appendix III)

(1) Issued in 1920
(2) Resulted from the enactment of Prohibition
(3) Issued as the result of the enactment of Prohibition, to assist taxpayers in determining the amount of "intangible value" lost by businesses previously involved in the alcoholic beverage industry

Methods prior to ARM 34

Very few owners of businesses understood that their businesses might have had intangible value; therefore, many businesses were sold and transferred at tangible asset values only.

ARM 34 introduced two key concepts:

(1) Goodwill exists if a business has excess earnings
(2) Goodwill value is determined by capitalizing the excess earnings

ARM 34 also introduced two key problems:

(1) What are excess earnings?

ARM 34 says that "excess earnings" are the earnings of the company in excess of earnings above the norm of companies with similar activities and size.

(2) What is an appropriate capitalization rate?

ARM 34 failed to define an appropriate capitalization rate. However, it gave approximate ranges for tangible and intangible assets. A discussion of these rates will be presented in Chapter 5.

b) 1959—Revenue Ruling 59–60 (See Appendix III)

(1) Issued in 1959
(2) Regarded as the single most important piece of valuation literature
(3) Outlined methods and factors to be used in valuing closely held businesses
(4) Involved itself with Estate and Gift Taxes
(5) Is widely accepted for tax and non–tax purposes

(6) Provided for a series of valuation formulas or methods

(a) The various formulas are not alternatives to one another; all of its methods should at least be considered
(b) Many formulas are tied to "earnings" rather than "excess earnings"
(c) Earnings are multiplied or capitalized by certain industry factors or "public" company comparable factors

(7) Realized that due to certain circumstances other methods could be used
(8) Recognized that if "comparable" factors are not available, other methods could be used
(9) The key 59–60 methods are:

(a) Comparable price methods (just a few of the many)

i) Price/earnings ratio
ii) Dividend paying capacity
iii) Price/book value

(b) Asset method
(c) Income method
(d) Combined method

(10) Refer to Revenue Ruling 59–60, Section 7, Average of Factors, which states:

"Because valuations cannot be made on the basis of a prescribed formula, there is no means whereby the various applicable factors in a particular case can be assigned mathematical weights in deriving the fair market value. For this reason, no useful purpose is served by taking an average of several factors (e.g., book value, capitalized earnings and capitalized dividends) and basing the valuation on the result. Such a process excludes active consideration of other pertinent factors, and the end result cannot be supported by a realistic application of the significant facts in the case except by mere chance."

c) 1965—Revenue Ruling 65–193 (See Appendix III)

(1) Modified Revenue Ruling 59–60
(2) Deleted a portion of Section 4.02(f) of Revenue Ruling 59–60
(3) Concerned with separately valuing tangible and intangible property. Section 4.02(f) of Revenue Ruling 59–60 states that:

"In some instances it may not be possible to make a separate appraisal of the tangible and intangible assets of the business. The enterprise has a value as an entity. Whatever intangible value there is, which is supported by the facts, may be measured by the amount by which the appraised value of the tangible assets exceeds the net book value of such assets."

d) 1966—Revenue Procedure 66–49 (See Appendix III)

(1) Issued January 1, 1966
(2) Provided information and guidelines relative to appraisals of contributed property for federal income tax purposes
(3) Required properly prepared appraisals by qualified individuals
(4) Provided guidelines regarding proper appraisal reports

e) 1968—Revenue Ruling 68–609 (See Appendix III)

Sometimes referred to as the "excess earnings method" or "treasury method", this Ruling introduced a "formula" method to determine values for intangibles, specifically goodwill. Revenue Ruling 68-609 required that adjusted net assets be considered in deriving the total value of a business and discussed the possible use of the following ranges of capitalization rates (generally assumed to be after-tax):

(1)	Tangible Assets	8% to 10%
(2)	Intangible Assets	15% to 20%

f) 1977—Revenue Ruling 77–287 (See Appendix III)

(1) Issued in 1977
(2) Amplified Revenue Ruling 59–60 relative to discounts for lack of marketability
(3) Specifically recognized criteria for determining discounts for lack of marketability
(4) Provided direction on discounts for publicly traded securities restricted under federal securities laws

g) 1981—Revenue Ruling 81–253 (See Appendix III)

(1) Issued in 1981
(2) Added to Revenue Ruling 59–60
(3) Stated that:

> *"Absent family discord, no minority interest discount will be available for blocks of stock transferred to family members when the family as a group owns a controlling interest in the company."*

(4) Superseded by Revenue Ruling 93–12

h) 1983—Revenue Ruling 83–120 (See Appendix III)

(1) Issued in 1983
(2) Amplified Revenue Ruling 59–60
(3) Contained guidelines for valuing preferred stock
(4) Specified factors to be considered on valuing common and preferred stock for gift and other tax purposes in a recapitalization of a closely held business

i) 1993—Revenue Ruling 93–12 (See Appendix III)

(1) Issued in 1993
(2) Superseded Revenue Ruling 81–253
(3) Stated that:

> *"A minority discount will not be disallowed solely because a transferred interest, when aggregated with interests held by family members, would be a part of a controlling interest."*

j) 1998—Revenue Procedure 98–34 (See Appendix III)

(1) Issued in 1998
(2) Sets forth a methodology to value certain compensatory stock options
(3) Followed similar approach, as does FASB 123

k) Internal Revenue Code §2703

IRC Code §2703 states for estate, gift and other tax purposes, the value of any property is determined without regard to any right or restriction relating to the property. Key issues for a valuation analyst to be aware of:

(1) An exception exists for any option, agreement right or restriction which, (a) is a bona fide business arrangement, (b) is not a device to transfer property for less than its fair market value, (c) is comparable to similar arm's length arrangements, and (d) these safe harbors must be independently satisfied.
(2) The mere showing that a right or restriction is a bona fide business arrangement is not sufficient to establish the absence of a device.
(3) Each right or restriction must be tested separately.
(4) A right or restriction is considered to meet the three 'safe harbor' requirements if more than 50 percent of the applicable property is owned by individuals who are not members of the transferor's family.
(5) Property owned by non–family members must be subject to the same rights or restrictions.

For more information of these and other Rulings, see Appendix III.

B. UNITED STATES DEPARTMENT OF LABOR (DOL)

The Department of Labor issues regulations specifically pertaining to business valuations for Employee Stock Ownership Plans (ESOPs). Similar to IRS Revenue Rulings, DOL regulations do not have the force of law. Instead, the regulations represent the DOL's stance as it relates to certain issues.

The United States Department of Labor (DOL) issues regulations that are unique to Employee Stock Ownership Plan (ESOP) valuations. These regulations are not included or tested in this course, since the topic is considered advanced.

Observation

The Financial Accounting Standards Board (FASB) is another body that impacts the valuation profession, along with the International Accounting Standards Board (IASB).

C. U.S. SECURITIES AND EXCHANGE COMMISSION (SEC)

The U.S. Securities and Exchange Commission (SEC) has statutory authority to establish financial accounting and reporting standards for publicly held companies under the Securities Exchange Act of 1934. Throughout its history, however, the Commission's policy has been to rely on the private sector for this function to the extent that the private sector demonstrates ability to fulfill the responsibility in the public interest. In addition to the authority to establish standards, the SEC is responsible for enforcing requirements for key participants in capital markets within its jurisdiction. The SEC provides an overview of its history and current role in a brief publication available on its website:[2]

> When the stock market crashed in October 1929, public confidence in the markets plummeted...Congress held hearings to identify the problems and search for solutions. Based on the findings in these hearings, Congress—during the peak year of the Depression—passed the Securities Act of 1933. This law, together with the Securities Exchange Act of 1934, which created the SEC, was designed to restore investor confidence in our capital markets by providing investors and the markets with more reliable information and clear rules of honest dealing. The main purposes of these laws can be reduced to two common-sense notions:
>
> - Companies publicly offering securities for investment dollars must tell the public the truth about their businesses, the securities they are selling, and the risks involved in investing.
> - People who sell and trade securities—brokers, dealers, and exchanges—must treat investors fairly and honestly, putting investors' interests first…
>
> Though it is the primary overseer and regulator of the U.S. securities markets, the SEC works closely with many other institutions, including Congress, other federal departments and agencies, the self-regulatory organizations (e.g. the stock exchanges), state securities regulators, and various private sector organizations. In particular, the Chairman of the SEC, together with the Chairman of the Federal Reserve, the Secretary of the Treasury, and the Chairman of the Commodity Futures Trading Commission, serves as a member of the President's Working Group on Financial Markets.

[2] "The Investor's Advocate: How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital Formation." http://www.sec.gov/about/whatwedo.shtml

D. FINANCIAL ACCOUNTING STANDARDS BOARD (FASB)

The Financial Accounting Standards Board (FASB) is the designated organization for establishing standards of financial accounting and the preparation of financial reports for non-governmental entities. The FASB is a private sector, self-regulated organization, but the standards set forth by FASB are officially recognized as authoritative by the Securities Exchange Commission (SEC) and the American Institute of Certified Public Accountants (AICPA). FASB replaced the AICPA's former authoritative body, the Accounting Principles Board (APB), in 1973. Prior to the change, the APB had issued APB Opinion No. 16, Business Combinations, and APB Opinion No. 17, Intangible Assets (August 1970). FASB officially weighed into the valuation field in June 2001, with the issuance of Statement of Financial Accounting Standards (SFAS) No. 141, Business Combinations, and SFAS No. 142, Goodwill and Other Intangible Assets—which replaced the APB Opinions. SFAS 157, Fair Value Measurements, became effective for financial statements issued for fiscal years beginning after November 15, 2007.

In 2008, FASB reorganized its pronouncements into the Accounting Standards Codification ("ASC" or "Codification").[3] The ASC is the source of authoritative generally accepted accounting principles (GAAP) recognized by the FASB to be applied by nongovernmental entities. It is effective for interim and annual periods ending after September 15, 2009. Rules and interpretative releases of the Securities and Exchange Commission (SEC) under authority of federal securities laws are also sources of authoritative GAAP for SEC registrants.

ASC 350, Intangibles—Goodwill and Other, superseded SFAS 142 and "provides guidance on financial accounting and reporting related to goodwill and other intangibles, other than the accounting at acquisition for goodwill and other intangibles acquired in a business combination or an acquisition by a not-for-profit entity."

ASC 805, Business Combinations, superseded SFAS 141R and "provides guidance on the accounting and reporting for transactions that represent business combinations to be accounted for under the acquisition method." The required use of the acquisition method was a shift from SFAS 141R's prescribed "purchase method."

ASC 820, Fair Value Measurement, superseded SFAS 157, and "defines fair value," "sets out in a single Topic a framework for measuring fair value," and "requires disclosures about fair value measurements."

These topics will be discussed further in the Fair Value Study Guide.

E. INTERNATIONAL ACCOUNTING STANDARDS BOARD (IASB)

Like FASB, the International Accounting Standards Board (IASB) is a private sector, self-regulated standard-setting body. IASB is the independent standard-setting body of the IFRS Foundation. The IFRS Foundation is an independent, not-for-profit organization, whose "primary mission is to develop, in the public interest, a single set of high quality, understandable, enforceable and globally accepted International Financial Reporting Standards (IFRS) based upon clearly articulated principles." The Trustees of the IFRS Foundation undertake governance and oversight over the IASB and are monitored by a board (The

[3] January 2008 was the initial release of the Codification, which was available during an extended verification period.

Monitoring Board) composed of public authorities, including representatives from the SEC, the Japan Financial Services Agency, the European Commission, and the International Organization of Securities Commissions (IOSCO).[4] The IFRS Advisory Council is the formal advisory board to the IASB and the Trustees of the IFRS Foundation.

In 2002, Paul Volcker, the first chairman of the Foundation's trustees, addressed the World Congress of Accountants: "I do not think it reasonable today, if it ever was, to take the position that U.S. GAAP should, de facto, be the standards for the entire world. Rather, the International Accounting Standards Board, whose oversight trustees I chair, is now working closely with national standard setters throughout the world to develop common solutions to the accounting challenges of the day. The aim is to find a consensus on clearly defined principles."

The objective of initial memorandum of understanding between FASB & IASB (the "Norwalk Agreement") was to make the existing financial reporting standards of the two entities "fully compatible," which was understood to mean that compliance with U.S. GAAP would result in compliance with IFRS & vice versa, though it was not intended that the standards would be identical. The Norwalk Agreement has been praised by global financial leaders as an important step on the path toward a single set of global accounting standards; nevertheless, some convergence projects remain incomplete or have been discontinued due to an inability of the boards to agree.

Convergence projects that relate to valuation issues have had mixed success. Business Combinations (ASC 805 and IFRS 3) have been largely converged, though Combinations of Entities Under Common Control have not been converged (Pooling of Interests for U.S. GAAP remains). IASB issued IFRS 13, which was basically a verbatim equivalent to FASB's Fair Value Measurement (SFAS 157, now ASC 820). In 2007, the IASB and FASB decided not to address convergence of reporting standards for Intangible Assets (including goodwill). Joint work on Impairment has been discontinued.

III. PROFESSIONAL ORGANIZATIONS

Observation

NACVA, ASA, IBA, and AICPA are other accredited bodies impacting professional and ethical standards for business valuation.

One other accrediting organization in North America is the Canadian Institute of Chartered Business Valuators (CICBV). While it, too, has impacted the valuation profession, it is not discussed here.

A. THE NATIONAL ASSOCIATION OF CERTIFIED VALUATORS AND ANALYSTS (NACVA)

In 1990, the idea to establish an association to support the needs of CPAs and other business professionals in their pursuit to provide business and intangible asset valuation and litigation consulting services was conceived. The idea and dream to have such an association came at the suggestion of numerous professionals throughout the country, who, while attending business valuation seminars offered by the subsequent founders of the National Association of Certified

[4] The chairman of the Basel Committee on Banking Supervision serves as an observer on the Monitoring Board.

Valuators and Analysts (NACVA®), took the time to express their thoughts and pledge their support to an effort such as NACVA. Since then, NACVA has garnered the loyal support of thousands of valuators in building the Association and expanding its reach.

NACVA's membership of approximately 6,000 professionals is comprised of CPAs and other valuation and consulting professionals, all of whom are pursuing business valuation, litigation forensics consulting, and various other types of related services serving the legal and business communities. Of the total membership, about 80% have obtained the Certified Valuation Analyst® (CVA®), Master Analyst in Financial Forensics™ (MAFF™), or Accredited in Business Appraisal Review™ (ABAR™) designations. You will find our membership comprises some of the most intelligent, dynamic, and innovative people in the professional financial/accounting community. NACVA's members are an elite group of people. As you learn about NACVA, you will discover we have taken many steps to bring together our wealth of resources in order to facilitate the networking of knowledge and theory in the fields of valuation, litigation, fraud deterrence, and related disciplines.

Thousands of organizations and individuals throughout the USA and other parts of the world have an interest in our professional expertise. We are a substantial group of professionals all with unique expertise, who, by and large, are the most qualified group in the country to serve the needs of the users of business and intangible asset valuation services and financial forensic services, including damages determinations of all kinds and fraud detection and prevention services. NACVA's members are all very well educated; most are experienced in accounting, tax, and financial analysis; and all certified members are required to obtain at least 36 hours of Continuing Professional Education (CPE) every three years. The integrity of the Association is furthered by NACVA's rigorous certification programs which require a complete understanding of the process. We believe our valuation, litigation, and fraud certification programs are the country's most objective for specialists in these areas because they emphasize a solid and broad base of knowledge which a professional can build.

NACVA is a progressive organization. The Association consciously pursues goals to attain and disseminate knowledge, develop better theory, increase public awareness of the profession, encourages strategic alliances within the accounting, legal, and business communities, and expands benefits and services to members. NACVA is the premier organization of professionals representing the dominant force in the valuation, litigation forensics and fraud consulting communities.

NACVA's mission is to provide resources to members and enhance their status, credentials, and esteem in the field of performing valuations and other related advisory services. To further this purpose, NACVA will advance those services as an art and science, establish standards for admission to the Association, provide professional education and research, foster practice development, advance standards of ethical and professional practice, enhance public awareness of the Association and its members, and promote working relationships with other professional organizations.

To achieve these purposes, NACVA carries out numerous activities, including but not limited to the following:

1. Advancement, communication, and enforcement of standards of ethical and professional practice
2. Development and presentation of quality educational and training programs

3. Certification of practitioners on the basis of professional competence, ethics, independence, and objectivity. This includes the establishment of criteria for certification as a Certified Valuation Analyst (CVA), Master Analyst in Financial Forensics (MAFF), and Accredited in Business Appraisal Review (ABAR).
4. Fostering public awareness that a credentialed member has met and continues to abide by standards of ethical conduct, objectivity, and independence and performs his or her services at the highest level of professional competence
5. Promoting and enhancing collegial and professional relationships among members of the Association and among the Association and other professional organizations

B. THE INSTITUTE BUSINESS OF APPRAISERS (IBA)

The Institute of Business Appraisers (IBA) is the oldest and most prestigious professional association devoted solely to the appraisal of closely-held businesses. Established in 1978, IBA is the pioneer in business appraisal education, professional accreditation, and development of the market data necessary for making sound appraisal decisions. The IBA Market Database, with more than 33,000 comparables, is free to IBA members. Since 1978, IBA has been instrumental in promoting the advancement of the careers and practices of business appraisers throughout the world.

IBA’s mission is to provide the highest quality of service to our members by assisting them in a journey to professional excellence. Our goal is to provide a supportive and nurturing environment for each member through our resources, including technical support, market data, professional certification, and practical education in all aspects of appraisal of small and mid-size businesses. In fulfilling this mission, IBA Headquarters staff is assisted by the generosity of the many volunteers who provide professional mentoring, report review, instruction, and technical publications for the enhancement of the profession.

To help us meet the professional needs of our members, IBA has established the following goals:

- To increase awareness of business appraisal as a specialized profession
- To ensure that the services of qualified, ethical appraisers are available
- To expand the knowledge regarding the theory and practice of business appraisal
- To develop and provide information, programs, and services for members
- To impact national policy and law affecting the business appraisal community

IBA’s professional accreditation program is one of the most important components of our professional development curriculum. Members who meet established criteria may attain the following designation:

1. Certified Business Appraiser (CBA)

This designation denotes a level of competence attained only by the most accomplished business appraisers, and grants its recipients special recognition and prestige among fellow appraisers, the courts, and throughout the business appraisal community.

In order to maintain the high standards of this credential, accredited members are required to obtain at least 36 hours of Continuing Professional Education (CPE) every three years.

IV. OVERVIEW OF THE BUSINESS VALUATION INDUSTRY

In the first decade of the 21st century, certain key factors will continue to fuel the need for valuations of closely held companies.

A. HISTORY

The valuation of closely held businesses first became a formal issue during the 1920s when the Eighteenth Amendment instituting Prohibition was enacted. Businesses involved in the alcoholic beverage industry were forced to close and found it necessary to value their businesses in order to determine the extent of their losses. ARM 34 discussed earlier was issued to assist in valuing these businesses. Since the 1920s, closely held businesses have been valued for a variety of reasons, resulting in the creation of the consulting service niche in which today's professionals play a pivotal role.

B. ECONOMIC INSTABILITY

During a recessing economy, companies of all sizes react by laying off personnel. Historically, these layoffs have involved only blue–collar workers. Past recessions have affected both blue–collar and white–collar employees. In prior years, companies such as IBM Microsoft and Boeing, once thought of as companies that could provide unquestioned employment security, have had to lay off employees. Many employees near retirement are often encouraged to leave early with golden parachutes or similar incentives. However, other employees became victims of downsizing, which was especially true at the turn of the 21st century.

Many of these individuals consider the possibility of starting their own businesses or purchasing an entire or partial interest in an existing business. Those considering a purchase of an existing business generally require a valuation of that business. Unstable economic conditions have also caused many companies to reassess their long-term objectives and strategic direction.

During the 1980s there were mergers and acquisitions of many larger companies. In the 1990s, and now currently, small- to medium-sized companies entered the M&A arena. Companies consider merging with or acquiring another company in order to:

1. Help ensure economic stability in a recessing economy through overhead sharing
2. Maintain or increase market share
3. Establish strategic alliances for growth and diversification

Presently, acquiring companies often require valuations of each company associated with the proposed combination or purchase. In addition, economic instability has resulted in increased numbers of bankruptcies. Tax and other regulations related to these bankruptcies frequently necessitate a business valuation.

C. AGE DEMOGRAPHICS

During the next 10 to 20 years, the so–called baby boomers will be retiring. In America, the 55 to 64 age group is expected to rise from 29 million in 2004 to 40 million in 2014. That is because of the explosion of births during the prosperous postwar period between 1946 and 1964. These retiring parents, who represent the wealthiest generation in history and whose major assets frequently consist of interests in closely held businesses, will need assistance with their succession planning. Succession planning entails transferring their businesses in the following ways:

1. Gift the business to their heirs
2. Sell the business to their heirs
3. Sell the business to third parties
4. Establish a charitable trust
5. Establish an ESOP
6. Issue options to key employees

Regardless of the alternative selected, a valuation is usually necessary.

D. LITIGATION ENGAGEMENTS

It has been said that ours is a litigious society; it is. When finances become strained, there is more pressure on relationships, which often leads to dissolution or a break-up amongst key employees, resulting in the need for a valuation.

1. Valuations are often required in situations involving:

   a) Partner disputes
   b) Dissenting shareholder actions
   c) Fairness opinions
   d) Divorces[5]

2. Valuations are also often necessary in situations that may involve litigation[6] related to the establishment of an economic loss involved in the following types of cases:

   a) Wrongful death
   b) Wrongful injury
   c) Wrongful loss of property
   d) Patent infringement

E. TAX PLANNING

Tax planning is associated with rights/restrictions of ownership interests in non–traditional legal entities.

1. Family Limited Partnerships and Family Limited Liability Companies
2. Limited Liability Companies

[5] The Consultant's Training Institute (CTI) offers an in-depth matrimonial workshop; the workshop is ideally suited to valuation analysts that are either new to the profession or have less than five years of work experience in the matrimonial "niche".
[6] The CTI also offers courses to practitioners interested in the areas mentioned hereunder. The training provided through the MAFF is suited to practitioners that provide "litigation support" (or forensic economic) services with a focus on commercial damages, and to a lesser extent personal damages, which arise in employment litigation, wrongful death and/or personal injury matters.

F. FINANCIAL REPORTING

Relatively new but important changes in financial reporting are also increasing the demand for business valuations. For example, Financial Accounting Standard No. 142 requires that goodwill be tested for impairment at least annually. In order to test goodwill for impairment, it is necessary to estimate the Fair Value of the acquired company or business unit.

V. PURPOSES OF VALUATIONS

A. PURPOSES FOR VALUING BUSINESS

Before valuing a company, one must know the purpose of the valuation. There are four basic purposes for valuing a business; tax, litigation, transaction and regulatory. The purpose of the valuation will affect the assumptions and methodologies used to determine value. There are many reasons to have a closely held business valued, including:

1. Mergers and acquisitions
2. Sales and divestitures
3. Buy/sell agreements
4. Fairness opinions
5. Shareholder transactions
6. Capital infusions
7. Employee Stock Ownership Plans (ESOPs)
8. Employee benefit plans
9. Expert testimony/litigation support
10. Estate planning and taxation
11. Gift taxes
12. Solvency opinions
13. Insolvency opinions
14. Collateral valuations
15. Purchase price allocations
16. GAAP valuations under FAS 141 and/or FAS 142
17. Charitable contributions
18. Determination of net operating loss in bankruptcy
19. Determination of liquidation value in bankruptcy
20. S Corporation Elections—calculation of built-in gain per asset
21. Banks—loan applications
22. Eminent domain proceedings
23. Marital dissolution

Some of the common reasons for valuations are expanded in the following paragraphs.

1. Mergers, Acquisitions and Sales

Whenever a company merges with another company, is acquired by another company, or sold, a valuation is necessary. In a merger situation, a professional may be asked to establish an "exchange value" of the companies involved. The valuator may be engaged to establish the value for either or both of the companies. In a sale or divestiture of a company or of an interest in a company, the seller may engage a professional's services to establish a range of values of the business that will assist the seller in negotiating a sales price.

Conversely, a person or company may engage a professional to perform a valuation of a company they want to acquire. When businesses are acquired, they are often acquired for a flat or lump-sum amount. For accounting and tax reasons, the lump-sum purchase price must be allocated among the various classes of tangible and intangible assets of the business.

a) IRC Code §338

Under Code §338 (see Appendix III), a corporation, which acquires a controlling interest in another corporation may elect to treat the stock purchase as an asset purchase. It, therefore, is not a valuation method per se, but a procedure for allocating the lump-sum purchase price among various classes of assets. The seven classes of assets and their descriptions are indicated in Table 1–2.

Table 1–2 IRC Section 338 Classes of Assets

Class No.	Description
I	Cash and cash equivalents
II	Certificates of deposits and marketable securities
III	Accounts receivable
IV	Inventory
V	All assets not in any other class
VI	All amortizable Section 197 intangibles
VII	Goodwill and going concern value

Prior to IRC Code §197, the distinction between Class VI and Class VII was very important, as it differentiated between amortizable and non–amortizable assets. However, since purchased goodwill is currently amortizable for tax purposes, the classification is somewhat less important.

There are certain advantages of electing to treat a stock purchase as an asset purchase:

(1) Income tax benefits of being able to depreciate or amortize assets
(2) Ability to pick and choose which liabilities are being assumed
(3) Ability to exclude all contingent liabilities
(4) Ability to change form of business entity

b) IRC §1060

While Code §338 pertains to the corporate purchase of a controlling interest in stock, Code §1060 pertains to the transfer of assets which constitute a trade or business, whether it is a corporation or otherwise. The purchaser's basis in the assets purchased is allocated among all tangible and intangible assets using the classification criteria provided in Code §338.

It should be noted that both the seller and the buyer of a group of assets which constitute a trade or business must report to the IRS the effects of the allocations of the purchase price to the various assets (a copy of the necessary Form 8594 is provided at the end of this Chapter).

As previously indicated, Code §1060 applies to all taxable entities while Code §338 applies only to corporations.

2. Buy-Sell Agreements

All closely held businesses should adopt a buy-sell agreement among the partners or shareholders. Much protracted litigation could be avoided if, in the beginning, the business owners would address the issue of a buy-sell agreement in their partnership or shareholders agreements. A buy-sell agreement is an agreement that establishes the methodology to be followed by the parties regarding the ultimate disposition of a departing or a deceased owner's interest in a closely held business. The process of determining the value of the business is directed by the buy-sell agreement and there are many alternative procedures for doing so. Some buy-sell agreements provide for the determination of value merely by agreeing to a value at the beginning of each year. Some agreements are based on a predetermined or prescribed formula, whereas other agreements require that an independent valuation be performed periodically. Regardless of the alternative selected by the owners, a professional may be asked to assist in the valuation process.

There are two basic types of buy-sell agreements: the stock-repurchase and cross-purchase agreements. Under a stock-repurchase agreement, the company agrees to purchase the interest of a departing owner. A cross-purchase agreement allows the remaining owners to purchase the departing owner's stock.

An appropriately constructed buy-sell agreement will address several important items including:

a) What events (e.g., death, disability, etc.) trigger the buyout?
b) How will the buyout be funded: insurance, financing or something else?
c) How soon will the buyout occur, in 30 days, 60 days or longer?
d) How is the interest to be valued, i.e., based on a fixed value, a formula, or a valuation?

Note: when preparing a business valuation one should always review the existing buy-sell agreements for restrictions, valuation methodology, puts/calls, terms of purchase, etc.

3. Employee Stock Ownership Plans (ESOPS)

An ESOP is a type of employee benefit plan. It is considered a defined contribution plan and is intended to invest primarily in the employer's stock. The ESOP is a mechanism by which employees become beneficial owners of stock in their company.

To establish an ESOP, a firm creates a trust which the employer funds by either contributing shares of the company and/or contributing cash to buy company shares. The company can also have the ESOP borrow funds to buy new or existing shares of company stock. The trustee responsible for managing the ESOP trust may be a bank, trust company, disinterested individual, company officer, or employee. The contributions a company makes to its ESOP can be tax-deductible up to an amount equal to 25 percent of the payroll of the participants in the plan.

Many small- to mid-sized employers have instituted ESOPs. Generally, any non-publicly traded company with an ESOP must obtain a valuation of its stock on an annual basis. One significant advantage of an ESOP is that shareholders of a closely held corporation can defer taxation on the gain resulting from their sale of company stock to an ESOP, provided the ESOP owns 30 percent or more of a company's shares after the sale. In order to defer the gain, the seller must reinvest sale proceeds in qualified replacement property (QRP) consisting of stocks or bonds in operating companies in the U.S.

IRC Section 401(a)(28)(C) specifically requires the use of an "independent appraiser" for ESOP valuations. At a panel discussion sponsored by the ESOP Association, the employee stock ownership plan (ESOP) requirements for independent appraisers were discussed. Practitioners wanted to know the conditions for meeting these requirements by outside CPA firms providing audit and tax services to an employer. According to a projects leader for the IRS Employee Plans Technical and Actuarial Division, a firm will be treated as an independent appraiser under Sec. 401(a)(28)(C) if all of the following conditions are met:

a) The firm represents itself to the public as an appraiser or performs appraisals on a regular basis
b) The appraiser is qualified to value the type of property
c) The appraiser is not a related party. See IRC. Reg. Sec. 1.170A–13(c)(5)

4. Estate, Gift and Income Taxes

In many cases, the value of an interest in a closely held business is an individual's primary asset. The value of the closely held business must be ascertained to adequately perform a thorough and comprehensive estate or financial plan. It may also be necessary to establish the value of an interest in a closely held business to properly prepare estate or gift tax returns and to establish the basis of inherited stock in the hands of an heir to an estate.

Age demographics, as previously stated, will involve parents wanting to retire who will have to properly deal with the value that has accumulated in their closely held businesses. There are various ways a business owner can transfer the value that has accumulated in a closely held business. These include giving the business to the heirs, selling the business to the heirs or to third parties, or giving the business to a charity. Regardless of how the business is transferred, an independent valuation of the business interest is imperative.

If parents die before making transfer arrangements for the business, a value will have to be established for reporting on an estate tax return.

The universal standard of value for gift, estate, and inheritance taxes is "fair market value." Fair Market Value is defined in Revenue Ruling 59–60 as "the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts."

Revenue Ruling 59-60 also outlines a number of valuation methods and techniques which have become generally accepted and which must be considered in each case. However, as previously mentioned, valuation is as much an art as a science. The final determination of value under the regulatory standard will depend upon the facts and circumstances of the particular valuation.

Practice Pointer

The Taxpayer Relief Act of 1997 added IRC Section 2001 (f); Section 2001 (f) requires full disclosure of the method used for valuing a business interest; for the IRS to revalue a gift made after August 5, 1997, that has been adequately disclosed, a final notice of re-determination must be issued within the applicable statute of limitations period.

If a charitable gift is made of property valued at more than $5,000, a "qualified appraisal" must be attached to IRS Form 8283; the charity, in turn, must provide contemporaneous written acknowledgement (the substantiation requirement).

See *Estate of Roark v. Commissioner,* T.C. Memo 2004-27 (failure to properly substantiate a donation results in a denial of charitable tax deduction). U.S. Tax Court opinions are available at www.ustaxcourt.gov.

See IRS Regulation §1.170A- 13(c)(3)(ii).

5. Litigation Support

For a variety of reasons, an attorney involved in a pending lawsuit might need to determine the value of a closely held business. The professional, as the expert, will be asked to give expert testimony regarding the conclusions. The need for litigation support[7] relative to business valuations can arise in divorces, partner disputes, dissenting shareholder actions, insurance claims or wrongful death and injury cases.

6. Regulatory—FAS 141 and 142

The FASB now requires that independent valuations be made to establish the purchase value of all intangibles included in a business combination. Similarly, FAS 142 requires an annual review of the values of intangible assets in order to measure whether or not any impairment of the original or carrying value has occurred. Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide "appraisal or valuation services, fairness opinions, or contribution-in-kind reports" for any of its audit clients.

7. Attestation Under FAS 141 and 142

The independent valuations discussed above will be subject to the audit process and under current AICPA guidelines; the independent auditor must possess the skills necessary to evaluate the valuer's methods, critical assumptions, and data. The AICPA recommends that auditors engage their own expert if the auditor does not possess sufficient expertise.

[4] NACVA, through the Consultants' Training Institute (CTI) offers one additional certification program, the Master Analyst in Financial Forensics (MAFF), to meet the need of its membership in competing in these new business opportunities.

VI. VALUATION CONCEPTS

In this chapter, we will "search for truth" as it relates to valuation theory and make an attempt to reconcile it with practice. In order to develop our understanding of valuation theory, we must understand and agree upon certain valuation concepts.

A. VALUATION

A valuation is a process taken to establish a value for an entire or partial interest in a closely held business or professional practice, taking into account both quantitative and qualitative tangible and intangible factors associated with the specific business being valued.

Definition: The act or process of determining the value of a business, business ownership interest, security, or intangible asset (as defined in the International Glossary of Business Valuation Terms (IGBVT) found in Chapter Eight).

B. APPRAISAL

In the process of performing a valuation of a closely held business, the valuation analyst may require property appraisals of various specific assets owned by the company, such as:

1. Art (from a reputable art dealer)
2. Coins (from a reputable coin dealer)
3. Real estate
4. Machinery and equipment (from a reputable appraiser)
5. Jewelry (from a reputable gemologist or dealer)
6. Antiques (from a reputable dealer)
7. Other collectibles (from other reputable dealers)

C. VALUE OF A PARTICULAR BUSINESS (DEFINED)

> *"One of the frequent sources of legal confusion between cost and value is the tendency of courts, in common with other persons, to think of value as something inherent in the thing being valued, rather than an attitude of persons toward that thing in view of its estimated capacity to perform a service. Whether or not, as a matter of abstract philosophy, a thing has value except to people to whom it has value, is a question that need not be answered for the sake of appraisal theory. Certainly for the purpose of a monetary valuation, property has no value unless there is a prospect that it can be exploited by human beings."*

James C. Bonbright (1891–1985)
Professor of Finance, Columbia University

Similar to the value of many items or possessions, the value of an interest in a closely held business is typically considered to be equal to the future benefits that will be received from the business, discounted to the present, at an appropriate discount rate.

This seemingly simple definition of value raises several problems, some of which are:

1. Whose definition of "benefits" applies?
2. Future projections are extremely difficult to make (absent a crystal ball) and also very difficult to get two opposing parties to agree to.
3. What is an appropriate discount rate?
4. How long of a stream of benefits should be included in this determination of value?

The following chapters will address each of the problems posed above, and provide a variety of practical methods/solutions for resolving them.

D. THEORETICAL BASIS OF VALUE

Almost everyone has an opinion of value, be it of a business, a tangible asset, or an intangible asset. Unfortunately, the term "value" means different things to different people. This presents problems for the valuation analyst who has the extremely important task of working with clients and other parties to come up with an appropriate definition of value for a specific valuation.

As defined by Webster's dictionary, value is:

> *"A fair return or equivalent in goods, services, or money for something exchanged; the monetary worth of something; marketable price; relative worth, utility, or importance; something intrinsically valuable or desirable."*

> **Observation**
>
> **Three "Standards of Value" are introduced in this section; Fair Market Value, Fair Value, and Strategic/Investment Value. Readers should understand when to apply these and also be able to distinguish between them.**
>
> **"Premises of Value" are also subsequently discussed. All valuations will require the use of one of these six premises of value along with a Standard of Value.**

Three Standards of Value:

1. Fair Market Value

In the 1990s, Arthur Andersen & Co. provided a tongue-in-cheek definition of FMV:

"Fair Market Value is the amount, price, highest price, most probable price, cash or cash–equivalent price at which property would change hands or the ownership might be justified by a prudent investor or at which a willing buyer and seller would exchange, would agree to exchange, have agreed to exchange, should agree to exchange or may reasonably be expected to exchange, possibly with equity to both and both fully aware or having knowledge or at least acting knowledgeably of the relevant facts, possibly even acting prudently and for self–interest and with neither being under compulsion, abnormal pressure, undue duress or any particular compulsion."

In the U.S., the most widely recognized and accepted standard of value is termed fair market value (FMV). It is the standard used in all Federal tax matters, whether it is gift taxes, estate taxes, income taxes or inheritance taxes. The IRS has defined FMV in Revenue Ruling 59–60 as follows:

> *"The price at which the property would change hands between a willing buyer and a willing seller, when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts."*

It is important to remember the "willing buyer and willing seller" mentioned above are considered hypothetical as opposed to specific. Thus a representative price would not be considered a FMV if it were affected by a buyer's or seller's unique motivations. This would be an example of investment value, defined by real estate terminology as "value to a particular investor based on individual investment requirements."

In the *International Glossary of Business Valuation Terms* (IGBVT) (see Chapter Eight for the full glossary), Fair Market Value has this common definition:

Fair Market Value—the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts. (NOTE: In Canada, the term "price" should be replaced with the term "highest price.")

2. Fair Value

Fair Value can have several meanings, depending on the purpose of the valuation.

a) In most states, fair value is the statutory standard of value applicable in cases of dissenting stockholders' valuation rights. In these states, if a corporation merges, sells out, or takes certain other major actions, and the owner of a minority interest believes that he is being forced to receive less than adequate consideration for his stock, he has the right to have his shares appraised and to receive fair value in cash. In states that have adopted the Uniform Business Corporation Act, the definition of fair value is as follows:

   "Fair value," with respect to a dissenter's shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable.

   Even in states that have adopted this definition, there is no clearly recognized consensus about the interpretation of fair value in this context, but published precedents established in various state courts certainly have not equated it to fair market value. The state of Utah has also adopted this definition of fair value with the exception that Utah Code Ann. Section 16–10a–1201(4) 1995 eliminates the words "unless exclusion would be inequitable" from the end of the definition. Within the valuation profession the strictest definition of fair value of a minority interest is a pro rata share of a controlling interest valuation on a non-marketable basis.

While each jurisdiction has its own interpretations and definitions, according to the Model Business Corporation Act, Fair Value means "…the value of the corporation's shares determined (i) immediately before the effectuation of the corporate action to which the shareholder objects, (ii) using customary and current valuation concepts and techniques…, and (iii) without discounting for lack of marketability or minority status…"[8]

b) Fair Value is also the standard of value used by the *Financial Accounting Standards Board (FASB)* in its pronouncements pertaining to business valuation. In June of 2004 the FASB released its Exposure Draft *Fair Value Measurements* which attempts, for the first time, to "define fair value and establish a framework for applying the fair value measurement objective in GAAP." Although FASB uses the term "fair value" just as it is used in various state statutes, it should be clearly understood that this is a completely different definition of value. Although FASB's definition of fair value should be considered a work in progress, as of June 2006 FASB's revised definition of Fair Value was as follows:[9]

> *"Fair value is the price that would be received for an asset or paid to transfer a liability in a transaction between marketplace participants at the measurement date."*

c) Fair value may also relate to value in divorce. Many states have specific definitions of fair value with regard to marital dissolution.

Note: The differences in the various definitions used for Fair Value are, at present, irreconcilable. That is why you will not find this term in the International Glossary of Business Valuation Terms (IGBVT).

3. Strategic/Investment Value

Investment value is the value to a particular investor based on individual investment requirements and expectations. (NOTE: In Canada, the term used is "Value to the Owner.") (IGBVT)

E. PREMISE OF VALUE

In the valuation context, once the standard of value is determined, the appropriate premise of value must then be selected. Premise of value can be further broken down into various subsets, including:

1. Book Value

Definition: With respect to a business enterprise, the difference between total assets (net of accumulated depreciation, depletion, and amortization) and total liabilities as they appear

[8] "Model Business Corporation Act," Comments copyright © American Bar Foundation and Law and Business, Inc. Section 13.01, pg. 237.
[9] FASB maintains a Fair Value Project website at http://www.fasb.org/project/fv_measurement.shtml.

on the balance sheet (synonymous with Shareholder's Equity). With respect to a specific asset, the capitalized cost less accumulated amortization or depreciation as it appears on the books of account of the business enterprise. (IGBVT)

Book Value is synonymous with shareholders' equity, net worth, and net book value. It is essentially the difference between the total book value of a company's assets and the total book value of its liabilities. Assets are generally recorded at historical cost, net of any accumulated depreciation and/or value allowances, and liabilities are generally recorded at face value. Because of the potential for unrecorded intangible assets, understated values for the tangible assets, as well as unrecorded assets and liabilities, book value of the company is not an appropriate measure of business value. The longer a particular asset or liability is carried on the books, the greater the potential for differences between book value and fair market value.

2. Going Concern Value

Definition: The value of a business enterprise that is expected to continue to operate into the future. The intangible elements of Going Concern Value result from factors such as having a trained work force, an operational plant, and the necessary licenses, systems and procedures in place. (IGBVT)

A trained and assembled work force is a valuable intangible asset for many businesses because of the substantial costs involved with developing a new work force.

Going concern value can be particularly relevant to service firms, such as medical practices. The American Medical Association refers to going concern value as "in–place value" and states the following relative to practice valuation:
Some advisers give an in–place value to assets because they are assembled into a working system and they help to produce income. For example, a physician may have purchased a piece of equipment for $10,000 and depreciated it over a period of five years at $2,000 per year. At the end of those five years, when the physician decides to sell the practice, the balance sheet shows the value of the equipment as zero because it has been written off in the intervening years. But to a buyer the equipment has value, because it is in place and functioning.

3. Liquidation Value

Definition: The net amount that would be realized if the business is terminated and the assets are sold piecemeal. Liquidation can be either "orderly" or "forced." (IGBVT)

4. Replacement Value

Replacement value refers to the current cost of a similar new property having the nearest equivalent utility to the property being valued.

VII. HOW VALUATION PURPOSE AFFECTS THE CONCLUSION OF VALUE

Before a valuation analyst proceeds in valuing a business, he/she must recognize the purpose for which the valuation is needed. Different purposes require the use of different valuation methods and approaches and will frequently generate different values.

NACVA Professional Standards require the valuation analyst specifically and carefully define the purpose of each valuation. (NACVA Standard 3.3(d))

> *"No single valuation method is universally applicable to all appraisal purposes. The context in which the appraisal is to be used is a critical factor. Many business appraisals fail to reach a number representing the appropriate definition of value because the appraiser failed to match the valuation methods to the purpose for which it was being performed. The result of a particular appraisal can also be inappropriate if the client attempts to use the valuation conclusion for some purpose other than the intended one."*

Pratt, Reilly, Schweihs, *Valuing A Business* – 4th edition, McGraw–Hill

All valuations can be classified as either:

A. TAX VALUATIONS

1. Estate tax
2. Gift tax
3. ESOPs
4. Allocation of lump-sum purchase price (Code §§338 and 1060 allocations)
5. Charitable contributions
6. Calculation of the Built-in Gain (BIG) for S Corporation Elections

Or

B. NON-TAX VALUATIONS

1. Purchase
2. Sale
3. Merger
4. Buy-sell agreements
5. Regulatory valuations: asset allocation/valuation under FAS 141 and 142
6. Litigation support

    a) Partner/shareholder disputes: There is a growing need for valuation services in this area
    b) Divorce actions: State law governs disputed property settlements. Most states have failed to establish standards of value

c) Damage/economic loss cases

(1) Breach of contract
(2) Lost business opportunity
(3) Antitrust
(4) Other

Over 30 years ago, former chairman of the Business Management Institute, Victor I. Eber, CPA, pointed out the crucial relevance of appropriately defining the purpose of a valuation:

> *"Appraisal techniques for income, estate, and gift tax purposes can substantially differ from methods used to appraise a business for purposes of acquisition, merger, liquidation, divestiture, split–up and spin–offs.... [T]he typical appraisal for commercial purposes will frequently deal with factors of concern to prospective purchasers, liquidators or merger partners, as distinguished from a determination of an IRS–acceptable value of the business as a free-standing going concern.*
>
> *Many principals and their advisers in buy-sell situations consciously consider a limited number of variables in establishing a value. For example, a small loan holding company negotiating for the purchase of an additional office would concentrate almost entirely on the origin and condition of receivables, with minimum regard for the organization structure, the condition of the office, book value, or the past earnings of the business under existing management .Such truncated appraisal is based on the assumption that the acquiring company can supply those things. Thus, it appears that many essential factors are being ignored, on the recognized assumption that the principals expect to overcome the business deficiencies.*
>
> *For estate and gift tax appraisals, such shortcuts are not taken because the appraiser is typically valuing a business in a noncommercial, non–acquisition setting. Further it is a situation in which the appraiser must follow requirements."*[10]

VIII. VALUATOR VERSUS ADVOCATE

This is a vital concept that must be understood! A valuator relies more heavily on quantifiable, objective data in performing a valuation and attempts to remove as much subjectivity as possible. An advocate introduces subjective factors and attempts to rely more heavily on qualitative factors in providing valuation services.

Definition:

> *To "advocate" is to attempt to make an argument on behalf of an idea or a person. The purpose of advocacy is persuasion. The advocate wants to instill an idea in order to bring about a change in thinking or behavior. The primary tools of an advocate are words and tact.*

[10] Victor I. Eber, "How to Establish Value for Close Corporation Stock That Will Withstand an IRS Audit", Estate Planning (Autumn 1976), pp. 28-29.

It is critical that the valuation analyst understand his/her role in the valuation engagement such that advocacy in particular engagements (expert engagements) is minimized. The primary focus in this course will be in the context of a "valuator" or an objective "valuation analyst." However, regardless of how much we attempt to be completely objective, we oftentimes find ourselves taking some advocacy position as each valuation engagement will require some subjective choices at various steps in the valuation process. Therefore, we are talking about reducing the level or degree of advocacy when we are in a "valuator" position.

IX. IRC SECTION 6662 ACCURACY RELATED PENALTIES (TAX VALUATIONS)

The Omnibus Budget Reconciliation Act (OBRA) consolidated into one Internal Revenue Code section (Code §6662) several different accuracy-related taxation penalties.

- The negligence penalty (previously assessed under Code §6653(a))
- The substantial understatement of income tax penalty (previously assessed under Code §6661, substantial understatement of liability)
- The substantial valuation overstatement penalty (previously assessed under Code §6659, addition to tax in the case of valuation overstatement for purposes of the income tax)
- The substantial estate or gift tax valuation understatement penalty (previously assessed under Code §6660, addition to tax in the case of valuation understatement for purposes of estate and gift taxes)
- The substantial overstatement of pension liabilities penalty (previously assessed under Code §6659A, addition to tax in case of overstatements of pension liabilities)

The accuracy-related penalty is applied to the portion of any underpayment of tax that is attributable to one or more of the above five issues. All accuracy-related penalties apply to tax returns due, without regard to extensions after December 31, 1989.

In controversies with the IRS[11] which concern valuation issues, it is not uncommon for the IRS to assess accuracy related penalties. However, the Tax Court has consistently refused to allow these assessments when the taxpayer has acted "reasonably" by engaging a valuation professional who has obtained proper training in valuation theory.

Practice Pointer

The North American valuation organizations enforce ethical standards. These ethical standards are separate and distinct from IRC accuracy-related penalties… penalties which valuation analysts involved in tax matters are potentially subject.

X. THE EQUITY INTEREST AS AN INVESTMENT

The purchase of an equity interest in a closely held business should be treated no differently than the purchase of any other investment. The investor should not only expect to receive the investment (the amount invested or principal) back, but should also expect to receive a fair return on the investment. The return should be commensurate with the amount of risk involved.

[11] See Sharp, Jr. vs. Commissioner, February 27, 1997, 97-1 USTC 60,268, http://usataxcourt.gov.

Observation

The purchase of an equity interest (regardless of whether it is a majority or minority interest) is deemed or considered by the valuation profession an *investment*; as such, the investment requires a fair or reasonable return. Fair or reasonable return depends on the level of business and financial risk.

When thinking of the purchase of an equity interest as an investment, there are certain principles to be kept in mind.

A. THE ALTERNATIVES PRINCIPLE

1. This principle applies to valuing businesses in the context of buying or selling a business
2. In any valuation involving a business that is being offered for sale, it must be realized that both the buyer and the seller have alternatives (choices), and do not necessarily need to enter or proceed with a proposed purchase/sale transaction

B. THE PRINCIPLE OF SUBSTITUTION

The value of an asset tends to be determined by the cost of acquiring an equally desirable substitute.

C. THE INVESTMENT VALUE PRINCIPLE

1. Valuation of security interests in closely held businesses is often a very difficult process. This is due to the lack of an active free trading market for securities in closely held businesses. Because of this lack of a market, many small closely held businesses are valued based on the investment value principle or approach.
2. Simplified formula:

$$\text{Value} = \frac{\text{Benefit Stream}}{\text{Required Rate of Return}}$$

Note: If any two of the three variables are known, the value of the third can be calculated:

a) The investment value of the business (present value)
b) The amount of return (profit) that a business provides to its owner
c) The rate of return expected on the investment (sometimes referred to as yield)

D. RATE OF RETURN/LEVEL OF RISK PRINCIPLE

1. A fundamental relationship exists between rate of return from an investment and the amount of risk associated in the investment
2. There is a direct relationship between risk and return. The greater the risk—the greater the required rate of return
3. There are various types of investments that carry different levels of risk and, therefore, different potential returns. The following are sample rates of return on various types of investments

Description of Investment	Rates of Return* (2000)	Rates of Return (2005)
Bank mortgages (30–year fixed conventional)	8.08%[1]	5.81%[4]
Long–term (20 yr) treasury bonds	6.23%[1]	4.85%[5]
Intermediate (5 yr) term treasury bonds	6.16%[1]	3.63%[5]
Six month CDs	5.09%[1]	2.72%[5]
Common stocks (publicly traded):		
Large Company Stock Total Returns for Year	–9.11%[2]	10.87%[6]
Long Horizon NYSE Equity Risk Premium	7.10%[3]	6.10%[7]

[1]Statistical Abstract of the United States – 2001 pages 736–740
[2]SBBI Valuation Edition Annual Year Book – 2000 page 31
[3]SBBI Valuation Edition Annual Year Book – 2000 page 266
[4]www.stlouisfed.org January 12, 2005
[5]tmpages.com Board of Governors Federal Reserve Jan. 11, 2005
[6]SBBI Valuation Edition Annual Yearbook- 2005 page 31
[7]SBBI Valuation Edition Annual Yearbook- 2005 Appendix C

*This information illustrates that the required rate of return changes over time and that riskier investments require higher rates of return. The valuation analyst will use different rates to fit the year of the valuation. Current year rates of return are not applicable to all engagements, and the analyst should not be lulled by current year numbers.

ORDER OF INVESTMENT RISK

Higher Degree of Risk

Venture Capital Investments
Small Common Stock
Blue Chip Common Stock
Preferred Stocks
"C" Rated Corporate Bonds
"B" Rated Corporate Bonds
"A" Rated Corporate Bonds
U.S. Treasury Obligations

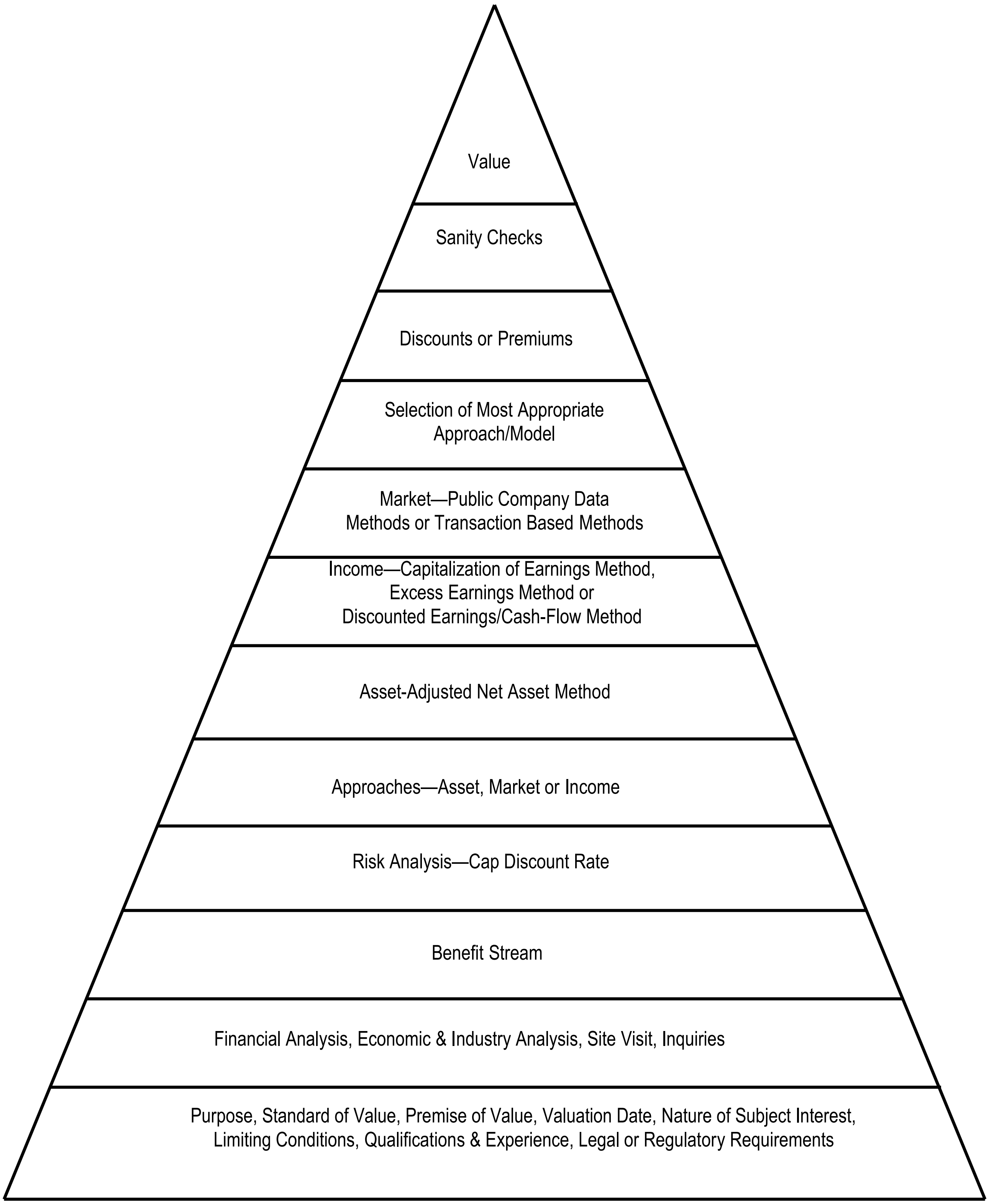
Lower Degree of Risk

XI. KEY FINANCIAL VARIABLES

Whether one focuses on historical data or future projections, there are three key variables that are extremely important in determining the value of a closely held business. Each of these variables are equally important in estimating "value" and the valuation analyst, utilizing personal knowledge and judgment combined with sufficient facts about the business being valued, must make informed decisions regarding each variable in order to reach a proper Conclusion of Value. Chapters Two, Four, and Five will discuss these factors in more detail. These three key financial variables are:

- Identification and definition of appropriate benefit stream
- Measurement of appropriate benefit stream (which forms the basis for determining the value of the expected benefit stream)
- Determination of an appropriate capitalization/discount rate

The Valuation Process



Form **8594** (Rev. February 2006)
Department of the Treasury
Internal Revenue Service

Asset Acquisition Statement
Under Section 1060

► Attach to your income tax return. ► See separate instructions.

OMB No. 1545-1021
Attachment Sequence No. **61**

Name as shown on return	Identifying number as shown on return

Check the box that identifies you:
☐ Purchaser ☐ Seller

Part I General Information

1 Name of other party to the transaction	Other party's identifying number

Address (number, street, and room or suite no.)

City or town, state, and ZIP code

2 Date of sale	3 Total sales price (consideration)

Part II Original Statement of Assets Transferred

4 Assets	Aggregate fair market value (actual amount for Class I)	Allocation of sales price
Class I	$	$
Class II	$	$
Class III	$	$
Class IV	$	$
Class V	$	$
Class VI and VII	$	$
Total	$	$

5 Did the purchaser and seller provide for an allocation of the sales price in the sales contract or in another written document signed by both parties? . . . . ☐ Yes ☐ No

If "Yes," are the aggregate fair market values (FMV) listed for each of asset Classes I, II, III, IV, V, VI, and VII the amounts agreed upon in your sales contract or in a separate written document? . . . . . . ☐ Yes ☐ No

6 In the purchase of the group of assets (or stock), did the purchaser also purchase a license or a covenant not to compete, or enter into a lease agreement, employment contract, management contract, or similar arrangement with the seller (or managers, directors, owners, or employees of the seller)? . . . . . . ☐ Yes ☐ No

If "Yes," attach a schedule that specifies **(a)** the type of agreement and **(b)** the maximum amount of consideration (not including interest) paid or to be paid under the agreement. See instructions.

For Paperwork Reduction Act Notice, see separate instructions. Cat. No. 63768Z Form **8594** (Rev. 2-2006)

Form 8594 (Rev. 10-2002) Page **2**

Part III **Supplemental Statement—**Complete only if amending an original statement or previously filed supplemental statement because of an increase or decrease in consideration.

7 Tax year and tax return form number with which the original Form 8594 and any supplemental statements were filed.

8 Assets	Allocation of sales price as previously reported	Increase or (decrease)	Redetermined allocation of sales price
Class I	$	$	$
Class II	$	$	$
Class III	$	$	$
Class IV	$	$	$
Class V	$	$	$
Class VI and VII	$	$	$
Total	$		$

9 Reason(s) for increase or decrease. Attach additional sheets if more space is needed.

Form **8594** (Rev. 10-2002)

Instructions for Form 8594

Department of the Treasury
Internal Revenue Service

(Rev. February 2006)

Asset Acquisition Statement Under Section 1060

Section references are to the Internal Revenue Code unless otherwise noted.

General Instructions

Purpose of Form

Both the seller and purchaser of a group of assets that makes up a trade or business must use Form 8594 to report such a sale if goodwill or going concern value attaches, or could attach, to such assets and if the purchaser's basis in the assets is determined only by the amount paid for the assets.

Form 8594 must also be filed if the purchaser or seller is amending an original or a previously filed supplemental Form 8594 because of an increase or decrease in the purchaser's cost of the assets or the amount realized by the seller.

Who Must File

Generally, both the purchaser and seller must file Form 8594 and attach it to their income tax returns (Forms 1040, 1041, 1065, 1120, 1120S, etc.) when there is a transfer of a group of assets that make up a trade or business (defined below) and the purchaser's basis in such assets is determined wholly by the amount paid for the assets. This applies whether the group of assets constitutes a trade or business in the hands of the seller, the purchaser, or both.

If the purchaser or seller is a controlled foreign corporation (CFC), each U.S. shareholder should attach Form 8594 to its Form 5471.

Exceptions. You are not required to file Form 8594 if any of the following apply.

- A group of assets that makes up a trade or business is exchanged for like-kind property in a transaction to which section 1031 applies. If section 1031 does not apply to all the assets transferred, however, Form 8594 is required for the part of the group of assets to which section 1031 does not apply. For information about such a transaction, see Regulations sections 1.1031(j)-1(b) and 1.1060-1(b)(8).
- A partnership interest is transferred. See Regulations section 1.755-1(d) for special reporting requirements. However, the purchase of a partnership interest that is treated for federal income tax purposes as a purchase of partnership assets, which constitute a trade or business, is subject to section 1060. In this case, the purchaser must file Form 8594. See Rev. Rul. 99-6, which is on page 6 of Internal Revenue Bulletin 1999-6 at *http://www.irs.gov/pub/irs-irbs/irb99-06.pdf,* and Regulations section 1.1060-1(b)(4).

When To File

Generally, attach Form 8594 to your income tax return for the year in which the sale date occurred.

If the amount allocated to any asset is increased or decreased after the year in which the sale occurs, the seller and/or purchaser (whoever is affected) must complete Parts I and III of Form 8594 and attach the form to the income tax return for the year in which the increase or decrease is taken into account.

Penalties

If you do not file a correct Form 8594 by the due date of your return and you cannot show reasonable cause, you may be subject to penalties. See sections 6721 through 6724.

Definitions

Trade or business. A group of assets makes up a trade or business if goodwill or going concern value could under any circumstances attach to such assets. A group of assets can also qualify as a trade or business if it qualifies as an active trade or business under section 355 (relating to distributions of stock in controlled corporations).

Factors to consider in determining whether goodwill or going concern value could attach include:

- The presence of any section 197 or other intangible assets (but the transfer of such an asset in the absence of other assets will not be a trade or business);
- Any excess of the total paid for the assets over the aggregate book value of the assets (other than goodwill or going concern value) as shown in the purchaser's financial accounting books and records; or
- A license, a lease agreement, a covenant not to compete, a management contract, an employment contract, or other similar agreements between purchaser and seller (or managers, directors, owners, or employees of the seller).

Consideration. The purchaser's consideration is the cost of the assets. The purchaser's consideration is the amount realized.

Fair market value. Fair market value is the gross fair market value unreduced by mortgages, liens, pledges, or other liabilities. However, for determining the seller's gain or loss, generally, the fair market value of any property is not less than any nonrecourse debt to which the property is subject.

Classes of assets. The following definitions are the classifications for deemed or actual asset acquisitions.

Class I assets are cash and general deposit accounts (including savings and checking accounts) other than certificates of deposit held in banks, savings and loan associations, and other depository institutions.

Class II assets are actively traded personal property within the meaning of section 1092(d)(1) and Regulations section 1.1092(d)-1 (determined without regard to section 1092(d)(3)). In addition, Class II assets include certificates of deposit and foreign currency even if they are not actively traded personal property. Class II assets do not include stock of target affiliates, whether or not actively traded, other than actively traded stock described in section 1504(a)(4). Examples of Class II assets include U.S. government securities and publicly traded stock.

Class III assets are assets that the taxpayer marks-to-market at least annually for federal income tax purposes and debt instruments (including accounts receivable). However, Class III assets do not include:

Cat. No. 29292S

- Debt instruments issued by persons related at the beginning of the day following the acquisition date to the target under section 267(b) or 707;
- Contingent debt instruments subject to Regulations sections 1.1275-4 and 1.483-4, or section 988, unless the instrument is subject to the noncontingent bond method of Regulations section 1.1275-4(b) or is described in Regulations section 1.988-2(b)(2)(i)(B)(2); and
- Debt instruments convertible into the stock of the issuer or other property.

Class IV assets are stock in trade of the taxpayer or other property of a kind that would properly be included in the inventory of the taxpayer if on hand at the close of the taxable year, or property held by the taxpayer primarily for sale to customers in the ordinary course of its trade or business.

Class V assets are all assets other than Class I, II, III, IV, VI, and VII assets.

Note. Furniture and fixtures, buildings, land, vehicles, and equipment, which constitute all or part of a trade or business (defined earlier) are generally Class V assets.

Class VI assets are all section 197 intangibles (as defined in section 197) except goodwill and going concern value. Section 197 intangibles include:

- Workforce in place;
- Business books and records, operating systems, or any other information base, process, design, pattern, know-how, formula, or similar item;
- Any customer-based intangible;
- Any supplier-based intangible;
- Any license, permit, or other right granted by a government unit;
- Any covenant not to compete entered into in connection with the acquisition of an interest in a trade or a business; and
- Any franchise (including a sports franchise acquired after October 22, 2004), trademark, or trade name.

However, the term "section 197 intangible" does not include any of the following:

- An interest in a corporation, partnership, trust, or estate;
- Interests under certain financial contracts;
- Interests in land;
- Certain computer software;
- Certain separately acquired interests in films, sound recordings, video tapes, books, or other similar property;
- Interests under leases of tangible property;
- Certain separately acquired rights to receive tangible property or services;
- Certain separately acquired interests in patents or copyrights;
- Interests under indebtedness;
- Professional sports franchises acquired before October 23, 2004; and
- Certain transactions costs.

See section 197(e) for more information.

Class VII assets are goodwill and going concern value (whether or not the goodwill or going concern value qualifies as a section 197 intangible).

Allocation of consideration. An allocation of the purchase price must be made to determine the purchaser's basis in each acquired asset and the seller's gain or loss on the transfer of each asset. Use the residual method for the allocation of the sales price among the amortizable section 197 intangibles and other assets transferred. See Regulations section 1.1060-1(c). The amount allocated to an asset, other than a Class VII asset, cannot exceed its fair market value on the purchase date. The amount you can allocate to an asset also is subject to any applicable limits under the Internal Revenue Code or general principles of tax law.

Consideration should be allocated as follows.

1. Reduce the consideration by the amount of Class I assets transferred.
2. Allocate the remaining consideration to Class II assets, then to Class III, IV, V, and VI assets in that order. Within each class, allocate the remaining consideration to the class assets in proportion to their fair market values on the purchase date.
3. Allocate consideration to Class VII assets.

If an asset in one of the classifications described above can be included in more than one class, choose the lower numbered class (e.g., if an asset could be included in Class III or IV, choose Class III).

Reallocation after an increase or decrease in consideration. If an increase or decrease in consideration that must be taken into account to redetermine the seller's amount realized on the sale, or the purchaser's cost basis in the assets, occurs after the purchase date, the seller and/or purchaser must allocate the increase or decrease among the assets. If the increase or decrease occurs in the same tax year as the purchase date, consider the increase or decrease to have occurred on the purchase date. If the increase or decrease occurs after the tax year of the purchase date, consider it in the tax year in which it occurs.

For an increase or decrease related to a patent, copyright, etc., see *Specific Allocation,* later.

Allocation of increase. Allocate an increase in consideration as described under *Allocation of consideration.* If an asset has been disposed of, depreciated, amortized, or depleted by the purchaser before the increase occurs, any amount allocated to that asset by the purchaser must be properly taken into account under principles of tax law applicable when part of the cost of an asset (not previously reflected in its basis) is paid after the asset has been disposed of, depreciated, amortized, or depleted.

Allocation of decrease. Allocate a decrease in consideration as follows.

1. Reduce the amount previously allocated to Class VII assets.
2. Reduce the amount previously allocated to Class VI assets, then to Class V, IV, III, and II assets in that order. Within each class, allocate the decrease among the class assets in proportion to their fair market values on the purchase date.

You cannot decrease the amount allocated to an asset below zero. If an asset has a basis of zero at the time the decrease is taken into account because it has been disposed of, depreciated, amortized, or depleted by the purchaser under section 1060, the decrease in consideration allocable to such asset must be properly taken into account under the principles of tax law applicable when the cost of an asset (previously reflected in basis) is reduced after the asset has been disposed of, depreciated, amortized, or depleted. An asset is considered to have been disposed of to the extent the decrease allocated to it would reduce its basis below zero.

Patents, copyrights, and similar property. You must make a specific allocation (defined below) if an increase or decrease in consideration is the result of a contingency that

-2-

directly relates to income produced by a particular intangible asset, such as a patent, a secret process, or a copyright, and the increase or decrease is related only to such asset and not to other assets. If the specific allocation rule does not apply, make an allocation of any increase or decrease as you would for any other assets as described under *Allocation of increase* and *Allocation of decrease.*

Specific allocation. Limited to the fair market value of the asset, any increase or decrease in consideration is allocated first specifically to the patent, copyright, or similar property to which the increase or decrease relates, and then to the other assets in the order described under *Allocation of increase* and *Allocation of decrease.* For purposes of applying the fair market value limit to the patent, copyright, or similar property, the fair market value of such asset is redetermined when the increase or decrease is taken into account by considering only the reasons for the increase or decrease. The fair market values of the other assets are not redetermined.

Specific Instructions

For an original statement, complete Parts I and II. For a Supplemental Statement, complete Parts I and III.

Enter your name and taxpayer identification number (TIN) at the top of the form. Then check the box for purchaser or seller.

Part I—General Information

Line 1. Enter the name, address, and TIN of the other party to the transaction (purchaser or seller). You are required to enter the TIN of the other party. If the other party is an individual or sole proprietor, enter the social security number. If the other party is a corporation, partnership, or other entity, enter the employer identification number.

Line 2. Enter the date on which the sale of the assets occurred.

Line 3. Enter the total consideration transferred for the assets.

Part II—Original Statement of Assets Transferred

Line 4. For a particular class of assets, enter the total fair market value of all the assets in the class and the total allocation of the sales price. For Classes VI and VII, enter the total fair market value of Class VI and Class VII combined, and the total portion of the sales price allocated to Class VI and Class VII combined.

Line 6. This line must be completed by the purchaser and the seller. To determine the maximum consideration to be paid, assume that any contingencies specified in the agreement are met and that the consideration paid is the highest amount possible. If you cannot determine the maximum consideration, state how the consideration will be computed and the payment period.

Part III—Supplemental Statement

Complete Part III and file a new Form 8594 for each year that an increase or decrease in consideration occurs. See *Reallocation after an increase or decrease in consideration,* on page 2, and *When To File,* on page 1. Give the reason(s) for the increase or decrease in allocation. Also, enter the tax year(s) and form number with which the original and any supplemental statements were filed. For example, enter "2004 Form 1040."

Paperwork Reduction Act Notice. We ask for the information on this form to carry out the Internal Revenue laws of the United States. You are required to give us the information. We need it to ensure that you are complying with these laws and to allow us to figure and collect the right amount of tax.

You are not required to provide the information requested on a form that is subject to the Paperwork Reduction Act unless the form displays a valid OMB control number. Books or records relating to a form or its instructions must be retained as long as their contents may become material in the administration of any Internal Revenue law. Generally, tax returns and return information are confidential, as required by section 6103.

The time needed to complete and file this tax form will vary depending on individual circumstances. The estimated burden for individual taxpayers filing this form is approved under OMB control number 1545-0074 and is included in the estimates shown in the instructions for their individual income tax return. The estimated burden for all other taxpayers who file this form is shown below.

Recordkeeping	11 hr.
Learning about the law or the form	2 hr., 34 min.
Preparing and sending the form to the IRS	2 hr., 52 min.

If you have comments concerning the accuracy of these time estimates or suggestions for making this form simpler, we would be happy to hear from you. You can write to the IRS at the address listed in the instructions for the tax return with which this form is filed.

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In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information which many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentor the valuation analyst may know. Those at the top of the field continue to grow.

Recommended reading includes, but is not limited to:

- Blackman, Irving L., *Valuing Your Privately Held Business, The Art & Science of Establishing Your Company's Worth*, Section A, Chapter 1 (Valuation, Future Expectation and Uncertainty) and Chapter 2 (Why Valuation is a Must).
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests*, Chapter 1 (Business Valuation and Pricing).
- Damodaran, Aswath, *Damodaran on Valuation, Security Analysis for Investment and Corporate Finance*, Chapter 1 (Introduction to Valuation).
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 1 (Introduction to Financial Valuations).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Part I, Chapter 1 (Business Valuation Standards and Credentials).
- http://www.fasb.org/ is the website maintained by the Financial Accounting Standards Board. It contains current exposure drafts, FASB rulings, and other relevant information. FASB Statements—Full Text, Summaries, and Status (Including Concepts Statements—Full Text and Status are available).
- Fishman, Jay, Shannon Pratt, and William Morrison, *Standards of Value, Theory and Applications.*

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BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 1

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 1: Introduction to Business Valuation

1. Primary opportunities for the valuation analyst can be found in working with:

    a. Business owners, investors, attorneys, and individuals performing valuations for a variety of reasons, including estate planning and taxation, litigation support, mergers and acquisitions, and financial statement reporting
    b. Business owners as only the owner of a business can engage a valuation analyst for a valuation engagement of a business
    c. Other CPA firms as every privately held company is required to estimate the value of its intangible assets for financial statement reporting purposes
    d. Business owners in order to estimate the value of a group of assets as allocated on Form 8594

2. What is the basic difference between an appraisal and a valuation?

    a. The act or process of determining the value of a business, business ownership interest, security, or intangible asset is an appraisal whereas a valuation is the process of determining the value of gems, equipment, furnishings, and other tangible assets to be used in determining the value of a business
    b. Nothing; they are the same thing
    c. Appraisal is usually for a tangible asset and a valuation is usually for stock or interest in stock of a company or other intangible asset
    d. Valuation is usually for stock or bond or other public security and an appraisal is usually for a non-public asset, stock or bond

3. Risk management in the valuation niche demands solid training and staying current through continuing education.

    a. True
    b. False

4. A buy/sell agreement:

    a. Avoids litigation
    b. Notes that an independent valuation is to be performed, when, and why
    c. Identifies when or what events trigger a buyout, identifies how any buyout will be funded and identifies the timing of any buyout
    d. Always identifies the interest rate, if any, applicable

5. The most commonly quoted regulatory and professional bodies for business valuation are:

    a. NACVA, AICPA
    b. IRS, DOL, FASB
    c. ASA, IBA
    d. IACVA, ABV

6. Three theoretical standards of value are:

   a. Investment value, going concern value, and fair market value
   b. Fair market value, investment value, and fair value
   c. Going concern value, asset value, and fair value
   d. Book value, fair market value, and liquidation value

7. Fair Market Value is based upon:

   a. In business valuation, a legally created standard of value that applies to specific statutory transactions
   b. The market value, the standard of value applicable in cases of dissenting stockholders' valuation rights. Fair market value, with respect to a dissenter's shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable
   c. The value described by an arms length transaction between a knowledgeable willing buyer and a knowledgeable willing seller
   d. The value described by an arms length transaction involving a willing buyer or a willing seller—and depends upon the reason you have been retained to perform a business valuation

8. A valuation analyst must match the appropriate standard of value to the purpose for which the valuation engagement is performed.

   a. If the context in which the valuation is to be used is not critical and no lawsuit is in process, then the valuation analyst will always select fair value.
   b. A valuation for buying a business will be the same as for selling that business. It is the nature of the business that defines the standard of value.
   c. A valuation for securing a new loan should be done the same as a valuation in a divorce.
   d. The valuation is to be used only for the purpose for which it was done and will likely be inappropriate for another use even by the same company or client.

9. A valuator relies on quantifiable objective data in performing a valuation, attempting to remove as much subjectivity as possible. An advocate:

   a. Does essentially the same thing for a specific client
   b. Introduces subjective factors and attempts to rely more heavily on qualitative factors
   c. Is a valuator who works only for attorneys
   d. Is an attorney who works for a valuation firm to edit valuation reports to prevent ambiguous terms and advocate the use of proper legal terms so the firm won't be sued

10. What are the three main reasons for tax related valuations?

   a. Estate tax, gift tax, and allocation of purchase price
   b. Estate tax, buy/sell agreements, and litigation
   c. ASC 805 (formerly FASB 141), ASC 350 (formerly FASB 142), and estate tax
   d. ASC 350 (formerly FASB 142), litigation, and gift tax

11. The American Medical Association refers to going concern value as an "in-place value."

   a. True
   b. False

12. The major point(s) of Internal Revenue Code §2703 is/are:

    a. For estate, gift and other tax purposes, the value of any property is determined without regard to any right or restriction relating to the property
    b. An exception to restrictions on property exists for any option, agreement, right, or restriction, which (1) is a bona fide business arrangement, (2) is not a device to transfer property for less than its fair market value, (3) is comparable to similar arm's length arrangements; and (4) these safe harbors must be independently satisfied. The mere showing that a right or restriction to property is a bona fide business arrangement is not sufficient to establish the absence of a device
    c. Each right or restriction must be tested separately. A right or restriction is considered to meet the three 'safe harbor' requirements if more than 50% of the applicable property is owned by individuals who are not members of the transferor's family. Property owned by non-family members must be subject to the same rights or restrictions
    d. Both a and b, but not c
    e. a, b, and c

13. The Internal Revenue Service first introduced the concept of goodwill and excess earnings when they issued:

    a. ARM 34
    b. Revenue Ruling 59-60
    c. Revenue Ruling 68-609
    d. APB Opinion 16

14. Which of the following factors should be considered when valuing a closely held business under Revenue Ruling 59-60?
    i. Nature and history of the business
    ii. Economic outlook and industry condition
    iii. Methods to calculate preferred stock
    iv. The earnings capacity of the company

    a. i, ii, and iv
    b. ii, iii, and iv
    c. i, ii, and iii
    d. All of the above

15. If a valuator is retained to value a company for estate tax purposes, it is acceptable for the valuator to value the business as a/an:

    a. Advocate
    b. Independent expert
    c. Related party
    d. Employee of the company

16. IRC Section 401(a)(28)(C) requires the use of an "independent appraiser" for ESOP valuations to be independent the following conditions must be met:

    a. The valuator is qualified, performs appraisals on a regular basis, and is not a related party
    b. The valuator is qualified, may be a related party, and performs appraisals on a regular basis
    c. The valuator is qualified, does not perform appraisals on a regular basis, and is not a related party
    d. The valuator does not need to be qualified, but must perform appraisals regularly and is not a related party

17. Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide "appraisal valuation services, fairness opinions or contribution-in-kind reports" for any of its audit clients.

    a. True
    b. False

18. Before the valuation analyst can proceed in valuing a business, the first step an analyst must determine is:

    a. The purpose of the valuation
    b. The best method to apply
    c. The standard of value
    d. The appropriate marketability discount

19. Which of the following cases provides guidance as to the admissibility of expert testimony in appraising a business:

    a. *Daubert v. Merrill Dow*
    b. *Estate of Walter Gross v. Commissioner*
    c. *Estate of Davis v. Commissioner*
    d. *Estate of Roark v. Commissioner*

20. The United States Department of Labor issues regulations specifically pertaining to business valuations for:

    a. Employee Stock Ownership Plans
    b. Gift and estate tax returns
    c. Merger and acquisitions
    d. Partner disputes

21. Value equals the benefit stream divided by a required rate of return is an example of what principle:

    a. Alternative principle
    b. Principle of substitution
    c. Investment value principal

22. A fundamental relationship exists between rate of return from an investment and the amount of risk in the investment. Therefore:

    a. An investor would expect a higher rate of return from a treasury note compared to large company stock
    b. An investor would expect a higher rate of return from a six month CD compared to a 5-year treasury bond
    c. An investor would expect a higher rate of return from a publicly traded company compared to a privately held company
    d. An investor would expect a higher rate of return from a publicly traded stock compared to a 5-year treasury bond

23. Strategic/Investment value is defined as:

    a. The amount at which property would change hands between a hypothetical willing buyer and a willing seller
    b. An amount determined under statutory standard of value
    c. The value to a particular investor based on individual investment requirements and expectations
    d. The value as if the business is going to continue operating as it presently is operating

24. Revenue Ruling 93-12 was a significant benefit to taxpayers as it allowed that:

    a. Valuation of a minority (i.e., non-controlling) interest in an entity will not have to consider either the transferor or the transferee as they relate to control of the entity
    b. Valuation of an ownership interest in a business for gift tax purposes would always allow rates of return on tangible assets between 8% and 10%
    c. Contributions of non-cash property for federal income tax purposes shall always be valued based on the historical cost of the property
    d. Adopted the "family attribution" rule, which states that no minority interest discount is available for blocks of stock transferred to family members when the family holds a controlling interest in the entity

CHAPTER TWO

FINANCIAL STATEMENT ANALYSIS AND CALCULATION OF FINANCIAL RATIOS

"Patience is the best remedy for every trouble."
Plantus, Titus Maccius (c. 254- 184 B.C.)

"Be not afraid of going slowly; be only afraid of standing still."
Chinese Proverb

Observation

Financial statement analysis is one of the most important steps in gaining an understanding of the historical, current, and potential profitability of a company. Financial analysis is also critical in evaluating the relative stability of revenues and earnings, the levels of operating and financial risk, and the performance of management.

Common size financial statements are an important tool in financial statement analysis. This Chapter explains the calculation and interpretation of common size balance sheets as well as common size income statements.

This Chapter also defines a wide variety of ratios derived from financial statement information. The ability to calculate, compare, and interpret these financial ratios is a key learning objective of this chapter.

I. FINANCIAL RATIO (TREND) ANALYSIS SUMMARY

In general, a thorough financial analysis of any business would include a study of the following financial information:

1. A summary of both the historical and the adjusted economic/normalized balance sheets over the period being analyzed, detailing each balance sheet line item.[1]
2. A summary of both the historical and the economic/normalized adjusted income statements over the period being analyzed, detailing each income statement line item.
3. A summary of both the historical and the economic/normalized adjusted income statements over the period being analyzed, where each income statement line item is reported as a percentage of net sales (often referred to as a common-size income statement).
4. A summary of both the historical and the economic/normalized adjusted balance sheets for the period being analyzed, where each balance sheet line item is reported as a percentage of total assets (often referred to as a common-size balance sheet).
5. A summary of both the historical and the economic/normalized adjusted cash flows from operating activities (on the basis of operations and adjusted for owner/manager discretionary items such as compensation and perquisites) over the period being analyzed.

[1]Economic or normalized financial statements have been adjusted to better reflect the economic reality underlying measures of assets, liabilities, revenues, expenses, etc. Preparation of normalized financial statements is covered in detail in Chapter 3.

6. A summary of the five main categories of selected financial ratios over the period being analyzed are:

   a. Internal liquidity ratios
   b. Operating efficiency ratios
   c. Operating profitability ratios
   d. Business risk (operating) analysis ratios
   e. Financial risk (leverage) analysis ratios

7. The valuation analyst should then compare the aforementioned ratios for the subject company to those for other specific businesses or to an appropriate industry average.

II. COMMON-SIZE ANALYSIS

The conversion of balance sheet and income statement line items to percentages of a total is often referred to as placing the statements on a "common-size" basis. For purposes of common- size statements, balance sheet line items are presented as a percentage of total assets and income statement line items are presented as a percentage of total net sales or gross revenue.

Converting the subject company's balance sheets and income statements to a common-size basis assists the analyst by identifying internal trends. Common-size statements also facilitate comparison with other companies in the same industry. A comparison with the data of one or more other companies if done on the basis of absolute dollar amounts would be very confusing and time consuming without common-size analysis. Further, comparisons with industry averages are facilitated and made more efficient by using common-size analysis.

Because common-size financial statement analysis is based on relative size, it removes the confusion that prevails when exact dollar amounts are used. It is also a fundamental step in developing ratio (trend) and comparative analyses.

III. RATIO (TREND) ANALYSIS

A. OVERVIEW

Financial ratios are measures of the relative health, or sometimes the relative sickness of a business. A physician, when evaluating a person's health, will measure the heart rate, blood pressure and temperature; whereas, a financial analyst will take readings on a company's growth, cost control, turnover, profitability, and risk. Like the physician, the financial analyst will then compare these readings with generally accepted guidelines. Ratio analysis is an effective tool to assist the analyst in answering some basic questions, such as:

1. How well is the company doing?
2. What are its strengths and weaknesses?
3. What are the relative business and operating risks to the company?

Please note that although an analysis of financial ratios will help identify a company's strengths and weaknesses, it has its limitations and will not necessarily identify all strengths and weaknesses, nor will it provide the solutions or cures for the problems it identifies. For instance, off balance sheet financing techniques are not included or reflected in the balance sheet. Typical off- balance sheet items include:

1. The use of operating leases (vis-à-vis- capitalized lease)
2. Use of finance affiliates
3. Sales or factoring of receivables
4. Use of securitization
5. Take-or-pay and throughput contracts
6. Use of joint ventures
7. Guaranteeing the debt of affiliates

In addition, historical financial data has limitations since the subject firm can:

1. Record questionable revenue
2. Record revenue too soon
3. Record sham revenue
4. Record one-time gains to boost income
5. Shift expenses either to an earlier or later period
6. Under-report or improperly reduce liabilities
7. Shift revenues to the future
8. Take current charges to shift future expenses

To make the most effective use of financial ratios, the ratios should be calculated and compared over a period of several years. This allows the valuation analyst to identify trends in these measurements over time. These ratios can also be compared to specific other companies or to industry averages or norms in order to see how the subject company is performing relative to other businesses in its industry during the same period of time.

Once the analyst has obtained the GAAP basis and/or tax basis balance sheets and income statements and has prepared a summary of the historical economic/normalized balance sheets and income statements, then an analysis of the key financial statement ratios can be undertaken.

B. APPLICATION OF RATIO ANALYSIS

1. An Analysis of Financial Ratios is a Useful Tool for Business Valuations

a) Integral tool in trend analysis

(1) Compares the company's own ratios to itself over time
(2) Identifies the company's strengths and weaknesses
(3) Assists in establishing appropriate capitalization rates (helps to identify risk factors particular to the subject company) (See Chapter Five)

b) Integral tool in comparative analysis

(1) Assists in making comparisons with other companies' or industry averages
(2) Assists in selecting appropriate price/earnings ratios or price/asset multiples relative to the company's indicated performance to compare to comparable companies or industry averages

2. Uses Historical Data

a) Preferably for five years or alternatively, the length of the natural business cycle of the subject company and industry
b) More than five years when the analyst deems appropriate
c) Less than five years when the analyst uncovers unavailability of information, unusual fluctuations or a specific valuation purpose

3. Steps in Trend Analysis

a) Obtain and analyze GAAP basis or tax basis financial data
b) List and prepare summaries by year for key financial statement accounts (both balance sheet and income statement items)
c) Select, compute and compare the relevant financial ratios for each year
d) Analyze and develop conclusions. This analysis will highlight questionable or unusual items to be discussed with management for clarification or potential adjustment

4. Observation

The most effective way to compare and analyze several years of financial data is to prepare a spreadsheet, either standalone or by using a valuation software program that lists the description of the financial data and the respective years. The majority of software programs list the descriptions vertically and the years (or other timing) horizontally, allowing easy side-by-side comparisons of financial information.

IV. KEY FINANCIAL RATIOS

The thorough valuation analyst will consider and compute five categories of ratios:

1. Internal liquidity ratios
2. Operating efficiency ratios
3. Operating profitability ratios
4. Business risk (operating) analysis ratios
5. Financial risk (leverage) analysis ratios

The following section provides a summary of the five categories of financial ratios, along with descriptions of how each ratio is calculated and its relevance to financial analysis. Remember, the ratios themselves may not be entirely meaningful unless used in trend analysis or comparative analysis.

A. INTERNAL LIQUIDITY RATIOS

The internal liquidity ratios (also referred to as solvency ratios) measure a firm's ability to pay its near-term financial obligations.

1. Current Ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio provides a good measure of solvency if accounts receivable and inventories are liquid.

2. Quick Ratio

$$\text{Quick Ratio} = \frac{\text{Cash + Marketable Securities + Receivables}}{\text{Current Liabilities}}$$

If inventories are not easily liquidated, the quick ratio provides a better indicator of the firm's financial solvency vis-à-vis the current ratio.

3. Cash Ratio

$$\text{Cash Ratio} = \frac{\text{Cash + Marketable Securities}}{\text{Current Liabilities}}$$

The cash ratio is the most conservative measure of solvency; it is used if neither accounts receivables nor inventories are liquid

4. Receivable Turnover

$$\text{Receivable Turnover} = \frac{\text{Net Sales}}{((\text{Beginning A/R} + \text{Ending A/R}) \div 2)}$$

This calculation finds the ratio between the net sales for the period and the average balance in accounts receivable. The resulting ratio is a measure of how many times accounts receivable are collected (or turned over) during the period being examined. For example, a ratio of 6 indicates that accounts receivable, on average, were completely collected 6 times over the past year, or every two months.

The analyst can further convert the turnover ratio by dividing it into 365. This yields a rough indication of the average time required to convert receivables into cash. Ideally, a monthly average of receivables should be used and only sales on credit should be included in the sales figure. The interpretation of the average age of receivables depends upon a company's credit terms and the seasonable activity immediately before year–end. If a company grants 30 days credit terms to its customers, for example, and a turnover analysis indicates average collection time of 41 days, then accounts receivable collections are lagging. If the terms were for 60 days, however, it appears collections are being made ahead of schedule. Note, if the sales volume in the last month of the year is unusually large, the average age of receivables as computed above can be misleading.

5. Inventory Turnover

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{((\text{Beginning Inventory} + \text{Ending Inventory}) \div 2)}$$

This ratio measures the number of times a company sells (or turns) its inventory during the year. The relationship between inventory turnover and the gross profit rate may be important. A high inventory turnover and a low gross profit rate frequently go hand in hand. This, however, is merely another way of saying if the gross profit rate is low a higher volume of business is necessary to produce a satisfactory return on total assets. Although, a high inventory turnover is usually regarded as a good sign, a rate that is high in relation to that of similar firms may indicate the company is losing sales by failing to maintain an adequate stock of goods to serve its customers promptly.

High inventory turnover can also indicate better liquidity or superior merchandising. Conversely, it can indicate a shortage of needed inventory for sales. Low inventory turnover can indicate poor liquidity, possible overstocking or obsolete inventory. In contrast to these negative interpretations, however, a planned inventory buildup may be occurring to avoid material shortages.

As with the accounts receivable turnover ratio, the inventory turnover ratio can be divided into 365 to estimate the average number of days required to completely sell the company's inventory.

6. Payables Turnover

$$\text{Payables Turnover} = \frac{\text{Cost of Goods Sold}}{((\text{Beginning AP} + \text{Ending AP}) \div 2)}$$

The payables turnover ratio measures the number of times a year that a company pays its average accounts payable balance. If the ratio is too high, the firm may be paying too quickly and not taking advantage of the interest free credit available from accounts payable. If the ratio is low, then the firm may be a credit risk and/or losing valuable discounts. Once again, this ratio can be divided into 365 to estimate the number of days the average account payable is outstanding before being paid.

7. Cash Conversion Cycle

$$\begin{array}{lclclcl} \text{Cash} & & \text{Inventory} & & \text{Days to} & & \text{Payable} \\ \text{Conversion} & = & \text{Turnover} & + & \text{Collect} & - & \text{Payment} \\ \text{Cycle} & & \text{Period} & & \text{Receivables} & & \text{Period} \end{array}$$

The cash conversion cycle measures the time between the outlay of cash for inventory and the collection of cash from the sale of that inventory.

B. OPERATING EFFICIENCY RATIOS

1. Net Fixed Asset Turnover

$$\text{Net Fixed Asset Turnover} = \frac{\text{Net Sales}}{((\text{Beginning F/A} + \text{Ending F/A}) \div 2)}$$

This ratio can be an indication of management's ability to effectively utilize fixed assets. Additionally, a low ratio can often be an indication of obsolete or impaired fixed assets.

2. Total Asset Turnover

$$\text{Total Asset Turnover} = \frac{\text{Net Sales}}{((\text{Beginning Total Assets} + \text{Ending Total Assets}) \div 2)}$$

This ratio is an indication of management's ability to effectively utilize total assets; however, it is important to note the asset turnover ratio can be affected by factors other than a firm's efficiency. A firm with newer and less depreciated assets will cause the ratio to fall relative to the firms with older or more depreciated assets. Additionally, a low ratio can often be an indication of obsolete or impaired assets.

C. OPERATING PROFITABILITY RATIOS

Operating ratios are used in the evaluation of management performance.

1. Cost of Sales/Sales (%)

$$\text{Cost of Sales} = \frac{\text{Cost of Sales}}{\text{Net Sales}}$$

This ratio is an indication of the subject company's operating environment and operating efficiency. For example, if the company's cost of sales/sales ratio is increasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.

2. Gross Margin (%)

$$\text{Gross Margin} = \frac{\text{Net Sales - Cost of Sales}}{\text{Net Sales}}$$

This ratio expands on the issues found by analyzing the cost of sales ratio. Note that the sum of the two ratios (cost of sales and gross margin) equals 100%.

3. Operating Expenses/Sales (%)

$$\text{Operating Expenses} = \frac{\text{Operating Expenses}}{\text{Net Sales}}$$

Management generally has greater control over operating expenses than it has over revenue. This ratio is often used as a measure of management's ability to control its operating expenses.

4. Operating Margin (%)

$$\text{Operating Margin} = \frac{\text{Income from Operations}}{\text{Net Sales}}$$

This ratio expands on the issues identified by analyzing the operating expense ratio.

5. Return on Assets (%) (ROA)

$$\text{ROA} = \frac{\text{Net Income}}{((\text{Beg. Total Assets} + \text{Ending Total Assets}) \div 2)}$$

This ratio is an important test of management's ability to earn a return on assets funded from all sources (debt and equity). The income figure used in computing this ratio should be income before deducting interest expense, since interest is a payment to creditors for funds used to acquire assets. Income before interest reflects earnings throughout the year; therefore it should be related to the average investment in assets during the year.

6. Return on Equity (%) (ROE)

$$\text{ROE} = \frac{\text{Net Income}}{((\text{Beg. Common Equity} + \text{Ending Common Equity}) \div 2)}$$

Because interest and dividends paid to creditors and preferred stockholders are fixed in amount, a company may earn a greater or lesser return on the common stockholders' equity than on its total assets.

Financing with fixed-return securities is often called trading on the equity. Results may be favorable or unfavorable to holders of common stock. For example, if the rate of return on total assets is greater than the average rate of payment to creditors and preferred stockholders, the common stockholders will gain from trading on the equity and return on common equity will increase.

D. BUSINESS RISK (OPERATING) ANALYSIS

Business risk refers to the volatility of earnings over time. (See the formal definition in the International Glossary of Business Valuation Terms in Chapter Eight.) There are three ratios (two of these require knowledge of basic statistics to derive) used to asses the business risk.

1. Coefficient of Variation of Operating Income (EBIT)

$$\text{Coef. of Var. Operating. Inc.} = \frac{\sigma EBIT}{\mu EBIT}$$

σ – is the symbol for the standard deviation

μ – the symbol for the Mean (or average). Note. It is important to recognize that there is a difference between the mean and median, notwithstanding that these numbers may be the same. Median is the mid-point in a sequence of numbers.

Valuation analysts will usually compute the coefficient of variation (C of V); data from one or more business cycles is used to derive the data for the formula [In day 3 (Case) and day 5 (CVTA) the C of V will be revisited].

2. Sales Volatility

$$\text{Coef. of Sales Volatility} = \frac{\sigma Sales}{\mu Sales}$$

Again, sales volatility is measured in one or more business cycles.

3. Degree of Operating Leverage (DOL)

$$DOL = \frac{\%\Delta EBIT}{\%\Delta Sales}$$

DOL measures the inherent risks of operations of the business and is largely a function of a firm's cost structure and level of capital intensity. It is important to note that DOL is independent of the risk that is due to financial leverage.

> **Practice Pointer**
>
> **Business Risk is largely a function of a firm's cost structure. The greater the proportion of variable costs, the better a firm can weather an economic downturn or rapid industry obsolescence. Companies with significant capital investment and large fixed costs have less ability to adapt to poor or changing economic or competitive conditions, making them higher risk.**

E. FINANCIAL RISK (LEVERAGE) RATIOS

The inclusion of debt in a firm's financial structure increases its earnings volatility in relation to sales, thus increasing risk. Financial leverage ratios should be interpreted in conjunction with a firm's degree of operating leverage (DOL) and sales volatility. As a general rule, valuation analysts will see that firms with high DOL and sales volatility tend to have low financial leverage ratios, while firms with low DOL and sales volatility tend to have high financial leverage ratios.

1. Long-Term Debt-to-Equity Ratio (or Debt/ Equity Ratio)

$$\text{Debt/Equity} = \frac{\text{Long-Term Debt + Deferred Tax Liabilities}}{\text{Total Equity}}$$

This ratio is controversial. Some valuation analysts will exclude deferred tax liabilities if they believe these liabilities will not eventually be paid. Some analysts will include the effect of operating leases, especially if the lease should have been capitalized.

2. Total Debt-to-Total Invested Capital Ratio

$$\text{Debt/Capital} = \frac{\text{Current Liabilities + Long-Term Debt}}{\text{Total Liabilities + Total Capital}}$$

This ratio measures what percentage of a firm's assets is financed with debt.

3. Total Debt-to-Total Assets Ratio

$$\frac{\text{Current Liabilities + Long-Term Debt}}{\text{Total Assets}}$$

The debt/asset ratio shows the proportion of a company's assets which are financed through debt. If the ratio is less than one, most of the company's assets are financed through equity. If the ratio is greater than one, most of the company's assets are financed through debt. Companies with high debt/asset ratios are said to be "highly leveraged."

4. Interest Coverage Ratio

$$\text{Interest Coverage} = \frac{\text{Earnings Before Interest and Taxes (EBIT)}}{\text{Interest Expense}}$$

This ratio is a measure of a firm's ability to meet its interest payments. A high ratio may indicate a borrower would have little difficulty in meeting the interest obligations of a loan. This ratio also serves as an indicator of a firm's capacity to take on additional debt.

5. Operating Cash Flow Ratio (OCF Ratio or CFO Ratio)

$$\text{OCF Ratio} = \frac{\text{OCF}}{\text{Current Liabilities}}$$

This ratio measures a firm's ability to generate the resources required to meet its current liabilities.

6. **Operating Cash Flow to Long-Term Debt (OCF/ LTD)**

$$\text{OCF/LTD} = \frac{\text{OCF}}{\text{Book Value of Long-Term Debt + PV of Lease Obligations}}$$

This ratio measures the ability to service total long-term debt, including lease obligations. Since operating cash flows already reflect interest expense, payment of interest expense is reflected in the ratio.

7. **Operating Cash Flow to Total Debt Ratio (OCF/ TD)**

$$\text{OCF/TD} = \frac{\text{OCF}}{\text{Total Long-Term Debt + Current Interest Bearing Liabilities}}$$

This ratio measures the ability to service total interest bearing debt. Since operating cash flows already reflect interest expense, payment of interest expense is reflected in the ratio.

V. COMPARATIVE ANALYSIS

Comparative analysis uses information gleaned from the two previous sources, common-size analysis and ratio "trend" analysis. As indicated by its title, comparative analysis involves comparison of the subject company's status and performance with those of specific other companies or industry averages. Comparative analysis can involve either a comparison over a historical period of more than one year or over the latest complete 12-month period.

A. SOURCES OF INFORMATION

In many cases, specific company data for comparison is not available, and the analyst will need to use general industry information. Some of the most common sources for general industry information are:

1. Risk Management Association (RMA) ANNUAL STATEMENT STUDIES®[2]

   a) The Standard Edition is the only source of financial ratio benchmarks derived directly from more than 200,000 statements of financial institution borrowers and prospects and includes over 700 industries. The data includes income statement and balance sheet common size comparisons as well as 19 operating ratios.
   b) The Valuation Edition features not only the national data contained in the standard RMA Annual Statement Studies® database, but enhanced financial ratios, national and regional data, percentages and real dollar values, and industry growth rates.
   c) The Valuation Edition Unlimited Edition includes the current year data and features contained in both the standard and valuation editions of the RMA Annual Statement Studies® database, plus Standard Edition data from 2003 through 2005 and Valuation Edition data from 2006 through current RMA year.

[2] Risk Management Association (RMA) Annual Statement Studies® is available from NACVA (800-677-2009) and ValuSource (800-825-8763). ANNUAL STATEMENT STUDIES®, RMA THE RISK MANAGEMENT ASSOCIATION®, and the RMA Logo are trademarks of the Risk Management Association. RMA owns the copyright in the ANNUAL STATEMENT STUDIES® data. The data is used under license from RMA.

2. IRS Corporate Ratios[3]

   a) This database—compiled from over five million corporate tax returns—displays, analyzes, and customizes financial statement information, as well as calculated percentages and ratios. It provides industry standard financial statement benchmarking data for over 250 industries.

3. Almanac of Business and Industry Ratios from Prentice Hall, Inc.
4. Integra statistics by industry
5. Key Business Ratios from Dun & Bradstreet, Inc.
6. Specific industry statistics from industry associations

> **Practice Pointer**
>
> **The practitioner should be aware of the pros and cons in the utilization of different data sources.**

B. QUALITY OF INFORMATION

In constructing a comparative analysis, the method of accounting for both the subject company and the comparison company or companies should be consistent. This is often very difficult to establish, unless the provider of the information adequately discloses the method of accounting for the comparison. In addition, the following considerations have become generally accepted as important checklist components to ensure that a specific company comparison is meaningful:

1. Companies must be of similar size, relative to sales volume and total assets
2. Companies must have similar historical and current levels of profitability
3. Companies must have similar competitive positions within the industry
4. Companies must be in the same or similar line of business
5. Companies must have similar historical rates of growth
6. Companies must have similar capital structures
7. Companies must offer a similar product line

C. STEPS IN COMPARATIVE ANALYSIS

The following steps outline a typical comparative company analysis. (For illustrative purposes this section will assume that the analyst is relying on RMA data; the use of RMA should not be construed as a preference of RMA over Integra or other alternative data sources.)

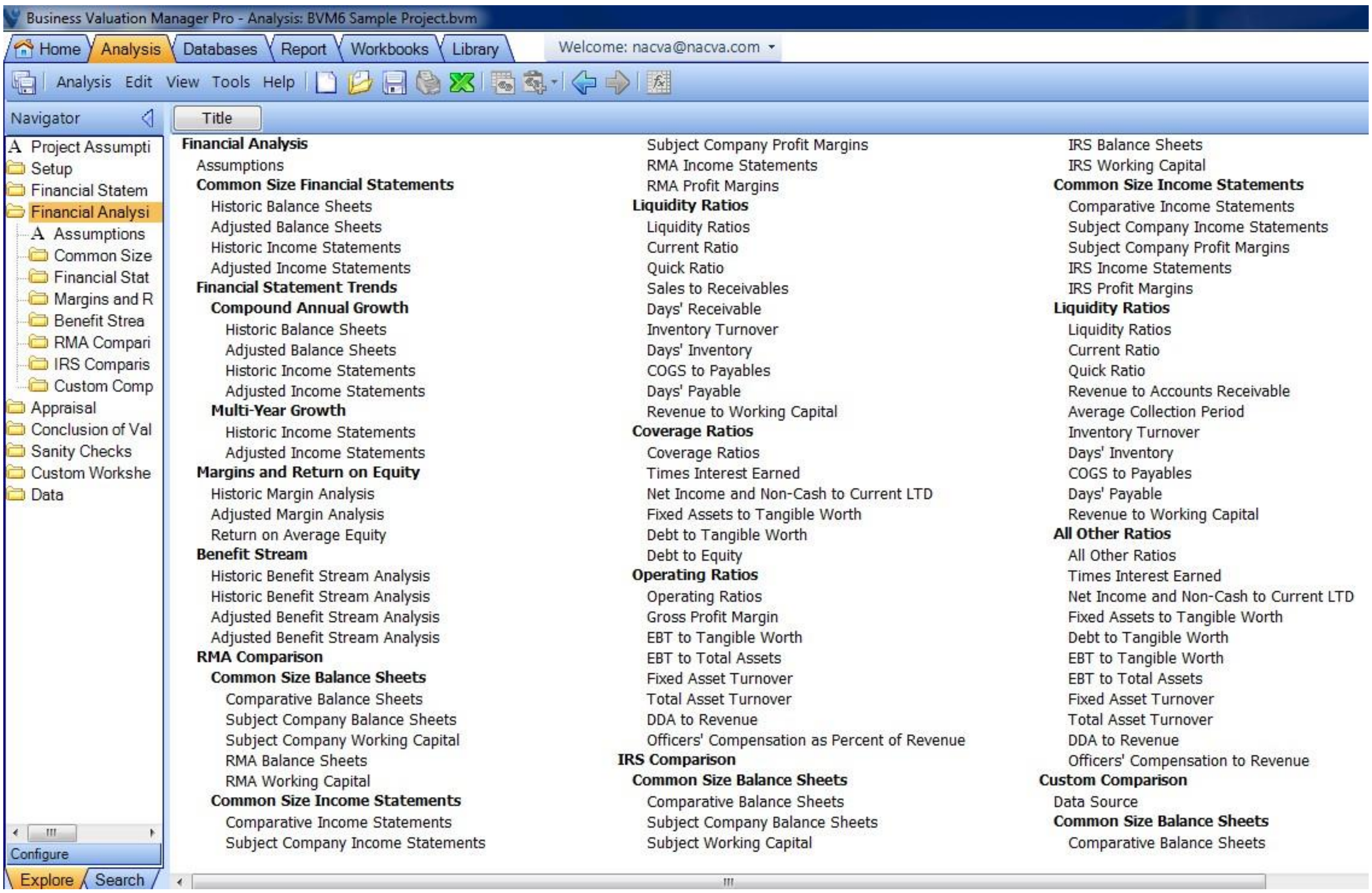
1. Prepare common-size income statements and common-size balance sheets
2. Determine results of selected key financial ratios of the subject company for the latest 12-month period
3. Determine the appropriate SIC# (Standard Industrial Classification) or NAICS# (North American Industrial Classification System) of the subject company
4. Obtain RMA "Financial Statement Studies" for appropriate SIC number and prepare a worksheet that lists subject company financial ratios, RMA financial ratios, and the differences between the two. **NOTE**: RMA data is gathered from financial information submitted to banking and other financial institutions to secure credit

[3] IRS Corporate Ratios is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

5. Analyze the common-size financial statements and comparative ratios and draw conclusions relative to:

   a) Liquidity
   b) Utilization of Assets (efficiency)
   c) Profitability
   d) Business Risk
   e) Financial Risk (leverage)

The following table provides an outline of the data, including common-size financial statement data and financial ratios, generated by *Business* Valuation Manager™ *Pro* (BMV *Pro*) software[4].



[4] BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information which many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes, and the experience of a valuation mentor or other business mentors the valuation analyst may know. Those at the top of the field continue to learn and grow. Recommended reading includes, but is not limited to:

- Blackman, Irving L., *Valuing Your Privately Held Business, The Art & Science of Establishing Your Company/s Worth*.
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests*, Chapter 3 (Business Analysis).
- Copeland, Tom, Tim Koller, and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies*.
- Damodaran, Aswath, Damodaran on Valuation, *Security Analysis for Investment and Corporate Finance*, Chapter 5 (Estimation of Growth Rates) and Chapters 10 through 12 (Ratios).
- Dun & Bradstreet, Inc. *Industry Norms and Key Business Ratios*, select by appropriate year.
- Fridson, Martin and Fernando Alvarez, *Financial Statement Analysis: A Practitioner's Guide*.
- Green, Robert, "Using Correlation Analysis in Determining Proper Method to Project Earnings", *The Valuation Examiner*, 1st qtr, 1994.
- Helfert, Erich A., *Techniques of Financial Analysis*, Chapter 1, Part III (The Nature of Financial Statements), and Chapter 3 (Assessment of Business Performance – Ratio Analysis and Performance).
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 3 (Financial Statement and Company Risk Analysis).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Chapter 8 (Financial Statement Analysis).
- Risk Management Associates, *Annual Statement Studies*, select by appropriate year.
- Rufus, Robert, "Financial Ratios: Use, Predictive Power and the Z-Score", *The Valuation Examiner*, M/J 2003.
- Rutter, Grover, "A Matter of Equity: The Old Safe-Rate Method Yard Stick for Measurement", *The Valuation Examiner*, F/M 1999.
- *Statistical Abstract of the United States*, select by appropriate year.
- Troy, Leo, *Almanac of Business and Industry Ratios*, select by appropriate year.

BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 2

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 2: Financial Statement Analysis and Calculation of Financial Ratios

1. Chianti Corp. reports the following items in their Balance Sheet: $70,000 fixed assets, $3,500 cash, $1,200 short term marketable securities, $4,500 in accounts receivables, $6,000 in inventories, $1,000 in prepaid expenses, $4,000 accounts payable and $2,100 in current notes payable. What is Chianti Corp.'s Current Ratio?

   a. 7.24
   b. 2.65
   c. 2.49
   d. 1.51

2. Assume the same facts as in question number one, what is Chianti Corp.'s Cash Ratio?

   a. 1.51
   b. 1.75
   c. 2.49
   d. 0.77

3. Assuming that Chianti Corp. reported annual sales of $100,000, cost of goods sold of $65,000, average receivables of $5,600, average inventories of $3,800, and average payables of $5,700. What is Chianti Corp.'s Receivables Turnover and Average Receivables Collection Period?

Receivables Turnover	Avg. Rec. Collection Period
a. 10.0	36.5
b. 11.61	31.5
c. 6.25	58.4
d. 17.9	20.4

4. Assuming the same facts as outlined in question three, what is Chianti Corp.'s Inventory Turnover? And Average Inventory Processing Period?

Inventory Turnover	Avg. Inventory. Processing Period
a. 12.4	29.4
b. 26.5	13.8
c. 17.11	21.3
d. 13.4	27.2

5. Assuming the same facts as in question three, what is Chianti Corp.'s Cash Conversion Cycle?

   a. 7.24 days
   b. 26.1 days
   c. 9.7 days
   d. -5.67 days

6. Assuming that Chianti Corp. reports net income of $5,200 and that its average total equity is $49,000, what is Chianti Corp.'s Return on Equity?

   a. 9.42%
   b. 21.20%
   c. 10.61%
   d. 11.51%

7. Based on the information provided in questions one through six, what is Chianti Corp.'s Net Profit Margin and Equity Turnover?

Net Profit Margin	Equity Turnover
a. 9.42%	2.13
b. 5.2%	2.04
c. 10.61%	2.04
d. 8.0%	4.32

8. The conversion of the balance sheet and income statement line items to percentages based on total assets or total sales is often referred to as:

   a. Trend analysis
   b. Common-size analysis
   c. Financial ratio analysis
   d. Comparative analysis

9. A financial analysis of any business would include all of the following EXCEPT for:

   a. An analysis of each balance sheet item over the period being analyzed
   b. An analysis of industry ratios in the same NAICS code as the company being analyzed
   c. An analysis of the income statement, where each item is reported as a percentage of sales
   d. An investigation as to the existence of inventory as of the valuation date

10. Ratio analysis will assist the valuation analyst in determining the following:

    a. The financial condition of the company
    b. Identifying all the strengths and weaknesses of the company
    c. The relative operating risks of the company
    d. Both a and b
    e. Both a and c
    f. Both b and c

11. The most conservative ratio in measuring a company's solvency is the:

    a. Current ratio
    b. Quick ratio
    c. Cash ratio
    d. Turnover ratio

12. A high inventory turnover can indicate all of the following EXCEPT:

    a. Better liquidity
    b. Superior merchandising
    c. Shortage of inventory
    d. Obsolete inventory

13. What type of ratios may a valuation analyst generally use to evaluate management performance?

    a. Operating profitability ratios
    b. Liquidity ratios
    c. Financial risk ratios
    d. Business risk analysis

14. Which of the following statements is correct?

    a. A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produce a satisfactory return on total assets.
    b. The net fixed asset turnover ratio is crucial when appraising a service business.
    c. If a company's cost of sales/sales ratio is decreasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.
    d. Companies with significant fixed operating costs in proportion to variable costs can better weather an economic downturn.

15. Which ratio measures the ability to service total interest-bearing debt?

    a. Interest coverage ratio
    b. Operating cash flow ratio
    c. Operating cash flow to long-term debt
    d. Operating cash flow to total debt ratio

16. What is the purpose of dividing a receivable or inventory turnover ratio by 365?

    a. We can never do enough math, so why not add another equation.
    b. To determine the number of days it may take to convert a current asset into cash.
    c. To determine if a company is effectively utilizing its fixed assets.
    d. To determine a company's operating efficiency.

CHAPTER THREE

GENERATING ECONOMIC/NORMALIZED FINANCIAL STATEMENTS

"There are plenty of good five-cent cigars in the country. The trouble is they cost a quarter. What this country needs is a good five-cent nickel."
Franklin Pierce Adams

I. GENERATING ECONOMIC/ NORMALIZED FINANCIAL STATEMENTS

A. OVERVIEW

Performing a thorough analysis of the historical (and resulting economic) financial statements of a business is prerequisite to performing a meaningful and thorough valuation. Basic financial statements include the balance sheet, income statement, and statement of cash flows. A thorough analysis of these statements[1] is required in any valuation of a closely held business or business interest. A complete financial analysis of the business will assist the analyst in many ways including, but not limited to, the following:

1. Helping to identify strengths and weaknesses of the business
2. Helping to identify trends of the business over time
3. Allowing the valuation analyst to compare and analyze the subject company's historical performance and providing a basis for comparing the business to other similar businesses or industry averages
4. Help identify areas for potential normalizing adjustments

A thorough financial analysis will allow the analyst to draw conclusions relating to key financial variables critical to the valuation of a closely held business while allowing the analyst to quantifiably support those conclusions. Financial analysis should be initially performed prior to making economic adjustments, as an aid in identifying potential areas of adjustment. Financial analysis should also be performed after adjustments are made.

[1] NACVA's valuation software, called Business Valuation Manager Pro (BVMPro), is a good place to start your valuation's financial analysis.

B. NECESSARY INFORMATION

In order to perform an adequate financial analysis, the analyst will require certain information from the client. This information should include, but not be limited to:

1. Financial information (historical and prospective) and other similar data on the subject company
2. Factual history of the company
3. Information about perceived competitors
4. Management's expectations and perceived strengthens and weaknesses

Practice Pointer

Rev. Rule 59-60 suggests five years or more of data should be considered; perhaps this figure was used since it approximated the average business cycle. In this global economy it is imperative that the valuation analyst understand the subject firm's business cycle as well as the local, regional, and in certain instances, the international economy and how these impact the subject firm's industry, because accordingly, the period to analyze could be longer or shorter, based on the analysts' judgment.

The analyst should use a checklist when requesting and obtaining documents and information. A sample checklist is included in Appendix IV of this manual. Even though the analyst may not require all of the items on the checklist, or may require some additional items, a checklist should still be used as an aid to organization and administration over this portion of the engagement.

The availability of audited or reviewed financial statements (as opposed to compiled statements or tax returns) sometimes leads the analyst to place a high degree of confidence in the statements. However, as will be discussed later in this chapter, GAAP rarely equates to true economic value. Therefore, adjustments for purposes of valuation are often made to even unqualified audited financial statements.

There is no universal method for analyzing a company's financial statements. Each analyst will begin at a different point, but no area can be skipped. It is important for the analyst to evaluate all the information provided so a decision to use or not to use any of the data is conscientiously and deliberately made.

C. ECONOMIC/NORMALIZED FINANCIAL STATEMENTS

It is often assumed that a good estimate of the value of a closely held business can be made by merely looking at the company's most recent balance sheet or income statement. This is certainly not the case. It is commonly accepted that most financial statements, even if prepared using Generally Accepted Accounting Principles (GAAP) or using a Tax Basis of Accounting (TBA), often present a picture that is very different from economic reality.

As a result, the analyst will generally prepare economic or "normalized" financial statements. Normalized financial statements will allow the analyst to better compare the subject company's financial performance and position to similar companies or industry averages. It also allows the analyst to better measure true economic income, assets and liabilities.

1. Objective

The main objective for recasting or adjusting the financial statements of a closely held company can be stated as follows:

> *"To adjust the financial statements or income tax returns of a business to more closely reflect its true economic financial position and results of operations on a historical and current basis."*

Balance sheet adjustments are made to reflect the current market values of both assets and liabilities.

Income statement adjustments are made to reflect the true economic results of operation similar to what a prospective buyer might require to have reasonable knowledge of the relevant facts. Normalizing adjustments are hypothetical and are not intended to present restated historical results or forecasts of the future in accordance with AICPA guidelines.

2. Purpose of Economic/Normalized Financial Statements

a) Should be useful for making comparisons to similar business or industry averages
b) Should be useful in making meaningful projections and forecasts
c) Should result in a representative level of benefits
d) Should (as nearly as possible) represent market values of net assets

3. Categories (or Areas) Of Normalization Adjustments

Normalizing adjustments generally fall into these categories:

a) Method of accounting (LIFO, FIFO, Weighted Average)
b) Non-recurring (transactions that are not reasonably expected to recur in the foreseeable future)
c) Non-operating/operating (this includes removal of non-operating assets and liabilities and their related earnings and/or expenses from historical financial statements)
d) GAAP compliance

Many normalizing adjustments cross boundaries. The analyst should be alert to the potential issues.

Common examples encountered by analysts include:

a) Accounting under GAAP (Generally Accepted Accounting Principles) or TBA (Tax Basis Accounting) or a combination thereof often results in a distorted picture of economic reality
b) Closely held business financial statements frequently have the following characteristics:

    (1) Highly aggressive expensing policies to reduce income taxes
    (2) Historical or cost basis in nature

c) Economic (normalized) financial statements can be costly to generate:

   (1) Supportable data just may not be available
   (2) Unfortunately, often results in adjusting those items that are relatively easy to support or easy to identify. The valuation analyst should spend enough time interviewing management to identify those areas most likely in need of adjustment. This will likely require some research to ascertain the norms and eccentricities of the industry for the subject company

d) Excessive compensation, perquisites, rent and similar effects of current ownership
e) Non-controlling (minority) vs. Controlling interest adjustments

   (1) Some valuation analysts believe that when valuing a non-controlling interest, those elements of the financial statement over which the non-controlling interest has no control should not be adjusted; others debate the appropriateness of adjusting an owner's compensation

Practice Pointer

With respect to adjustments for a minority interest, if any, valuation analysts must look at how state statutory laws define "control."

With the exception of states that have super majority provisions, "control" or "controlling interest" generally refers to more than a 50 percent interest. A minority shareholder lacks the capacity to distribute earnings, fundamentally change the structure of the entity, hire, or fire management, etc.

Where a majority interest is being valued, valuation analysts will typically make some or all of the following:

- **"Control Adjustments" such as:**
  - **Adjust compensation and benefits (typically these are non-qualified employee benefits)**
  - **Remove discretionary spending**
  - **Adjust for operating inefficiencies**
  - **Adjust financial structure (It is important to underscore that debt is not necessarily "bad" and that the subject company may be under-performing because it is not using leverage. It is equally important to point out when the subject firm may be "over-leveraged.")**

II. GAAP ACCOUNTING VERSUS ECONOMIC ACCOUNTING

A. GAAP PRINCIPLES THAT POTENTIALLY DISTORT TRUE ECONOMIC VALUE

"...within the framework of generally accepted accounting principles (GAAP), there is some latitude permitted in the preparation of financial statements."

George D. McCarthy/Robert E. Healy
Authors: Valuing a Company Practices and Procedures

1. Historical Cost Principle
2. Revenue Recognition Principle
3. Matching Principle
4. Consistency Principle
5. Objectivity Principle
6. Full Disclosure Financial Reporting Principle
7. Modifying (Or Exception) Principle

    a) Materiality Concept
    b) Conservatism
    c) Industry Peculiarities and Practices
    d) Cost-Benefit

B. COMMON ECONOMIC/NORMALIZING ADJUSTMENTS

Practice Pointer

This is an introductory valuation course. Therefore, in this chapter only a few of the most common normalization adjustments are presented. Candidates should note that an effort is underway to converge U.S. GAAP and IASB GAAP; the latter is not addressed in this introductory course.

The following are some of the more common economic/normalizing adjustments that a valuation analyst will encounter when valuing closely held businesses. It should be noted that the type of historical financial statements used could have a dramatic impact on the number of economic adjustments that need to be made. These distinctions are more clearly illustrated when comparing audited financial statements to tax basis or management prepared financial reports. Tax basis financial statements and internally prepared reports tend to put a greater emphasis on cash basis accounting.

The following is a list of the areas of possible economic adjustments. The list is not intended to be all-inclusive. The type and number of adjustments will vary between assignments and will be dependent upon the facts and circumstances in each case.

It should be noted that the valuation analyst's economic adjustments usually represent departure from generally accepted accounting principles (GAAP). A balance sheet adjustment to a historical asset or liability will be made to reflect the market value of that item. These adjustments usually bring net depreciated-historical-cost to market value and are made for valuation purposes. Such valuation adjustments show the “normalized” market value and can be offset against retained earnings.

On the other hand, economic adjustments made to the historical income statement do not necessarily require a corresponding or offset adjustment to the balance sheet. Removal of a one-time or non-recurring historical expense does not change any balance on the economic balance sheet. It is, therefore, likely that many economic adjustments to the income statement can be treated as one-sided entries. However, some valuation analysts will handle these economic adjustments to the income statement as increases or decreases to retained earnings. This is common when using valuation software that tracks both sides of the normalized adjustments. In either case, the valuator must understand the effect these normalized adjustments have on the normalized income and net-adjusted assets.

The valuation analyst may also need to consider the income tax effects for each adjustment made. This will depend upon whether or not the value is to be calculated on an after-tax basis or pre-tax basis.

1. Allowances for Doubtful Accounts

Goal: Adjust so that net accounts receivable represent the market value (as of date of valuation) of such receivables.

The estimate of the allowance for doubtful accounts should be analyzed and adjusted as necessary. The allowances should be challenged as they apply to either:

a) Trade accounts receivable
b) Notes receivable

This analysis can be done by comparing historical write-off of bad debts to the current estimated write-off to determine reasonableness. This analysis can also be done by comparing an aging of receivables to the allowance account in order to determine the adequacy of the allowance.

2. Notes Receivable

Goal: To reflect the market value (as of date of valuation) of notes receivable.

For a loan by the company to a shareholder the standard practice has been to write off the Note Receivable against Retained Earnings. This is a generalization. Yet, the valuation analyst needs to be cognizant of the purpose of the valuation and the facts and circumstances concerning the note. For example, in a valuation of a minority interest for purposes of redemption or sale, a productive shareholder note at market rates should not be adjusted. Another example is a divorce; the note may be a marital asset separately accounted for by the state court. **(Hence, the valuation analyst needs to make the judgment regarding both shareholder loan receivables, as well as payables, based on the purpose of the valuation and the facts and circumstances concerning the terms of the loan.)**

Many issues exist with respect to notes receivable, especially when the analyst discovers such receivables concern related parties. Notes are presumed to be valued at face value unless the analysis clearly establishes a different value. The following are several additional issues to consider:

a) Is there evidence of the indebtedness?
b) Is the note secured or unsecured?
c) If secured, what is the note secured by?
d) What factors are established relative to the valuation of notes by estate and gift tax regulations?

    (1) Interest rate
    (2) Date of maturity

(3) Full or partial inability to collect

(a) Insolvency of maker
(b) Insufficiency of collateral
(c) Other

i) Comparable sales
ii) Negotiable vs. non–negotiable

e) Are discounts noted for loss of use of money?

(1) Change of interest rates during term of note resulting in FMV being different than unpaid principal
(2) Does any documentation provide evidence of arms-length bargaining

f) Does the party intend to repay the obligation?

3. Inventory Valuation

Goal: Make adjustments to reflect the market value (as of the date of the valuation) of inventory.

a) FIFO vs. LIFO (LIFO follows the conservative and matching principles under GAAP)

A common normalizing adjustment involves the valuation of inventories, particularly when the method of costing inventory is the last in first out method (LIFO). From a balance sheet standpoint, the first in/first out method (FIFO) may better reflect the current value of inventory. However, many businesses have adopted the LIFO method. During periods of inflation, more costs are charged against income under LIFO, thus resulting in a lower tax liability.

If the valuation analyst determines that an adjustment from LIFO to FIFO should be made, the amount of the adjustment to inventory is usually the amount in the LIFO reserve. The corresponding adjustments to income on historical income statements are the yearly change in the LIFO reserve. That said, many valuators would not adjust income on a yearly basis for yearly changes in LIFO reserve. Those espousing this position are of the opinion that the adjustment is not necessary because the earnings more fairly represent economic earnings in the future.

b) Write down vs. Write-up

The company's write-down, write-off, and costing policies should also be analyzed. These practices will often alert you to other required adjustments. The existence of obsolete inventory should also be considered. Any appropriate adjustments should be made here as well. The same consideration for adjustment may be made if the analysis of costing policies varies from the standard for a given industry.

4. Depreciation Methods

Goal: Restate, if necessary, depreciation allowances to reflect true economic depreciation. However, for comparative purposes restate depreciation to reflect what is commonly found in the subject company's industry. This will improve comparability to industry averages.

The company's depreciation methods should be evaluated and a determination should be made as to the appropriateness of the method used. The analyst needs to keep in mind that the methods of depreciation a company uses may be tax motivated and may require adjustments. The analyst should determine what methods are commonly used in the industry or other similar companies, as well as what estimated useful lives are used.

a) Straight line method
b) Declining balance method
c) Sum-of-the-year's digits method
d) Units of production method
e) Tax methods (ACRS/MACRS, Section 179, Bonus Depreciation, etc.)

5. Leases (Capital vs. Operating)

Goal: To locate all material assets and liabilities and get these leases into the adjusted net assets of the company.

If the company being valued has equipment subject to a lease, the analyst should evaluate the lease and ascertain whether it is properly classified as a capital or an operating lease. A thorough understanding of Financial Accounting Standards Board Statement 13 (FAS 13), summarized in Appendix II, will help in making these determinations, and making any appropriate adjustment.

6. Adjust fixed asset values to reflect appreciation or impairment

7. Capitalizing vs. Expensing Policies

Goal: To adjust to industry standards if needed.

The capitalizing and expensing policies of the company should be analyzed in order to ascertain whether or not the policies are reasonable. Many companies have very aggressive policies in this regard and often exceed the limits of reasonableness. Any adjustments deemed necessary should be made to the economic financial statements. This should include an analysis of the company's capitalizing policies with respect to:

a) Fixed assets
b) Inventory
c) Research and development costs

8. Timing of Income and Expense Recognition

Goal: To restate earnings to align the subject company with the industry and thereby reflect patterns within the particular industry. (Note: A thorough understanding of industry-specific practices is very important to properly adjust this area of financial statements.)

The company's accounting methods regarding the timing of income recognition should be analyzed for reasonableness. One area where this issue is of particular concern and is likely to surface is in accounting for long-term contracts and installment sales.

a) Long-term contracts
b) Installment sales
c) Completed contract vs. percentage of completion
d) Other

9. Accounting for Taxes

Goal: To recognize a potential deferred tax liability.

When a company maintains its books and records using different methods for financial statement purposes than for tax purposes, a deferred tax liability is, in some instances, recognized and booked as a liability. If it can be established that the deferred liability will not result in an actual liability, this liability may need to be removed.

a) Deferred tax assets and liabilities

   (1) Flow-through method
   (2) Deferral method

b) Net operating loss carryovers

10. Extraordinary or Non-Recurring items

Goal: To make adjustments to remove one-time and/or non-recurring income and/or expense items from the historical earnings.

Accounting Principles Board Opinion No. 30 defines an extraordinary item as one that is:

Unusual in nature—the underlying event or transaction should possess a high degree of abnormality and be of a type clearly unrelated to, or only incidentally related to, the ordinary and typical activities of the entity, taking into account the environment in which the entity operates.

Infrequent in occurrence—the underlying event or transaction should be of a type that would not reasonably be expected to recur in the foreseeable future, taking into account the environment in which the entity operates.

Businesses will occasionally have extraordinary or non-recurring income or expenses. Some possible extraordinary or non-recurring income or expense items are the result of settlements of litigation, gains or losses from the sale of assets, gains or losses from the sale of business segments or insurance proceeds from key man or property casualty claims. One of the requirements of economic or normalized financial statements is to reflect earnings on a consistent basis. Therefore, any amounts deemed to be extraordinary or non-recurring should be removed to properly reflect the economic or normalized results of operations.

11. Compensation of Owners and Managers, Including Perquisites

Goal: To adjust officer or owner compensation to more closely reflect the reasonable compensation of a replacement executive.

> **Practice Pointer**
>
> **Numerous databases are available to help determine "reasonable compensation." It is important to understand the differences between the databases.**

A frequently encountered adjustment to the economic or normalized financial statements is for officer and owner compensation. Officers and owners typically compensate themselves based on what the business can afford. This amount of compensation is generally not commensurate with the true economic value of the services performed. The amount of the adjustment, if applicable, is the difference between the actual compensation paid and the average amount paid to other people in the same line of work in the same industry. Fringe benefits must be carefully considered in determining the full level of the officers'/owners' compensation. Information for making such adjustments can be obtained from:

a) Industry associations[2]
b) Employment agencies or employment search firms
c) Integra, Risk Management Associates, Annual Statement Studies[3]
d) Specific compensation related publications such as NIBM Executive Compensation, Panel Publishing (800–248–6426)
e) Economic Research Institute

12. Contingent Liabilities (usually not an income stream adjustment)

Goal: To consider including contingent liabilities in the adjusted net assets.

The analyst should attempt to ascertain whether any unrecorded or contingent liabilities exist. Some examples of these types of liabilities are:

a) Pending lawsuit(s)
b) Unrecorded product service liabilities
c) Unrecorded past service liabilities

[2] KeyValueData has established relationships with several industry associations.
[3] Data available through KeyValueData – requires payment of copyright fee.

d) Unrecorded pension plan liabilities
e) Unrecorded accrued warranty liabilities
f) Environmental liabilities
g) Capital gains tax on unrealized appreciation of assets

The financial statements should be adjusted to reflect the effects of any of the above items. FAS 5 states that any contingent liability, which is both probable and estimable, should be shown or accrued in the financial statements. Further, analysts should understand the current case law regarding the recognition of capital gains tax on unrealized appreciation of assets as it relates to the purpose for which the valuation is required.

13. Operating vs. Non-operating Items

Goal: To identify and remove non-operating assets (and any related liabilities) from the valuation process.

The analyst frequently encounters items that are non-operating in nature. In most cases, it is appropriate to value these items apart from the operating portion of the company. If the analyst values non-operating assets separately, it must be done so as to exclude any income generated or expenses incurred by the non-operating assets. Related income and expense should be valued separately from the earnings base capitalized in valuing the company's operations.

14. Intangibles

Goal: To identify and value intangible assets (see FAS 141, paragraph A 14 for a list of intangible assets). In many circumstances, the value of intangibles will be estimated through their impact on the benefit stream.

III. CONSTRUCTING ECONOMIC/NORMALIZED BALANCE SHEETS

A. OVERVIEW

In establishing a "market value" balance sheet, the analyst must convert or adjust the existing balance sheet, whether GAAP or Other Comprehensive Basis of Accounting (OCBOA), on a line-by-line basis. When using the balance sheet to establish the "fair market value" of a business, the market value of all the net assets and liabilities must be established.

B. ILLUSTRATION

The following chart demonstrates typical adjustments to the Balance Sheet:

Economic/Normalized Balance Sheet Adjustment Procedures

Note: "Replacement cost" refers to the cost to replace an asset under a particular fact situation.

Account Description	Potential Adjustment Procedure
Cash	Adjust for cash in excess of operating needs or consider as non-operating asset
Trade Note and Contracts Receivable	Generally, adjust to the amount collectible; remove owner receivable (although this is not always the case and is dependant on facts and circumstances); analyze policy for allowance for doubtful accounts.
Marketable Securities	Adjust to market value when appropriate.
Inventories:	
Raw Materials	Adjust to replacement cost and write-down unusable inventory.
Work-In-Progress	Adjust to replacement cost; analyze costing procedures/pricing policies.
Finished Goods	Adjust to replacement cost; analyze costing procedures/pricing policies; analyze write-down/write-off policies.
Excess Inventory	Potential adjustment if excessive inventory is carried.
Prepaid Items	Adjust to unamortized portion; analyze amortization policies; look for any prepaid expenses written off.
Fixed Assets	Adjust to market value or estimated depreciated cost to replace; analyze capitalization policy; analyze depreciation methods.
Leased Equipment	Adjust to replacement cost; analyze FAS 13 criteria and requirements; tax lease versus conditional sales contract; capital versus operating.
Real Estate	This asset may inflate the operating assets and distort ratios, returns on assets and capitalization of assets. You should consider whether to treat the real estate as a non-operating asset and reduce the benefit stream by any related revenues and expenses.
Intangible Assets:	
Goodwill	Adjust to estimated value, using prescribed method.
Patents	Adjust to estimated value, using prescribed method.
Franchise Agreements	Adjust to replacement cost.
Leasehold Interest	Favorable lease-present value of benefit over the term, discounted at several points above cost of debt.
Deferred Credits/Debits	Analyze for proper inclusion of any deferred tax liability, NOL carryovers, etc.
Non-Operating or Personal Assets	Consider removal from statement. Include related debt, if any.
Liabilities	Adjust to actual; analyze figures for unrecorded liabilities, either realized or contingent.
Capital Gains Tax	Recognize the tax effects from any adjustments in asset values above, if appropriate.

IV. CONSTRUCTING ECONOMIC /NORMALIZED INCOME STATEMENTS

A. OVERVIEW

Economic/normalized historical income statements are established for three main purposes:

1. To provide the analyst information for making comparisons.
2. To assist the analyst in making projections regarding future benefit streams or earnings.
3. To serve as a basis for determining/estimating additional value from unrecorded intangible assets (e.g., goodwill, etc.).

It should be noted that net pre-tax operating profit is often regarded as an important measurement of income. Therefore, economic adjustments to non-operating income or expense items may not be necessary. (Note: If the selected benefit stream is pre-tax, be sure that a pre-tax capitalization rate is used.)

B. ILLUSTRATION

The following chart illustrates possible adjustments to the Income Statement:

Account Description	Potential Adjustment/Procedure
Income	Remove all non-operating income (interest income, gain on sale of assets, etc.); analyze company's policies for recognizing revenue (cash basis versus accrual basis, completed contracts, etc.).
Cost of Sales	Analyze costing procedures for inventory and procedures involving write-ups and write-downs. Any adjustments to ending inventory should also be reflected as cost of goods sold (CGS). Adjustments should be made over the same period as the applicable balance sheet.
Officers' Compensation	In order to provide a meaningful comparison, officers' salaries should reflect comparable market salaries. This information is often available from trade associations, personnel managers and others in the same industry.
Other Salaries	Remove salaries (and benefits if any) of spouses, children, relatives, friends or others who are not contributing to the operation of the business.
Travel and Entertainment	Through discussions with the owner or the company's accountant, the analyst may discover travel and entertainment expenses are personal in nature and do not contribute directly to the operation of the company. These expenses should be eliminated to reflect economic earnings.

Rent	If the company either owns its own real estate or rents its facilities from the company owner(s), the analyst should compare the company's rent expense to the market and make any upward or downward adjustments as necessary.
Professional Fees	Quite often, owners of small businesses have personal expenses for legal, financial planning and tax preparation fees charged to their businesses. This area should be analyzed and adjustments should be made to more accurately reflect economic earnings.
Employee Benefits	This is an area that is often abused by owners of closely held companies. These expenses need to be adjusted to reflect realistic levels of employee benefits.
Auto Expense	Personal or other non-business automobile expense paid for by the company should be removed. Conversations with the owner/manager can often help to determine the amount of this adjustment.
Depreciation	If it is determined that the method(s) of calculating depreciation are too aggressive or conservative, adjustments must be made to more realistically reflect economic income as well as the economic balance sheet items.
Other	The analyst should search for other expenses that benefit the owners/managers that fall outside the normal costs of operations and make the appropriate economic balance sheet and income statement adjustments.

C. INCOME TAX EFFECT ON ECONOMIC AND NORMALIZING ADJUSTMENTS

Many analysts believe it is more theoretically sound to base their valuation and analysis on pre-tax earnings. One of the main arguments in support of this premise is that a company, through astute tax planning may be able to avoid in the short term the payment of income taxes. As such, the after-tax earnings will be the same as pre-tax earnings.

A crucial point to consider in dealing with income taxes is the nature of the investment being valued. A buyer who is considering acquiring an interest in a company as an asset purchase should be aware a step-up in basis will be received, resulting in additional depreciation and tax benefits. In this case, the tax liability for any capital gains will be with the former owner. As such, the buyer should be willing to pay full market price for the assets (less any commissions or broker's fees).

In most instances, however, the analyst is engaged to value the stock of a company to be purchased by a potential investor. In the case of a stock purchase, the buyer would not receive a step-up in basis on the underlying assets. In addition, a buyer would be assuming a contingent tax liability on the difference between fair market value and book value of the underlying assets.

Because of both of these factors, the buyer would surely discount any amount paid to the seller by an amount possibly as high as the contingent tax liability. If the purpose of the valuation is estate or gift tax, the valuation analyst should obtain an understanding of current case law regarding the treatment of contingent tax liability on unrealized gains on corporate assets.

In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information which many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentor the valuation analyst may know. Those at the top of the field continue to grow.

Recommended reading includes, but is not limited to:

- Burkert, Rodney P., "Adjusting Owner's Compensation Usually Inappropriate When Valuing a Minority Interest," Reader/Edition Exchange, Shannon Pratt's *Business Valuation Update*, June 1998.
- Lurie, James B., "Normalization and Control Premiums," *The Valuation Examiner*, M/J 2000.
- Taub, Maxwell, "Valuing a Minority Interest: Whether to Adjust Elements of a Financial Statement Over Which the Minority Shareholder Has No Control," *Business Valuation Review*, March 1998, p. 7-9.
- Maxwell Taub Article "Valuing a Minority Interest: Whether to Adjust Elements of a Financial Statement Over Which the Minority Shareholder Has No Control," *Business Valuation Review*, March 1998, pp. 7-9.

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BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 3

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 3: Generating Economic/Normalized Financial Statements

Advanced Products Company, Inc.

RMA Liquidity Ratios

Based On Historical Statements	RMA 2013 Advance 2013	RMA 2012 Advance 2012	RMA 2011 Advance 2011	RMA 2010 Advance 2010	RMA 2009 Advance 2009	Min	Max	Mean	Median
LIQUIDITY RATIOS:									
Upper Current Ratio	2.30	3.00	2.40	2.20	2.40	2.20	3.00	2.46	2.40
Median Current Ratio	1.50	1.50	1.40	1.30	1.60	1.30	1.60	1.46	1.50
Lower Current Ratio	1.00	1.00	1.00	0.90	1.10	0.90	1.10	1.00	1.00
Subject Current Ratio	3.40	2.80	2.10	1.70	1.60	1.60	3.40	2.32	2.10
P-Tile Rank	82nd P-Tile	Over 90th P-Tile	0.00	65th P-Tile	53rd P-Tile				
Upper Quick (Acid-Test) Ratio	1.90	1.60	1.70	1.10	1.80	1.10	1.90	1.62	1.70
Median Quick (Acid-Test) Ratio	0.90	0.90	0.70	0.70	0.80	0.70	0.90	0.80	0.80
Lower Quick (Acid-Test) Ratio	0.40	0.50	0.50	0.50	0.50	0.40	0.50	0.48	0.50
Subject Quick (Acid-Test) Ratio	2.10	1.60	1.30	0.80	0.90	0.80	2.10	1.34	1.30
P-Tile Rank	79th P-Tile	Over 90th P-Tile	0.00	62nd P-Tile	52nd P-Tile				
Upper Revenues/Receivable	18.80	12.60	14.40	14.80	12.60	12.60	18.80	14.64	14.40
Median Revenues/Receivable	11.80	7.60	8.90	9.20	8.20	7.60	11.80	9.14	8.90
Lower Revenues/Receivable	7.80	5.50	6.20	5.70	5.20	5.20	7.80	6.08	5.70
Subject Revenues/Receivable	9.90	9.70	10.40	9.40	8.10	8.10	10.40	9.50	9.70
P-Tile Rank	40th P-Tile	Over 90th P-Tile	0.00	51st P-Tile	49th P-Tile				
Upper Days' Receivables	19	29	25	25	29	19	29	25	25
Median Days' Receivables	31	48	41	40	45	31	48	41	41
Lower Days' Receivables	47	66	59	64	70	47	70	61	64
Subject Days' Receivables	37	38	35	39	45	35	45	39	38
P-Tile Rank	35th P-Tile	Over 90th P-Tile	0.00	59th P-Tile	30th P-Tile				
Upper Cost of Sales to Inventory	32.20	22.10	11.60	14.40	13.90	11.60	32.20	18.84	14.40
Median Cost of Sales to Inventory	7.70	6.80	5.20	6.80	6.80	5.20	7.70	6.66	6.80
Lower Cost of Sales to Inventory	4.10	3.10	3.00	2.60	2.90	2.60	4.10	3.14	3.00
Subject Cost of Sales to Inventory	6.90	6.00	7.70	5.60	6.70	5.60	7.70	6.58	6.70
P-Tile Rank	43rd P-Tile	Over 90th P-Tile	0.00	41st P-Tile	49th P-Tile				
Upper Days' Inventory	11	17	31	25	26	11	31	22	25
Median Days' Inventory	47	54	70	54	54	47	70	56	54
Lower Days' Inventory	89	118	122	140	126	89	140	119	122
Subject Days' Inventory	53	61	47	65	54	47	65	56	54
P-Tile Rank	32nd P-Tile	Over 90th P-Tile	0.00	32nd P-Tile	30th P-Tile				
Upper Cost of Sales to Payables	30.90	12.80	19.30	15.90	17.90	12.80	30.90	19.36	17.90
Median Cost of Sales to Payables	7.80	7.00	8.50	8.40	9.40	7.00	9.40	8.22	8.40
Lower Cost of Sales to Payables	4.10	4.50	5.60	5.50	5.60	4.10	5.60	5.06	5.50
Subject Cost of Sales to Payables	13.00	12.00	9.20	6.80	5.90	5.90	13.00	9.38	9.20
P-Tile Rank	63rd P-Tile	Over 90th P-Tile	0.00	38th P-Tile	30th P-Tile				
Upper Days' Payables	12	29	19	23	20	12	29	21	20
Median Days' Payables	47	52	43	43	39	39	52	45	43
Lower Days' Payables	89	81	65	66	65	65	89	73	66
Subject days' Payables	28	30	40	54	62	28	62	43	40
P-Tile Rank	68th P-Tile	Over 90th P-Tile	0.00	20th P-Tile	26th P-Tile				
Upper Sales to Working Capital	6.60	4.30	4.90	6.70	5.30	4.30	6.70	5.56	5.30
Median Sales to Working Capital	11.20	12.10	11.90	16.30	10.90	10.90	16.30	12.48	11.90
Lower Sales to Working Capital	365.90	181.40	205.90	-94.20	30.80	-94.20	365.90	137.96	181.40
Subject Sales to Working Capital	6.00	6.40	8.40	10.50	12.30	6.00	12.30	8.72	8.40
NAICS	423450	423450	423450	423450	423450				

RMA Operating Ratios

Based On Historical Statements	RMA 2013 Advance 2013	RMA 2012 Advance 2012	RMA 2011 Advance 2011	RMA 2010 Advance 2010	RMA 2009 Advance 2009	Min	Max	Mean	Median
OPERATING RATIOS:									
RMA Gross Profit Margin	44.10%	45.20%	47.30%	48.70%	44.00%	44.00%	48.70%	45.86%	45.20%
Subject Gross Profit Margin	37.33%	38.24%	37.00%	36.00%	36.00%	36.00%	38.24%	36.91%	37.00%
P-Tile Rank	Under 10th P-Tile	Under 10th P-Tile	Under 10th P-Tile	Under 10th P-Tile	Under 10th P-Tile				
Upper EBT/Tangible Worth	73.10%	36.90%	45.50%	62.80%	66.70%	36.90%	73.10%	57.00%	62.80%
Median EBT/Tangible Worth	33.60%	14.00%	21.60%	30.90%	36.30%	14.00%	36.30%	27.28%	30.90%
Lower EBT/Tangible Worth	6.40%	3.10%	-6.30%	7.00%	15.40%	-6.30%	15.40%	5.12%	6.40%
Subject EBT/Tangible Worth	27.06%	37.04%	32.70%	32.60%	30.36%	27.06%	37.04%	31.95%	32.60%
P-Tile Rank	44th P-Tile	77th P-Tile	66th P-Tile	51st P-Tile	45th P-Tile				
Upper EBT/Total Assets	31.80%	15.50%	15.10%	19.30%	19.90%	15.10%	31.80%	20.32%	19.30%
Median EBT/Total Assets	8.20%	5.30%	4.60%	8.00%	6.50%	4.60%	8.20%	6.52%	6.50%
Lower EBT/Total Assets	0.60%	0.70%	-1.90%	0.80%	2.60%	-1.90%	2.60%	0.56%	0.70%
Subject EBT/Total Assets	18.12%	22.13%	16.39%	13.06%	11.26%	11.26%	22.13%	16.19%	16.39%
P-Tile Rank	64th P-Tile	82nd P-Tile	74th P-Tile	63rd P-Tile	62nd P-Tile				
Upper Fixed Asset Turnover	449.00	262.00	106.90	102.70	79.40	79.40	449.00	200.00	106.90
Median Fixed Asset Turnover	76.40	44.00	28.60	31.90	22.80	22.80	76.40	40.74	31.90
Lower Fixed Asset Turnover	21.70	11.70	11.20	5.80	13.30	5.80	21.70	12.74	11.70
Subject Fixed Asset Turnover	19.00	22.20	20.30	17.70	13.50	13.50	22.20	18.54	19.00
P-Tile Rank	22nd P-Tile	34th P-Tile	37th P-Tile	35th P-Tile	28th P-Tile				
Upper Total Asset Turnover	4.90	3.70	3.70	3.80	3.40	3.40	4.90	3.90	3.70
Median Total Asset Turnover	3.20	2.50	2.40	2.60	2.60	2.40	3.20	2.66	2.60
Lower Total Asset Turnover	2.30	1.70	1.80	1.90	1.80	1.70	2.30	1.90	1.80
Subject Total Asset Turnover	3.40	3.40	3.50	3.40	3.40	3.40	3.50	3.42	3.40
P-Tile Rank	54th P-Tile	72nd P-Tile	73rd P-Tile	65th P-Tile	76th P-Tile				
EXPENSE TO REVENUE RATIOS:									
Upper % Deprtn., Depltn., Amort./Revenue	0.10%	0.70%	0.50%	0.60%	0.70%	0.10%	0.70%	0.52%	0.60%
Median % Deprtn., Depltn., Amort./Revenue	0.50%	1.40%	1.00%	1.40%	1.60%	0.50%	1.60%	1.18%	1.40%
Lower % Deprtn., Depltn., Amort./Revenue	1.50%	4.10%	3.40%	5.70%	2.90%	1.50%	5.70%	3.52%	3.40%
Subject % Deprtn., Depltn., Amort./Revenue	0.86%	0.88%	0.82%	1.32%	1.37%	0.82%	1.37%	1.05%	0.88%
P-Tile Rank	20th P-Tile	66th P-Tile	70th P-Tile	59th P-Tile	57th P-Tile				
Upper % Officer's &/or Owner's Compensation/Revenue	2.90%	4.00%	2.80%	2.00%	2.20%	2.00%	4.00%	2.78%	2.80%
Median % Officer's &/or Owner's Compensation/Revenue	4.40%	6.00%	4.10%	4.50%	4.20%	4.10%	6.00%	4.64%	4.40%
Lower % Officer's &/or Owner's Compensation/Revenue	5.70%	10.80%	10.70%	9.70%	6.90%	5.70%	10.80%	8.76%	9.70%
Subject % Officer's &/or Owner's Compensation/Revenue	2.89%	2.61%	2.85%	2.53%	2.67%	2.53%	2.89%	2.71%	2.67%
P-Tile Rank	77th P-Tile	83rd P-Tile	78th P-Tile	79th P-Tile	80th P-Tile				
NAICS	423450	423450	423450	423450	423450				

RMA Coverage Ratios

Based On Historical Statements	RMA 2013 Advance 2013	RMA 2012 Advance 2012	RMA 2011 Advance 2011	RMA 2010 Advance 2010	RMA 2009 Advance 2009	Min	Max	Mean	Median
COVERAGE RATIOS:									
Upper Times Interest Earned	11.60	13.90	15.10	10.80	13.50	10.80	15.10	12.98	13.50
Median Times Interest Earned	3.50	4.30	3.10	5.10	3.30	3.10	5.10	3.86	3.50
Lower Times Interest Earned	1.40	1.00	0.00	1.50	1.80	0.00	1.80	1.14	1.40
Subject Times Interest Earned	13.50	12.20	8.30	4.80	18.90	4.80	18.90	11.54	12.20
P-Tile Rank	78th P-Tile	74th P-Tile	66th P-Tile	49th P-Tile	82nd P-Tile				
LEVERAGE RATIOS:									
Upper Fixed Assets/Tangible Worth	0.00	0.00	0.10	0.10	0.20	0.00	0.20	0.08	0.10
Median Fixed Assets/Tangible Worth	0.20	0.30	0.60	0.50	0.40	0.20	0.60	0.40	0.40
Lower Fixed Assets/Tangible Worth	1.90	2.40	1.70	2.90	3.20	1.70	3.20	2.42	2.40
Subject Fixed Assets/Tangible Worth	0.30	0.30	0.30	0.50	0.70	0.30	0.70	0.42	0.30
Upper Debt-to-Tangible Net Worth	1.00	1.00	0.90	1.30	1.20	0.90	1.30	1.08	1.00
Median Debt-to-Tangible Net Worth	2.30	2.20	2.90	3.40	3.20	2.20	3.40	2.80	2.90
Lower Debt-to-Tangible Net Worth	130.00	23.40	12.20	12.00	10.30	10.30	130.00	37.58	12.20
Subject Debt-to-Tangible Net Worth	0.50	0.70	1.00	1.50	1.70	0.50	1.70	1.08	1.00
RMA Debt-to-Equity	3.13	2.65	3.02	3.27	2.64	2.64	3.27	2.94	3.02
Subject Debt-to-Equity	0.50	0.70	1.00	1.50	1.70	0.50	1.70	1.08	1.00
NAICS	423450	423450	423450	423450	423450				

1. Using the above illustration for sample year 2013, a comparative analysis for the Advanced Products Company, Inc. shows the industry profit margin per RMA to be 44.1%, whereas Advanced shows:

    a. 36.00%
    b. 37.00%
    c. 37.33%
    d. 38.24%

2. Using the illustration for year 2013, a comparative analysis for the Advanced Products Company, Inc. RMA shows the median industry accounts receivable turnover ratio to be 11.8 and Advanced accounts receivable turnover ratio to be 9.9.

    a. This indicates industry as a whole is better managing accounts receivable than Advanced.
    b. This indicates Advanced is better at managing accounts receivable than the industry as a whole.
    c. This indicates that the industry as a whole and Advanced both carefully monitor accounts receivable.
    d. This indicates that the industry as a whole and Advanced do not monitor accounts receivable with enough care, and both need to strive toward 5.0 as the ideal.

3. The valuation analyst needs historical performance data in order to:

    a. Decide whether or not the subject company is using the proper taxed based accounting
    b. Check and see whether or not the owner is taking too much in salary
    c. Find whether or not national economic reality may be properly reflected in the current year data.
    d. Analyze and compare various years in the company history to identify trends, strengths, weaknesses, and look for potential adjustments to normalize if adjustments are necessary and/or deemed appropriate

4. Advanced Product's accounting shows various items of machinery that were purchased three years ago for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000. Would a balance sheet adjustment be advised?

    a. Yes. The valuation analyst should adjust the balance sheet to fair market value and consider adjustment of depreciation expense on the income statement as well as the related tax affect on both the balance sheet and income statement.
    b. No. Valuation analysts do not have control over equipment, and adjusting the balance sheet would negatively skew company value.
    c. Yes. Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory in 1980. This data shows the adjustment was already made by the company.
    d. No. The company owns two of its three facilities and leases the other. Advanced is not likely to update machinery for a leased facility.

5. Net Income can be based on GAAP (Generally Accepted Accounting Principles) or TBA (Tax Basis Accounting), but neither may be economic reality.

   a. This is true because TBA is done to minimize payments to banks and other lending institutions.
   b. This is true as GAAP is too specific, and each company is unique. Therefore–even using the same set of accounting practices–no two companies will keep their books in the same exact way.
   c. This is true as corporations (all kinds), public companies, partnerships, sole proprietorships, privately held family businesses, and any varying degrees in between, all have different rules and principles under which they are found. These affect fiscal statements, and the valuation analyst must know what the underlying concept of any given company is as opposed to what it may state in the numbers.
   d. This is true as GAAP accounting is so similar to TBA that the numbers for one company in the same year will be different. Economic reality does not need to be reflected in either GAAP or TBA.

6. When a valuation analyst is able to obtain audited GAAP compliance financial statements, most likely, normalized adjustments will not be necessary because of the high level of confidence placed on these issued financial statements.

   a. True
   b. False

7. The main objective for adjusting the financial statements of a closely held company is:

   a. To determine if the owner is taking unreasonable compensation
   b. To adjust the financial statements of a business to more closely reflect its true economic financial position and results of operations on a historical and current basis
   c. To adjust the financial statements to ensure the financial statements are in conformity with Generally Accepted Accounting Principles
   d. To adjust the financial statements so there is consistency in the financial statements over the time period the valuator is analyzing

8. Which one of the following is NOT a general category of normalized adjustments?

   a. Removal of excess cash
   b. Inventory adjustment when inventory is recorded on a FIFO basis
   c. Reasonable compensation for owners
   d. Bad debt adjustment for a significant write off due to an unexpected bankruptcy filing by a major customer

9. Which of the following are considered “control” adjustments?

   a. Officers’ compensation and depreciation adjustments
   b. Discretionary spending and depreciation adjustments
   c. Discretionary spending and officers’ compensations
   d. Depreciation adjustments and bad debt adjustments

10. A pending lawsuit, unrecorded pension liabilities, and capital gains tax on unrealized appreciation of assets are what type of normalized adjustments:

    a. Non-operating adjustments
    b. Non-reoccurring adjustments
    c. Contingent liability adjustments
    d. Timing adjustments

11. The cost to replace an asset under a particular fact situation is known as:

    a. Fair market value
    b. Fair value
    c. Replacement cost
    d. Strategic value

12. In 2006, a company purchased a new operating press costing $300,000. The company elected Section 179 depreciation for this piece of equipment. An appropriate normalization adjustment would be:

    a. Do nothing
    b. Adjust the income statement, only to add back Section 179 depreciation
    c. Adjust the income statement to add back the Section 179 depreciation and adjust the balance sheet to reflect the fair market value of the asset
    d. Adjust the balance sheet only to reflect the fair market value of the equipment

Bonus: Issues to Consider in Chapter 3

Item 1	The estimated reserve for non-collectible accounts receivable is $50,000 and is based on approximately one percent of the company's most recent annual gross sales. Both the company and its auditors believe that the reserve is reasonable. However, after reviewing the receivable list, the president of the company estimates that actual bad debts on existing receivables will be only about $20,000.
Note	Consider if the President has knowledge that supersedes the company and the auditors' position on the non-collectible accounts. Will this adjustment be self-serving to the President or does it accurately reflect the current financial position?
Item 2	Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory. Therefore, it is determined that Advanced's actual current inventory is understated by $80,000.
Note	Consider an adjustment to inventory for the LIFO reserve. Consider if an adjustment must be made for each year or only the current year.
Item 3	The company owns two of its three facilities and leases the other. Due to a recent refinance proposal, the company obtained an MAI appraisal on both of the properties it owns. The total MAI appraisal for both properties is $250,000 and the current book value for both properties is $125,000.
Note	Adjust the property to fair market value. Consider adjustment for deferred taxes on the built-in gains of the property.
Item 4	The company has various items of machinery that were purchased three years earlier for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000.
Note	Adjust the balance sheet to fair market value. Consider adjustment of depreciation expense on income statement, as well as the related tax effect on the balance sheet and income statement.
Item 5	The company has a negotiable note receivable, received in an arms-length transaction, bearing 12 percent interest over five years. If this note represents a safe loan with minimal risk of non-collection, its value is determined by comparison with similar safe notes. If the going rate for similar safe notes is 18 to 20 percent, then the face value of the note must be discounted to account for the interest rate differential.
Note	Consider reducing the face value of the note to reflect the present value at 12 percent versus similar safe notes at 18 percent.

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CHAPTER FOUR

DEFINING AND ESTIMATING THE FUTURE BENEFIT STREAM

"Business without profit is not business anymore than a pickle is a candy."
Charles F. Abbott

Practice Pointer

In this chapter, we will discuss the following:

- **Selecting and measuring the type of future benefits to be valued**
- **Distinguishing cash flows to equity from cash flows to invested capital**
- **Forecasting future economic benefits**

After completing the financial analysis of the company, normalizing the historical earnings, analyzing the economic and industry conditions and forecasts and evaluating the internal and external risk factors of the company, the analyst is in a position to derive the estimate or conclusion of value. The following issues are addressed to derive estimate or conclusion of value:

- How will we define and measure the future benefit stream to be used in valuing the company?
- Will we use "historical" or "projected" economic income to estimate or project the future benefit stream?
- Will we be projecting future benefits to equity, or to the entire company (invested capital)?

I. DEFINING AND MEASURING THE FUTURE BENEFIT STREAM

To answer the first question above, the valuation analyst will consider the following:

A. NATURE OF BUSINESS INTEREST BEING VALUED; CONTROLLING VS. NON-CONTROLLING

The type of benefits may depend on the nature of the interest being valued. The estimated future benefit stream may be representative of a "controlling" interest benefit stream or a "non-controlling" interest benefit stream. The analyst must understand the correlation between the nature of the interest and the corresponding benefit stream. Capitalizing or discounting a controlling interest benefit stream will result in a "controlling interest value." Correspondingly, capitalizing or discounting a non-controlling interest benefit stream will result in a "non-controlling interest value."

Further, the type of benefits may depend on whether the nature of the interest being valued is an equity interest, invested capital, intangible asset, tangible asset, etc. The type of benefit needs to correspond to the interest having access to the benefit. For example:

1. Net cash flow to equity will result in the value of the equity
2. Net cash flow to invested capital will result in the value of the invested capital

B. PURPOSE OF THE VALUATION

The type of benefits is often defined or suggested, based on the purpose of the valuation (refer to the various purposes of valuations discussed in Chapter One). It is often the case that the parties seeking the valuation define the type of benefits to be used in a valuation. Such would be the case if you were asked to estimate the value of a business based on an established buy-sell agreement which defined the type of earnings to be employed in the valuation. For litigation purposes, state law may define the type of benefits. For transactional purposes, the type of benefits may be defined by parameters used to develop the market multiples.

C. METHOD USED TO SUPPORT THE ESTIMATE OR CONCLUSION OF VALUE

In some cases the type of earnings is defined by the method used in estimating the value of the business (see Chapter Six). For example, the type of earnings used with the Price Earnings Ratio Method or the Dividend Paying Capacity Method is the net income of the company. When using the Capitalization of Earnings Method or Excess Earnings Return on Assets over Reasonable Rate Method, the type of earnings used could be either net cash flow to equity, net income before tax or net income after-tax, as long as your capitalization rate is consistent with the type of earnings used.

The type of earnings generally used in the Discounted Economic Income Method (also referred to as the Discounted Future Earnings or Discounted Cash Flows) is Net Cash Flow to Equity or Net Cash Flow to Invested Capital. Net Income Before Tax or Net Income After-tax is usually the type of earnings used with the Excess Earnings Return on Assets (Treasury Method) as long as the rate of return on assets is based on the same type of earnings. For example, if the rate of return on assets is based on Net Income Before Taxes, then the valuator should use the same type of earnings.

D. NET CASH FLOWS VS. GAAP EARNINGS

When using an income approach, some valuators prefer net cash flows as the type of earnings to use as a measurement of economic income. The reasons net cash flows are generally preferred are:

1. Net cash flows represent the type of earnings most investors are seeking and expect to receive from their investments.
2. Most of the cost of capital derived from the capital markets and other empirical data that is used to derive the discount rate represents net cash flows as the type of earnings to measure economic income. For example, the data used in the Ibbotson Build-up Method to derive the discount rate is based on net cash flows as the measurement of economic income.

3. Net cash flows bring into the income approach the expected future changes in the balance sheet. Net cash flows will take into consideration the future expected working capital needs, capital expenditures, and changes in long-term debt necessary to support the projected earnings of the company.

GAAP earnings (or net income) are sometimes used as the type of benefits to measure economic income when the valuation analyst expects the future earnings will approximate the future net cash flows. Normally, this will be the case when the capital expenditures, net working capital requirements and changes in long-term debt to support the company's projected operations are insignificant in relationship to the earnings. In addition, even when capital expenditures are significant, this will be the case when depreciation expense approximates capital expenditures.

When determining whether to use net cash flows or net income, the analyst needs to carefully analyze the future expected trend in earnings and cash flows. The analyst must determine the future working capital needs, capital expenditures, and borrowings and repayments of long-term debt to support the expected future operations in order to determine the economic benefits available to the equity holder. If earnings are used, the analyst needs to explain in the report why he/she expects the future earnings will approximate the future cash flows of the company. Or when using net income as your measure of economic income, the valuator may convert the discount/capitalization rate derived from net cash flow data by the cash to earnings factor, if material (see Chapter Five).

E. OTHER TYPES OF EARNINGS

Other benefits streams used as a measurement of economic income include earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation and amortization (EBITDA), seller's discretionary cash flow, operating gross cash flows, free cash flows, etc. These types of benefits are generally used as a measurement of economic income when applying a market approach. This is because these types of benefits are generally capitalized based on pricing multiples derived from transactional data of comparable companies (see Chapter Six).

F. SELECTING THE TYPE OF BENEFITS AS A MEASUREMENT OF ECONOMIC INCOME

Practice Pointer

It is important to distinguish net cash flow to equity from net cash flow to invested capital and understand which is most appropriate.

Net cash flow to equity is also referred to as the Direct Equity Method. It is "direct to equity" because debt has been serviced (in the calculation below, net income is derived after subtracting both interest expense, and future debt repayments). Hence, what remains is net cash flows available to equity owners.

Net cash flow to invested capital is also referred to as the Invested Capital Method. This is the cash flow available to service invested capital (e.g., equity and interest bearing debt).

As indicated above, net cash flows are generally preferred by most valuators as the type of benefits used as a measurement of economic income. This is true whether using net cash flows to value the equity only or net cash flows to invested capital to value the total invested capital.

1. Net Cash Flow to Equity

In valuing equity by either discounting or capitalizing expected cash flows (keeping in mind the difference between discounting and capitalizing), we define net cash flow to equity as follows:

	Net Income (after-tax)
+	Non-cash charges (e.g., depreciation, amortization, deferred revenue, deferred taxes)
–	Capital expenditures necessary to support projected operations
–	Additions (deletions) to net working capital necessary to support projected operations
+	Changes in long-term debt from borrowings necessary to support projected operations
–	Changes in long-term debt for repayments necessary to support projected operations
=	**Net cash flow to equity**
–	**Dividends paid to preferred shareholders**
=	**Net cash flow to common shareholders' equity (after-tax)**

2. Net Cash Flow to Invested Capital

In valuing the entire **invested capital** of a company, project, or division by discounting or capitalizing expected cash flows, we define net cash flow to invested capital as follows:

	Net income (after-tax)
+	Non-cash charges (e.g., depreciation, amortization, deferred revenue, deferred taxes)
–	Capital expenditures necessary to support projected operations
–	Additions (deletions) to net working capital necessary to support projected operations
+	Interest expense net of the tax benefit resulting from interest as a tax deductible expense
=	**Net cash flow to invested capital (after-tax)**

Practice Pointer

When discounting net cash flow to equity, the appropriate discount rate is the cost of equity.
When discounting net cash flow to invested capital, the appropriate discount rate is the weighted average cost of capital (WACC).

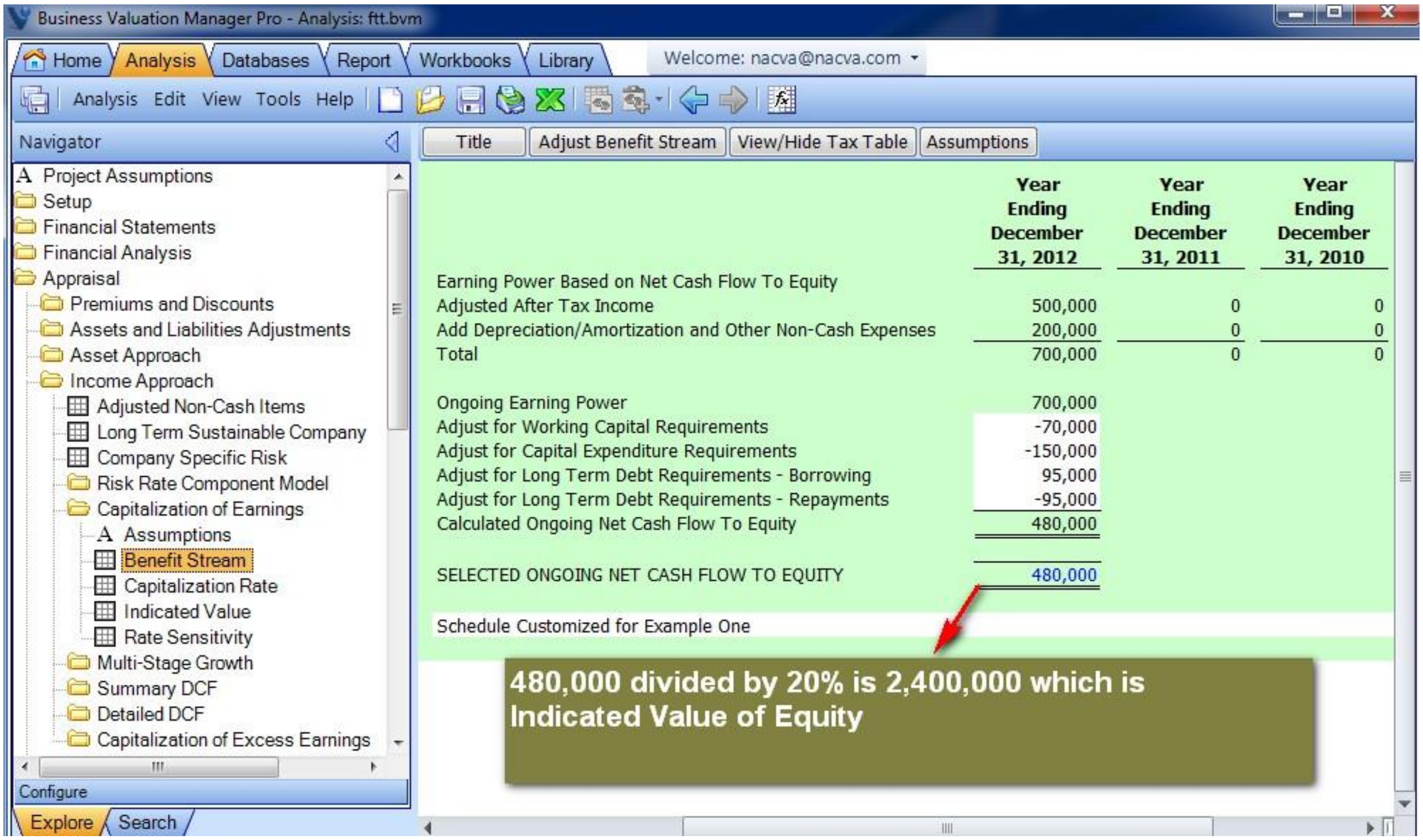
When calculating the net cash flows, the analyst must determine the components of cash flows based on the cash flows necessary to support projected operations. Analysts commonly make mistakes when the components of cash flows are determined based on historical data. The analyst must base the non-cash charges, capital expenditures, net working capital and long-term debt borrowings and repayments on the cash flow necessary to support the projected operations.

For example, if the company needs to expand its facilities, upgrade equipment, invest in new technologies, expand their distribution network, increase working capital to correct current working capital deficiencies or support anticipated growth, borrow debt to finance capital expenditures, repay current debt obligations as well as anticipated future borrowings, etc., the components of net cash flow need to adequately reflect the expected levels of operations and capital requirements to support the estimated future benefit stream.

When valuing an equity interest, the valuation analyst will generally use the net cash flow to equity as the type of benefit used as a measurement of economic income.

EXAMPLE ONE: NET CASH FLOW TO EQUITY

This exhibit generated from *Business* Valuation Manager™ *Pro* (BVM *Pro*) software[1].



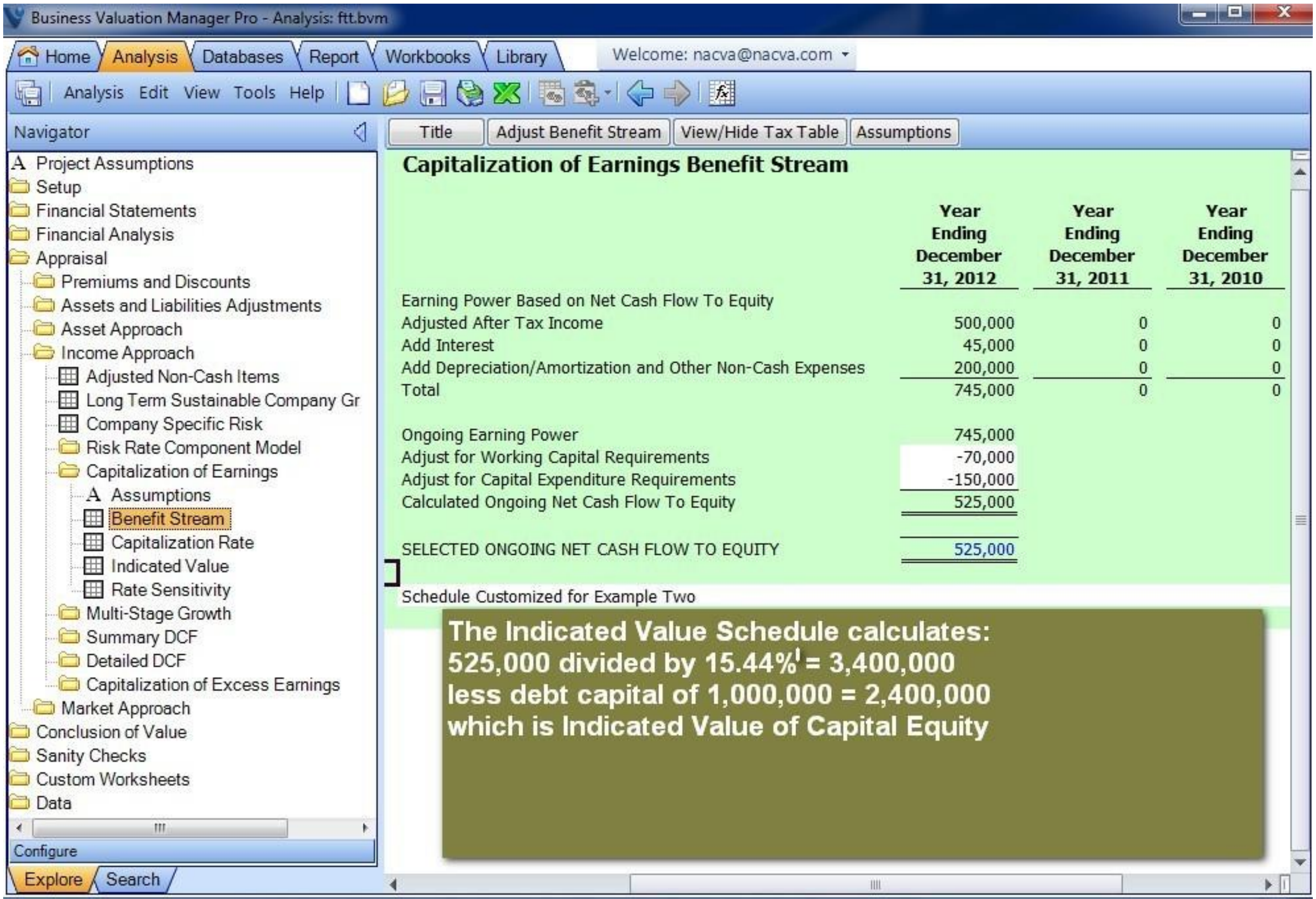
	Year Ending December 31, 2012	Year Ending December 31, 2011	Year Ending December 31, 2010
Earning Power Based on Net Cash Flow To Equity			
Adjusted After Tax Income	500,000	0	0
Add Depreciation/Amortization and Other Non-Cash Expenses	200,000	0	0
Total	700,000	0	0
Ongoing Earning Power	700,000		
Adjust for Working Capital Requirements	-70,000		
Adjust for Capital Expenditure Requirements	-150,000		
Adjust for Long Term Debt Requirements - Borrowing	95,000		
Adjust for Long Term Debt Requirements - Repayments	-95,000		
Calculated Ongoing Net Cash Flow To Equity	480,000		
SELECTED ONGOING NET CASH FLOW TO EQUITY	480,000		

However, in cases where the capital structure of the company is significantly different from the capital structures of the comparable industry or capital markets used to derive the discount/capitalization rate, the analyst should consider using the net cash flow to invested capital as a measurement of economic income. When using net cash flow to invested capital to value equity capital, the analyst will need to consider the weighted cost of capital for all types of invested capital and deduct the firm's actual debt capital from the total invested capital to arrive at the value of the equity capital. For companies that are highly leveraged or those with little to no debt, the analyst should consider selecting net cash flow to invested capital as the type of benefits to adequately consider the capital structure.

[1] BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

EXAMPLE TWO: NET CASH FLOW TO INVESTED CAPITAL

This exhibit generated from BVM *Pro* software.



	Year Ending December 31, 2012	Year Ending December 31, 2011	Year Ending December 31, 2010
Earning Power Based on Net Cash Flow To Equity			
Adjusted After Tax Income	500,000	0	0
Add Interest	45,000	0	0
Add Depreciation/Amortization and Other Non-Cash Expenses	200,000	0	0
Total	745,000	0	0
Ongoing Earning Power	745,000		
Adjust for Working Capital Requirements	-70,000		
Adjust for Capital Expenditure Requirements	-150,000		
Calculated Ongoing Net Cash Flow To Equity	525,000		
SELECTED ONGOING NET CASH FLOW TO EQUITY	525,000		

If earnings are selected as the type of benefits used to measure economic income, the analyst must have determined and documented that the future earnings and net cash flows are approximately the same or that the discount/capitalization rate has been converted by the cash to earnings factor. The types of earnings to choose from include, but are not limited to, the following:

a) Income from operations
b) Income before taxes
c) Net income (after-tax)

The type of earnings to use will generally depend upon which level of earnings the analyst believes provides the greatest level of stability and reliability. Many valuation analysts prefer to use income from operations because they believe this type of earnings is the most stable and reliable level of earnings of the company. In any case, the discount/capitalization rate must be consistent with the type of earnings.

> **Practice Pointer**
>
> **If pre-tax earnings are used, then the discount/capitalization rate must be on a pre-tax basis. Correspondingly, if after-tax earnings are used, then the discount/capitalization rate must be on an after-tax basis.**

II. USING HISTORICAL VS. PROJECTED ECONOMIC INCOME TO ESTIMATE FUTURE BENEFITS

Is the historical economic income indicative of the future or are projections best suited to estimate future benefits? Whether to use the historical economic income or projected economic income depends on the valuator's analysis of the company's expected future operations. The analyst should consider the purpose for the valuation; history of the company, management's expected future operations, the economic and industry conditions and forecasts, external and internal factors that have an effect on the future benefit stream and the trend of historical economic income.

A. PURPOSE OF THE VALUATION

The purpose for the valuation may suggest whether or not it is appropriate to use historical vs. projected economic income. Historical economic income is generally used to estimate future benefits for tax, buy-sell, and divorce valuations because the historical data is based on fact and hence considered more reliable.

Projected economic income, however, is used for both tax or non-tax valuations including litigation matters, ESOPs, and transactional valuations because the projected income may be more representative of the expected future results.

In litigation, the state law or jurisdiction may require or suggest the use of historical data or projected data. When valuing a company for transactional purposes, projected economic income may be needed to properly reflect the future operations associated with expected changes in the operations.

B. OTHER FACTORS TO BE CONSIDERED

1. In addition to the purpose of the valuation, other important questions/factors to be considered include:

a) Is the historical data representative of anticipated future operations?
b) Has the company significantly changed its product lines, locations, facilities, operating entities, market share, distribution channels, etc?
c) Is the company new and emerging, growing or a mature business?
d) What are management's expectations for growth, expansion, downsizing, market share, competition, changes in product lines, pricing, product development, etc?
e) How do the company's expectations compare to the historical data?
f) Are projections required to properly reflect the changes anticipated by management?
g) How will management's expectations affect the future capital requirements, capital expenditures, profitability, working capital requirements, etc?

h) What changes are occurring in the industry?
i) Is the industry going through consolidations, regulatory changes, technology changes, distribution changes, competitive pressures, etc?
j) How will the anticipated changes in the industry affect the company's estimated future benefit stream?
k) How will expected changes in the industry affect the company's expected capital expenditures, profitability, working capital needs, etc?
l) What is the economic forecast, locally, regionally, and nationally, and how will the economic forecast affect the estimated future benefits of the company?

2. Generally, estimated future benefits are based on historical economic income when:

a) The purpose for the valuation is tax or divorce. Historical economic income is based on fact and thus considered more reliable than projected economic income (the above is a generalization and readers must refer to state case law and the appropriate statute!)
b) Historical economic income is indicative of expected future benefits based on the stability and trend of historical earnings
c) Company is mature
d) Historical operations are a good proxy for the future
e) Future benefit stream is linear

3. Generally, estimated future benefits are based on projected economic income when:

a) Projected economic income may be considered more representative of the future whether or not the valuation is for tax or non-tax purposes
b) Projections are available and are considered indicative of the expected future benefits
c) Lack of reliable historical data
d) Emerging businesses
e) Start-up development stage enterprises
f) Future benefit stream is non-linear

> **Observation**
>
> **Linear vs. non-linear benefit stream.** A linear benefit stream is a stream of future benefits that is expected to remain constant or grow/decline at a constant rate. A non-linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate. Historical economic income is used when estimated future benefits are expected to be linear. Projected economic income is used when estimated future benefits are expected to be non-linear (subject to any restrictions based on the purpose of the engagement).
>
> Ultimately, the analyst will use his or her financial analysis, management inquires and economic/industry research to ascertain whether the historical data is the best indication of the future benefit stream or whether projections are required to estimate future benefits.

III. METHODS USED TO CALCULATE THE ESTIMATED FUTURE BENEFITS

Practice Pointer

In this section, four different ways of projecting future benefits are presented. There is no best practice or preferred method to project future benefits. The analyst must rely on professional judgment.

Once the valuation analyst has adjusted the historical income statements to an economic/normalized basis and has defined the type of earnings that will be used, then an estimate of the expected future benefits must be made. The methods used to calculate the estimated future benefits depend on whether the expected future benefit stream is linear or non-linear.

A. LINEAR BENEFIT STREAM ASSUMPTION

A benefit stream is linear when the estimated future benefits are expected to remain constant or grow or decline at a constant rate. Normally, historical economic income is used to estimate a linear benefit stream. Two of the most commonly used methods to estimate future benefits based on historical economic income are:

- Unweighted Average Method
- Weighted Average Method

These methods are used when capitalizing future benefits.

Many valuation software packages[2] will automatically calculate these methods. We discuss them in detail here so the analyst will understand what the software is doing and will select the most appropriate method.

- What is An Adequate Number of Historical Years to Use to Estimate Future Benefits?

  An adequate number of historical years to estimate future benefits depends on the business cycle of the company and the number of years are indicative of the projected operations. Many industries have a business cycle that is representative of a repetitive cycle of peaks and valleys in operations. In these cases, the valuator should always attempt to obtain an adequate number of years to represent the business cycle. For businesses where a distinct business cycle is not evident, the valuator should obtain all years that are representative of projected operations. Generally, valuation analysts prefer to use five to seven years worth of historical data to adequately cover the effects of internal and external factors that would be expected to continue in the future.

[2] Including BVM *Pro*, ValuSource Pro, and Express Business Valuation. These software packages are available from NACVA (800-677-2009) and ValuSource (800-825-8763).

1. Unweighted Average Method

The method of averaging historical economic income to determine the estimated future benefit stream is not in and of itself a methodology that will determine the appropriate future benefits. The analyst must first determine that an average of the historical economic income serves as a good proxy of the future expected benefits. Whether to use weighted or unweighted averages of the historical economic income depends on the relative representation of each year's historical economic income or the trend in historical economic income to the future expected benefits. An unweighted average method is typically used when the analyst concludes all of the past earnings are representative of the expected future benefits and no existing pattern or trend would suggest that any one year or years results are any more indicative than the rest of the historical data. A weighted average method is typically used when the analyst concludes certain past earnings are more representative of the expected future results or the historical earnings demonstrate a trend that is expected to continue in the future.

The unweighted average method, sometimes referred to as the "average method" of estimating expected future earnings, is based on the simple average or arithmetical mean of the historical economic earnings, which is calculated by taking the sum of a set of values and dividing the sum by the number of values used in deriving the sum.

$$\frac{\text{Sum of Variables}}{\text{Number of Variables}}$$

The unweighted average of the historical economic earnings is most appropriately used for estimating the amount of future earnings when there is no apparent pattern or trend in the past earnings history, or if it appears an existing pattern cannot be reasonably expected to continue. Generally, this method would be used for companies that are mature and earnings are constant or represent a business cycle of peaks and valleys that are expected to continue.

In other words, the analyst has not discovered any information or data, which would lead to the belief any one of the years in the analysis, is more or less typical of the future.

Example[3]:

Assume ABC Company has the following economic/normalized net cash flows to equity over the last five years.

5th prior year	$120,100
4th prior year	– 25,600
3rd prior year	– 12,300
2nd prior year	57,900
Prior year	10,700
Total	$150,800

$150,800 ÷ 5 = $30,160 Unweighted Average*

*This is the estimated amount of future earnings under this method.

2. Weighted Average Method

The weighted average method is used when the analyst concludes one or more of the historical years are more representative of the future estimated benefits or that a trend or pattern exists and is expected to continue. The weighted average method of estimating the expected future benefit stream is based on the average or arithmetical mean. Taking the sum of a set of values that has been multiplied by some index or weighting factor calculates this. Then the sum of these products is divided by the sum of the weights.

$$\frac{ew_1 + ew_2 + ew_n}{w_1 + w_2 + w_n} \qquad \frac{e = \text{earnings in a given period}}{w_1\ w_n = \text{weight factor assigned}}$$

The weighted average of historical economic earnings is most appropriately used for calculating future earnings when there appears to be a general pattern that may be extrapolated into the future. The pattern may be positive or negative. Generally the analyst applies a heavier weight to the most recent year's earnings and a lesser weight to the earlier years.

The analyst should be careful in applying weights and implying that if a year has a heavier weighting, it is more indicative of the future. This may lead the reader to believe the analyst knows more about the future than is the case. In the event the analyst places a disproportionate weight on any particular year or years, the analyst should explain in the report the rationale for the weighting.

[3] BVM *Pro* has three methods to define the benefit stream: average, weighted average, and trend line. BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

Example:

Assume Baker Company had the following economic/normalized net cash flows to equity over the last six years.

6th prior year	$115,700
5th prior year	135,900
4th prior year	117,800
3rd prior year	160,500
2nd prior year	122,300
Prior year	175,000

Calculated weighted average

$115,700	x	1	=	$ 115,700
$135,900	x	2	=	$ 271,800
$117,800	x	3	=	$ 353,400
$160,500	x	4	=	$ 642,000
$122,300	x	5	=	$ 611,500
$175,000	x	6	=	$1,050,000
Total		21		$3,044,400

$3,044,400 ÷ 21 = $144,971 Weighted Average *

* This is the estimated amount of future earnings under this method.

Even though cash flows have fluctuated each year, there appears to be a general upward trend. As such, it appears appropriate to use the weighted average method by placing greater weight on each of the new years of increasing cash flows.

B. NON-LINEAR BENEFIT STREAM ASSUMPTION

A benefit stream is non-linear when the estimated future benefits are expected to grow or decline at a variable rate. Normally, projected economic income is used to estimate a non-linear benefit stream. Two of the most commonly used methods to estimate future benefits based on projected economic income are:

- Projected Cash Flows
- Projected Earnings

These methods are used to estimate future benefits when discounting future benefits.

1. Projected Cash Flows (Discounted Cash Flow Method)

The analyst will project the specific cash flows over a number of years representative of the period in which the benefit stream is expected to vary followed by a terminal value. The terminal value is representative of the capitalized economic income once the benefit stream stabilizes, remains constant or grows or declines at a constant rate.

Generally, the analyst will project the cash flows with an adequate level of detail that will explain the projected operations and anticipated changes in the business. The key assumptions to the projected cash flows should be included in the report. (See example in Table 4–1.)

TABLE 4–1. EXAMPLE OF PROJECTED CASH FLOWS (DISCOUNTED CASH FLOW METHOD) (IN $,000)

	Year 1	Year 2	Year 3	Year 4	Year 5	Thereafter
Sales	$ 10,000	$ 10,500	$ 11,550	$ 12,350	$ 12,720	
Cost of sales	6,000	6,300	6,930	7,410	7,630	
Gross profit	4,000	4,200	4,620	4,940	5,090	
Operating expenses	2,050	2,120	2,300	2,400	2,450	
Income from operations	1,950	2,080	2,320	2,540	2,640	
Other income/expense	20	20	20	20	20	
EBIT	1,970	2,100	2,340	2,560	2,660	
Interest expense	280	250	210	170	130	
Income before tax	1,690	1,850	2,130	2,390	2,530	
Income taxes	680	740	850	960	1,010	
Net income	1,010	1,110	1,280	1,430	1,520	
Non-cash charges	200	200	200	200	200	
Capital expenditures	(150)	(500)	(50)	(300)	(50)	
Working capital	(100)	(100)	(100)	(100)	(70)	
L/T debt	(450)	(490)	(520)	(560)	(610)	
Net cash flow to equity	510	220	810	670	990	1,020
Capitalization rate						22.0%
Terminal value						4,636
Discount rate (25%)	0.800	0.640	0.512	0.410	0.328	0.328
Net present value	**$ 408**	**$ 141**	**$ 415**	**$ 275**	**$ 325**	**$ 1,521**
Equity value	**$ 3,085**					

Note: Discount rate is 25%, growth rate after Year 5 is 3%, and capitalization rate of terminal value is 22%. Each year's present value factor is calculated as $1/(1+i)^N$, where i equals the discount rate and n equals the number of years until the future benefit (net cash flow in this case) will be received.

2. Projected Earnings

The process for projecting earnings would be similar to the process described above for projecting cash flows. Projected earnings can be used when the projected earnings are expected to approximate the projected cash flows or when the discount rate has been converted by cash to earnings factor.

C. OTHER METHODS USED TO PROJECT ECONOMIC EARNINGS

The following are other methods used to project economic earnings:

1. Trend-Line Static Method:

   The trend-line static method often puts a heavier weighting on the latest year, as does the weighted average method. However, because the trend-line static method is based on least square formulas, it produces a trend line that lessens the impact which any particular year has on the calculation. The trend-line static method assumes a capitalization process of earnings rather than a discounting process

2. Projected Growth Rate in Earnings Method (data is increasing at a constant rate)
3. Trend-line Projected Method (data is increasing at a declining rate)
4. Geometric (data is increasing at an increasing rate)
5. Logarithmic (data is increasing but at an increasingly declining rate)
6. The Gompertz Curve (slow growth followed by rapid growth followed by slowing of growth and then a declining growth rate)
7. Internal Growth (return on equity times (1–p) where p refers to the proportion of earnings paid out in the form of dividends)

Regardless of the method, the analyst must decide how to handle years with negative earnings or cash flows.

A detailed explanation of other methods used to project economic earnings can be found in Appendix VIII and statistics books, along with explanations on how and why variables are used, important assumptions and the strengths and weaknesses of each calculation type.

D. THE CONCEPT OF FREE CASH FLOW

Valuation analysts should also familiarize themselves with the concept of free cash flow (FCF). In theory, FCF provides a measure of the cash available to the company for discretionary uses after deducting the funds needed to continue operating at a planned level. One issue that arises is the scarcity of guidance regarding what constitutes "required" and "discretionary" uses.

Generally speaking, "discretionary" uses are comprised of:

- Growth oriented capital expenditures and acquisitions
- Debt principal reduction
- Shareholder payments (dividends, stock repurchase)

E. OTHER CONSIDERATIONS USED TO CALCULATE FUTURE BENEFITS

1. What is an adequate number of projected years to use to estimate future benefits?

   There is no correct answer to how many years the economic income should be projected. Generally, the economic income will be projected over as many years as necessary until the benefit stream stabilizes and becomes linear (increasing or decreasing at a constant rate into perpetuity). Once the benefit stream stabilizes and becomes linear, the analyst can capitalize the remaining benefit stream into one number representing the terminal value (See Chapter Six). The analyst must use his or her professional judgment to project the economic income over a period that can be reasonably predicted. Usually, the level of reliability declines the longer the projection period. The valuator should factor the level of reliability for the projection into the discount rate. A CPA may be required to issue a compilation report when using some kinds of projections. Check with the appropriate governing society before issuing the valuation report.

2. Should the projected economic income be in constant real dollars or nominal dollars?

   The analyst can prepare the projected economic income in constant real dollars, where the projected economic income is based on the dollars in the first year without regard to inflation, or in nominal dollars, where an estimate of inflation is included in the projected economic income over the projection period. However, whether the analyst chooses constant dollars or inflation-adjusted dollars, they must select the appropriate present value discount rate that corresponds to the economic basis used to project the benefit stream (see Chapter Five).

3. Who should prepare the projections?

   Whether the company prepares the projections or whether the analyst prepares the projections with the assistance of management, the analyst needs to evaluate the projections for reasonableness and to determine that the projections properly reflect expected future operations, the economic and industry forecast and the external and internal factors that are expected to affect the future benefit stream. The analyst should assess the reliability of the projections and consider providing for any additional risks in the discount rate.

IV. VALIDATING YOUR CALCULATION OF ESTIMATED FUTURE BENEFITS

A. REVIEW CHECKLIST AND GENERAL CONSIDERATIONS

The analyst should consider the following steps as a review of the calculation of the estimated future benefits:

1. Graph the historical economic income and the estimated future benefits. Review the graph to determine whether the method used to determine the estimated future benefits is consistent with the trend.
2. Does the type of future benefits selected correspond with the purpose for the valuation?
3. Does the method used to estimate future benefits appropriately represent the projected operations?
4. Does the projected future benefit stream reflect management's expectation for future operations?
5. Does the projected future benefit stream reflect industry conditions and forecast?
6. Do the estimated future benefits reflect the capital expenditures needed to support the projected operations?
7. Do the estimated future benefits reflect the additional working capital needed to support the projected operations?

8. Do the estimated future benefits reflect the debt borrowings and repayments to support the projected operations?
9. If earnings are used as the type of benefits, do the earnings approximate the cash flows or has the capitalization/discount rate been adjusted accordingly?
10. Does the type of benefits selected correspond to the nature of the interest being valued?
11. Does the capitalization/discount rate match the type of benefit stream?

B. CORRELATION ANALYSIS

Certain professionals have advocated the use of correlation analysis as a more objective tool in the process of selecting the most appropriate method for determining estimated future benefits. The correlation coefficient (r) and the coefficient of determination (r^2) are two statistically derived values that can be used to assist the analyst in making a projection method selection. A detailed explanation of the use of correlation analysis can be found in Appendix VIII, based on an article by Robert L. Green, CPA, CVA, CFE, Using Correlation Analysis in Determining Proper Method to Project Earnings, The Valuation Examiner®, 1st Quarter 1994.

C. VALIDITY OF HISTORICAL DATA

It is important to consider also the quality and quantity of data available as the historical input to the estimation equation of any type.

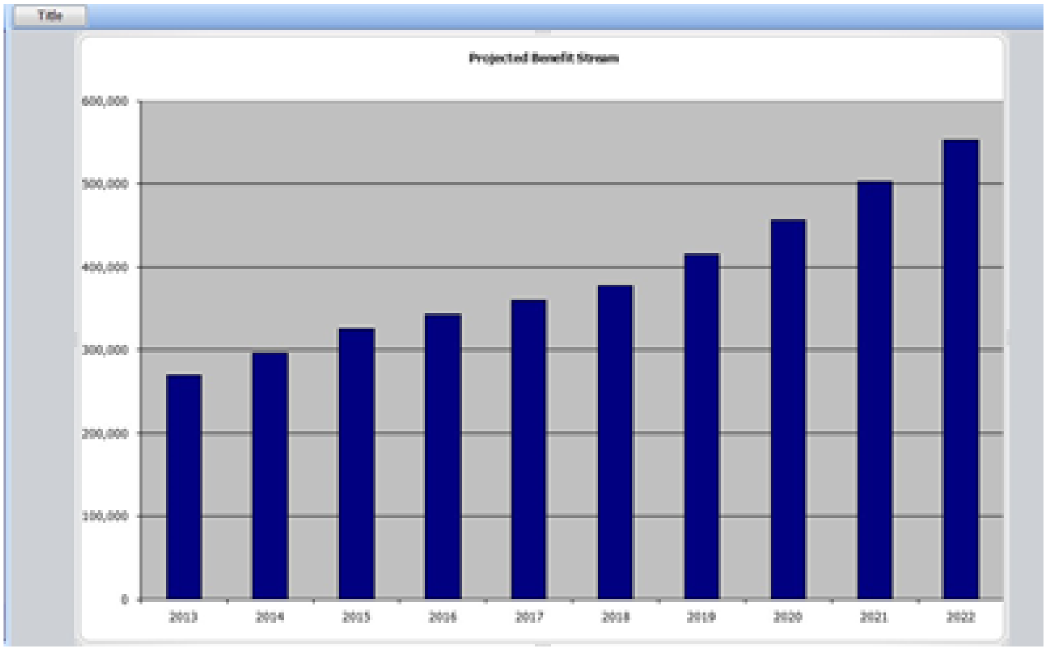
Quality—obviously any method of estimation is faulty if the information is invalid or questionable. Any estimation method produces riskier output when the input is questionable. The analyst needs to thoroughly understand the financial information and determine the quality of the data. If the quality of the data is questionable and the analyst is unable to make the appropriate adjustments to increase the reliability, the analyst should consider the additional risk in the development of the discount rate, or withdraw from the engagement.

Quantity—when only a few years of historical data are available as a foundation for an estimation of future events, then the degree of confidence that can be placed in those estimates is reduced. When only one or two years of historical economic income exist, the analyst must determine whether the data is indicative of projected operations. If the historical economic income is inadequate to estimate future benefits, the analyst should consider projecting future benefits. When fewer than five years of data are available, it is difficult to justify an estimation method other than unweighted or weighted average methods. If at least five years of data are available, the analyst may consider using the trend-line static method as well as the unweighted or weighted average methods.

All of the projection approaches described are more easily calculated using certain financial calculators or custom software, each having the formulae or algorithms already built in. Always have a clear understanding of the methodologies, check your formulas and calculations and be able to explain the theory and methodology used in the calculation.

In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information which many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentor the valuator may know. Those at the top of the field continue to grow.

This exhibit generated from *Business* Valuation Manager™ *Pro* (BVM *Pro*) software.[4]



[4] BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

Recommended reading includes, but is not limited to:

- Abrams, Jay B., *Quantitative Business Valuation*, Part I (Forecasting Cash Flows).
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests*, Chapter 4 (Capitalization of Discretionary Cash Flow Methodology), Chapter 5 (Discounted Cash Flow Methodology).
- Damodaran, Aswath, *Damodaran on Valuation*, Security Analysis for Investment and Corporate Finance, Chapter 5 (Estimation of Growth Rates), Chapters 7 & 8 (Free-cash Flow to Equity).
- Copeland, Tom, etal., Valuation *Measuring and Managing the Value of Companies*.
- Green, Robert, "The Income Approach – Net Income Versus Cash Flow?" *The Valuation Examiner*, July/August 2001.
- Helfert, Erich, *Techniques of Financial Analysis*, Chapter 4 (Projection of Financial Requirements), Chapter 5 (Dynamics and Growth of the Business System), Chapter 6 (Cash Flows and the Time Value of Money).
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 4 (Income Approach).
- Kasper, Larry J., *Business Valuations: Advanced Topics*, Chapter 2 (Calculate the Current Value).
- King, Alfred, *Valuation: What Assets Are Really Worth*, Chapter 9 (What Will Happen in the Future?)
- Norton, George M., *Valuation Maximizing Corporate Wealth*, Chapter 2 (Calculate Current Value).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Part III (Business Valuation Approaches and Methods).
- Pratt, Shannon, *Cost of Capital Estimating and Applications*, Part I (Cost of Capital Basics).

BUSINESS VALUATIONS: FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 4

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 4: Defining and Estimating the Future Benefit Stream

1. Cash flows that are calculated as: net income after tax plus non-cash charges, less applicable capital expenditures, less additions to net working capital to support operations, plus changes in long-term debt from borrowings required for operations, less changes in long-term debt for repayments:

   a. Equals net cash flow to equity
   b. Equals equity to debt ratio
   c. Equals invested equity
   d. Equals operations equity

2. The formula for net cash flow to invested capital can be calculated as:

   a. Net income before tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
   b. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, plus interest expense (tax-affected)
   c. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
   d. Net income after tax, plus non-cash charges, plus capital expenditures, plus additions to net working capital for operations, less interest expense (tax-affected)

3. Bell Landscape Company has the following historical earnings:

Year	Earnings
1	$75,400
2	65,200
3	87,600
4	90,500
5	53,900

   Which method of projecting earnings would appear most appropriate to estimate future benefits?

   a. Weighted average method
   b. Unweighted average method
   c. Trend Line—static method
   d. Gompertz curve method

4. Using the data provided above in question 3 for Bell Landscape, estimate the future benefits, using the method you have selected in question 3:

   a. $73,340
   b. $75,700
   c. $93,150
   d. $74,520

5. Start-up Jennings Baker Company provided you the following historical data:

Year	Earnings
1	($15,300)
2	32,400
3	89,600

   Which method of projecting earnings would appear most appropriate to estimate future benefits?

   a. Weighted average method
   b. Unweighted average method
   c. Trend Line—static method
   d. Gompertz curve method

6. Net cash flow to equity will result in what type of value?

   a. Invested capital
   b. Equity
   c. Controlling interest
   d. Non-controlling (i.e., minority) interest

7. When discounting cash flow to invested capital, the appropriate discount rate is:

   a. Cost of equity
   b. Weighted average cost of capital
   c. Capital asset pricing model
   d. Ibbotson build-up method

8. Generally, an estimated future benefit stream is based on historical economic income when:

   a. There is a lack of historical information
   b. Start up or development stage companies
   c. The future benefit stream is estimated to be non-linear
   d. The future benefit stream is estimated to be linear

9. A linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate.

   a. True
   b. False

10. Two most commonly used methods to estimate future benefits based on a linear benefit stream are:

    a. Weighted average method and unweighted average method
    b. Weighted average method and projected cash flow method
    c. Unweighted average method and projected cash flow method
    d. Projected cash flow method and projected earnings method

11. Using a weighted average method to determine a future benefit stream, a valuation analyst assigns more weight to the most recent years. This indicates:

    a. The valuation analyst determined the most recent year is the most indicative of future years
    b. All of the past earnings are representative of the expected future benefits
    c. No existing pattern or trend would suggest that any one year or years is more indicative than the rest of the historical data
    d. There is no apparent trend in the historical earnings

12. Using the Trend Line Projected Method, growth or data is:

    a. Increasing at a declining rate
    b. Increasing at an increasing rate
    c. Increasing at a constant rate
    d. Increasing at an increasingly declining rate

13. Projected economic income in constant real dollars is based on real dollars in the first year without regard for inflation.

    a. True
    b. False

14. When utilizing projected or forecasted financial information, the adequate number of years to be included in the analysis is:

    a. 5 years for tax valuation per the Internal Revenue Service, 10 years for all other types of valuations
    b. A minimum of 10 years for all valuations
    c. Number of years based on the owner's investment horizon.
    d. The number of years until it is assumed the benefit stream becomes linear

Chapter 4 Bonus Question:

Calculate the equity value using net cash flows to equity as the benefit stream. Assume a 20% after–tax net cash flow capitalization rate and a 15.58% weighted average cost of capital. Assume the net income (after–tax) is $500,000. Assume the non-cash charges are $250,000 a year, the expected capital expenditures to support the projected operations is $100,000 a year, the working capital necessary to support the projected operations is $50,000 a year, and the annual debt repayments are $250,000. Assume that the annual interest expense (tax effected) is $140,000 and that the debt capital is $3,000,000.

Net income (after-tax)	$ 500,000
Non-cash charges (e.g. depreciation, amortization, deferred revenue/taxes)	250,000
Capital expenditures necessary to support projected operations	(100,000)
Additions to net working capital necessary to support projected operations	(50,000)
Changes in long-term debt for repayments necessary to support projected operations	(250,000)
Net cash flow to equity	350,000
After-tax net cash flow capitalization rate	20%
Equity value	$1,750,000

Assuming the same facts as above, calculate the equity value using the net cash flows to invested capital.

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CHAPTER FIVE

CAPITALIZATION/DISCOUNT RATES

"Money doesn't always bring happiness
People with ten million dollars are no happier
than people with nine million dollars."
Hobart Brown (d. 2001)
Artist, Sculptor

I. OVERVIEW

Calculation of an appropriate capitalization/discount rate is one of the most difficult, and critical, steps in valuing a business or business interest. It is also a frequently contested area, since there is no single method or formula to arrive at the discount or capitalization rate. The discussion presented in this chapter is introductory—an overview of the concept and some of the tools most often used to compute the rates. The subject matter is so vast that whole courses on the topic of capitalizing and discounting are taught throughout the industry.

An equity interest in a closely held business should be considered an investment on which the holder expects a return. Investors will hold a security only if its expected return is high enough to compensate for any risk.

Within the context of business valuations, the capitalization or discount rate is the "yield rate" on the business investment. The yield rate is comprised of three main elements.

- The real rate of return - what investors expect in exchange for letting someone else use their money on a riskless basis
- Expected inflation - the expected depreciation in purchasing power while the money is tied up
- An additional return (premium) that compensates the investor for the relative degree of risk, in excess of the safe rate, inherent in the investment.

A. RISK ADJUSTMENT FACTORS

From a risk adjustment standpoint, there are three main categories of factors that may influence the capitalization or discount rate. Specific factors affecting risk are listed for each category. The three categories (and examples of factors) are:

1. External Factors

a) Expectations of the general economy
b) Existing conditions of the general economy
c) Expectations of a particular industry
d) Existing conditions of a particular industry
e) Competitive environment of a particular industry

2. Internal Factors

a) General expectations of the business
b) Financial position/condition of the business
c) Competitive position of the business
d) Size of the business
e) Nature of the business
f) Quality and depth of the organization and staffing of the business
g) Reliability or stability of the earnings of the business

3. Investment Factors

a) Risk factors associated with the investment itself
b) Amount invested in the particular business–relative to other investments in the portfolio
c) Expectations of capital appreciation of the investment
d) Expectations of liquidity of the investment
e) Level of the expected management burden of the investment

Most valuation professionals agree that each of the above factors theoretically impacts the determination of an appropriate capitalization or discount rate. However, there remains no simple, generally accepted, or practical way to quantify these factors. Therefore, the determination of an appropriate capitalization or discount rate has been—and will continue to be—one of the most difficult and perplexing issues in the valuation process.

II. PROPER CAPITALIZATION/DISCOUNT RATES

A. CRITERIA

Two primary criteria exist for the determination of capitalization or discount rates in the context of valuing closely held businesses.

1. The capitalization or discount rate should be essentially the same as the rate of return (yield) that is currently being offered to attract capital or investment to the type, size, and financial condition of business that is being valued.
2. The capitalization or discount rate must be consistent with the "type" of benefit streams to be capitalized or discounted (e.g., pre-tax versus after-tax, cash flow vs. earnings to invested capital or equity).

B. CAPITALIZATION RATE = DISCOUNT RATE LESS LONG-TERM SUSTAINABLE GROWTH RATE

> **Observation**
> **The term "earnings" as used in this book is synonymous with the term "benefit stream." These terms refer to cash flow, net income, or other types of benefit streams.**

Once the analyst selects the appropriate type of earnings and estimates the amount of future earnings, an appropriate capitalization or discount rate must be determined. This rate is applied to the amount of estimated future earnings calculated. A capitalization rate is applied in a capitalization process to calculate value and a discount rate is applied in a discounting process to calculate value. For clarity, the rates are defined as follows:

1. Discount rate

A rate of return used to convert a series of monetary sums into present value.

2. Capitalization rate

Any multiple or divisor used to convert anticipated economic benefits of a single period into value.

It is generally accepted in the valuation community that subtracting a company's expected long-term sustainable growth rate from its discount rate yields the capitalization rate.

C. CAPITALIZATION VS. DISCOUNTING

A distinction between the capitalization process and the discounting process is the utilization of a terminal value. Recall that the discounting process calculates the present value of a series of forecasted future benefits. Forecasts are made for a finite number of future periods. Thus, when valuing a company using a discounting process, the analyst must consider terminal values. The terminal value represents the value of a company in the terminal year of an earnings forecast, or what the company will be worth in x number of years. There are several methods of estimating terminal value, including price/earnings and other multiples. The most frequently used method is to capitalize terminal year earnings using an appropriate capitalization rate and then discount the results back to a present value.

Recall that the capitalization rate is equal to the discount rate minus the projected growth rate. Thus, the discount rate and the capitalization rate are interchangeable only when there is no projected growth in the benefit stream. The following exhibits show the relationship between discounting and capitalizing future benefits under three future benefit assumptions:

1. The future benefit stream is linear and there is no growth.
2. The future benefit stream is linear but growing at a constant rate.
3. The future benefit stream reflects nonlinear growth.

Linear Benefits
Capitalization Rates vs. Discount Rates
No Growth

Assumptions	
Annual Benefits	$100,000
Discount Rate	20%
Growth	0%
Capitalization Rate	20%
End of period discounting convention	

DISCOUNTING

Year	1	2	3	4	5
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.8333	0.6944	0.5787	0.4823	0.4019
Discounted Benefits	83,333	69,444	57,870	48,225	40,188

Year	6	7	8	9	10
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.3348	0.2791	0.2326	0.1938	0.1615
Discounted Benefits	33,490	27,908	23,257	19,381	16,151

Year	11	12	13	14	15
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.1346	0.1122	0.0935	0.0779	0.0649
Discounted Benefits	13,459	11,216	9,346	7,789	6,491

Year	16	17	18	19	20
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.0541	0.0451	0.0376	0.0313	0.0261
Discounted Benefits	5,409	4,507	3,756	3,130	2,608

Year	21	22	23	24	25
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.0217	0.0181	0.0151	0.0126	0.0105
Discounted Benefits	2,174	1,811	1,509	1,258	1,048

Year	26	27	28	29	30
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.0087	0.0073	0.0061	0.0051	0.0042
Discounted Benefits	874	728	607	506	421

Year	31	32	33	34	35
Annual Benefits	$100,000	$100,000	$100,000	$100,000	$100,000
Discount Factor	0.0035	0.0029	0.0024	0.0020	0.0017
Discounted Benefits	351	293	244	203	169

Sum of the Discounted Benefits (rounded)	$499,200

CAPITALIZING METHODOLOGY

Annual Benefits	$100,000
Capitalization Rate	20.0%
Capitalized Benefits	$500,000

Conclusion: This calculation demonstrates that, with no growth, the capitalization process produces the same result as the discounting process.

Linear Benefits
Capitalization Rates vs. Discount Rates
With Growth

Assumptions	
Annual Benefits	$100,000
Discount Rate	25%
Growth	5%
Capitalization Rate	20%
End of period discounting convention	

DISCOUNTING

Year	1	2	3	4	5
Annual Benefits	$100,000	$105,000	$110,250	$115,763	$121,551
Discount Factor	0.8000	0.6400	0.5120	0.4096	0.3277
Discounted Benefits	80,000	67,200	56,448	47,417	39,830

Year	6	7	8	9	10
Annual Benefits	$127,629	$134,010	$140,711	$147,747	$155,134
Discount Factor	0.2621	0.2097	0.1677	0.1342	0.1074
Discounted Benefits	33,457	28,104	23,607	19,830	16,657

Year	11	12	13	14	15
Annual Benefits	$162,891	$171,036	$179,588	$188,567	$197,995
Discount Factor	0.0859	0.0687	0.0550	0.0440	0.0352
Discounted Benefits	13,992	11,754	9,873	8,293	6,966

Year	16	17	18	19	20
Annual Benefits	$207,895	$218,290	$229,205	$240,665	$252,698
Discount Factor	0.0281	0.0225	0.0180	0.0144	0.0115
Discounted Benefits	5,852	4,915	4,129	3,468	2,913

Year	21	22	23	24	25
Annual Benefits	$265,333	$278,600	$292,530	$307,157	$322,515
Discount Factor	0.0092	0.0074	0.0059	0.0047	0.0038
Discounted Benefits	2,447	2,056	1,727	1,451	1,218

Year	26	27	28	29	30
Annual Benefits	$338,641	$355,573	$373,352	$392,020	$411,621
Discount Factor	0.0030	0.0024	0.0019	0.0015	0.0012
Discounted Benefits	1,023	860	722	607	510

Year	31	32	33	34	35
Annual Benefits	$432,202	$453,812	$476,503	$500,328	$525,344
Discount Factor	0.0010	0.0008	0.0006	0.0005	0.0004
Discounted Benefits	428	360	302	254	213

Sum of the Benefits (rounded)	$498,900

CAPITALIZING

Annual Benefits	$100,000
Capitalization Rate	20%
Capitalized Benefits	$500,000

Conclusion: This calculation demonstrates that, with linear growth, the capitalization process produces the same result as the discounting process.

Nonlinear Growth
Capitalization Rates vs. Discount Rates

Assumptions					
	Year 1	Year 2	Year 3	Year 4	Year 5
Base Benefits	$100,000	$115,000	$143,750	$155,250	$186,300
Growth	15.0%	25.0%	8.0%	20.0%	3.0%
Annual Benefits	$115,000	$143,750	$155,250	$186.300	$191,889
Discount Rate	25.0%	25.0%	25.0%	25.0%	25.0%
Growth	15.0%	25.0%	8.0%	20.0%	3.0%
Capitalization Rate	10.0%	0.0%	17.0%	5.0%	22.0%
End of period discounting convention					

DISCOUNTING

Year	1	2	3	4	5
Annual Benefits	$ 115,000	$ 143,750	$ 155,250	$ 186,300	$ 191,889
Discount Factor	0.80000	0.64000	0.51200	0.40960	0.32768
Discounted Benefits	$ 92,000	$ 92,000	$ 79,488	$ 76,308	$ 62,878

Year	6	7	8	9	10
Annual Benefits	$ 197,646	$ 203,575	$ 209,682	$ 215,972	$ 222,451
Discount Factor	0.26214	0.20972	0.16777	0.13422	0.10737
Discounted Benefits	$ 51,812	$ 42,693	$ 35,179	$ 28,987	$ 23,885

Year	11	12	13	14	15
Annual Benefits	$ 229,125	$ 235,999	$ 243,079	$ 250,371	$ 257,882
Discount Factor	0.08590	0.06872	0.05498	0.04398	0.03518
Discounted Benefits	$ 19,682	$ 16,218	$ 13,363	$ 11,011	$ 9,073

Year	16	17	18	19	20
Annual Benefits	$ 265,618	$ 273,587	$ 281,795	$ 290,249	$ 298,956
Discount Factor	0.02815	0.02252	0.01801	0.01441	0.01153
Discounted Benefits	$ 7,476	$ 6,161	$ 5,076	$ 4,183	$ 3,447

Year	21	22	23	24	25
Annual Benefits	$ 307,925	$ 317,163	$ 326,678	$ 336,478	$ 346,572
Discount Factor	0.00922	0.00738	0.00590	0.00472	0.00378
Discounted Benefits	$ 2,840	$ 2,340	$ 1,928	$ 1,589	$ 1,309

Year	26	27	28	29	30
Annual Benefits	$ 356,969	$ 367,678	$ 378,708	$ 390,069	$ 401,771
Discount Factor	0.00302	0.00242	0.00193	0.00155	0.00124
Discounted Benefits	$ 1,079	$ 889	$ 733	$ 604	$ 497

Year	31	32	33	34	35
Annual Benefits	$ 413,824	$ 426,239	$ 439,026	$ 452,197	$ 465,763
Discount Factor	0.00099	0.00079	0.00063	0.00051	0.00041
Discounted Benefits	$ 410	$ 338	$ 278	$ 229	$ 189

Sum of the Discounted Benefits (rounded) $ 696,172

TWO STAGE MODEL

Year	1	2	3	4	5	Terminal
Annual Benefits	$ 115,000	$ 143,750	$ 155,250	$ 186,300	$ 191,889	$ 197,646
Capitalization Rate						22.0%
Capitalized Benefits						$ 898,391
Discount Factor	0.80000	0.64000	0.51200	0.40960	0.32768	0.32768
Discounted Benefits	$ 92,000	$ 92,000	$ 79,488	$ 76,308	$ 62,878	$ 294,385

Sum of discounted benefits and terminal value $ 697,059

Conclusion: This calculation demonstrates that, with nonlinear growth, the capitalizing terminal value process produces the same result as the discounting process.

III. CAPITAL ASSET PRICING MODEL (CAPM)

CAPM, by definition, is an "equilibrium asset pricing theory that shows that equilibrium rates of expected return on all risky assets are a function of their co-variance with the market portfolio."

This method for determining a capitalization or discount rate is based on the theory that investors in risky assets require a rate of return above and beyond a risk free rate as compensation for bearing the risk associated with holding the investment.

A. ASSUMPTIONS

The assumptions underlying the capital asset pricing model are:

1. Investors are risk averse.
2. Rational investors seek to hold portfolios which are fully diversified.
3. All investors have identical investment holding periods.
4. All investors have the same expectations regarding expected rate of return, and how capitalization rates are generated.
5. There are no transaction costs.
6. There are no taxes.
7. The rate received from lending money is the same as the cost of borrowing.
8. The market has perfect diversity and liquidity so an investor can readily buy or sell any fractional interest.

B. CALCULATION OF EXPECTED RETURN

$$\text{Expected return} = \text{Risk-free rate} + \text{Beta x} \left\{ \begin{array}{ccc} \text{Expected return} & & \text{Risk-} \\ \text{on a} & — & \text{free} \\ \text{market portfolio} & & \text{Rate} \end{array} \right\}$$

Abbreviated, the variables and the equation appear as follows:

$ER_i = R_f + B\ (ER_m – R_f)$

The risk-free (R_f) rate is often represented by the 20-year yield to maturity on US Government bonds. The expected return on a market portfolio (R_m) is the actual return on the Standard and Poor's 500 (S&P 500) Index. The beta coefficient (B) is a key variable in the CAPM equation. In the standard CAPM calculation, it represents the co-variance of the rate of return on the subject security, with the rate of return on the market divided by the variance of the market. More simply, it is a measure of the volatility of the subject security as compared to the market.

In order to fully understand beta, certain terms must be understood:

1. Variance is a measure of the squared deviation of the actual return of a security from its expected return.
2. Co-variance is a statistical measure of the interrelationship between two securities.

In the standard calculation of CAPM, beta is computed using the return on investment (ROI) of the subject security. Since ROI is calculated using the price of stock, the analyst uses the standard CAPM very rarely. If the price of stock is known, is there a need for valuation?

Some analysts alter the CAPM model by modifying certain variables. The risk-free rate (R_f) is represented by the intermediate term (five to 10 year) Treasury bond yield rate. Beta (*B*) is modified so that it represents the co-variance of the pre-tax return on equity (ROE) of the subject company, with the ROE of other specific companies or industry averages divided by the variance of the ROE of the industry. Finally, rather than using the expected return on a market portfolio as the ER_m, it is represented by the average pre-tax ROE of the specific companies or the industry in which the subject company operates.

1. Calculation of Beta (β)

A beta[1] of 1.0 would indicate the subject company is no more or no less volatile than the industry. In this example the beta of 0.8501 indicates that the subject company is less volatile than the industry. As such, it would appear to be a better risk. Thus, a total risk-premium less than the industry would probably be appropriate for the company. Based on this analysis, it can be seen that the expected rate of return for a company should be positively related to its beta.

2. Security Market Line (SML)

The expected return on a security with a beta of zero is the risk-free rate, since a zero beta indicates no relative risk. The expected return on a security with a beta of one is the expected return of the market, since a beta of one indicates that the security has the same relative risk as the market.

A shortcoming of CAPM is the fact that it utilizes comparative information in its various forms. Since it may be extremely difficult to locate industry data, it may be difficult to use CAPM to develop a discount/capitalization rate. It is equally as difficult to find specific comparable company data for a closely held company.

3. Is CAPM a pre-tax or an after-tax method? The answer: it depends.

CAPM describes the cost of equity for a given company, and is equal to the risk-free rate plus some amount to compensate for the risk involved in excess of the risk-free rate. Thus, there are several elements to CAPM coming from both sides of the tax equation. This risk-free rate is usually a government bond rate, which is pre-tax to the investor. The expected return on a market portfolio is generated from average returns of the market after corporate tax, usually comparing the return to that of the S&P 500. Beta is public market volatility, generated by stock transactions, which is after corporate tax (but again, pre-investor tax). These companies' 10K forms do consider known tax liabilities in their bottom lines. However, this liability may not be the actual tax. In valuing a closely held company, beta is generally developed from comparable public companies or is calculated using the average pre-tax ROE (for equity capital) or ROI (for investment) of the specific company.

ROI, as used to develop beta[2], is calculated as:

$$\frac{\text{(Ending Stock Price - Beginning Stock Price) + Dividends}}{\text{Beginning Stock Price}}$$

[1] Historical beta research can be performed by KeyValueData.
[2] β or *b* often (but not always) indicate beta in financial equations.

This generates an after-tax rate (or variable) as the capacity to pay dividends (a key element) is based on after-tax earnings.

When the analyst uses CAPM to generate a capitalization rate, the risk rate for the general public market is an after-tax rate; therefore, CAPM is an after-tax method. The build-up method, loosely based on CAPM, to be an after-tax calculation. If the analyst uses RMA's ROE, it is pre-tax. One must be certain to identify variables when using CAPM to quantify a capitalization/discount rate.

IV. BUILD-UP METHOD

Observation

The capitalization/discount rate as used in business valuation is the expected yield rate on the investment.

It is extremely important that the analyst maintain consistency between the type of earnings and the capitalization or discount rates used in the valuation process. For example, a pre-tax rate should not be applied to net income because net income is assumed to be stated on an after-tax basis. This is a very simple distinction. However, often this distinction is overlooked in the valuation of a closely held business, thereby significantly over-valuing or under-valuing the business.

Three basic components of the cost of capital, as stated at the beginning of this chapter, are the real rate of return, expected inflation, and risk.

The combination of the first two components is sometimes referred to as the time value of money, which is the same for all investments of the same expected duration, although the expectation may be different for different investors. Risk, the third component mentioned, can vary from investment to investment based on the perceived uncertainty in a particular investment.

A. REAL RATE OF RETURN VS. NOMINAL RATE OF RETURN

The "Real return" represents the exchange rate between current and future purchasing power (inflation). The "nominal return" includes the "real" rate of return and the effects of inflation. It is important to note that the conversion of the nominal and real rates is not a process of addition; it is a geometric calculation. In other words, if the real rate is 5% and the inflation rate is 2.5% the nominal rate is not 7.5%. The nominal rate is 7.625% ([1.025 x 1.05] - 1). In formula form, the calculations of nominal and real rates are as follows:

$$\text{Real Rate} = [(1 + \text{Nominal Rate}) \div (1+ \text{Inflation Rate})] - 1$$
$$\text{Nominal Rate} = [(1 + \text{Real Rate}) \times (1 + \text{Inflation Rate})] - 1$$

In most cases the discount rate (cost of capital) is stated as a nominal rate. This means that an inflation estimate is included.

B. REAL RATES AS A COMPONENT OF THE COST OF CAPITAL

The real rate and inflation forecast is the starting point for determining the cost of capital. A premium is added on for each additional risk the investor is willing to take. The process of adding on each premium is known as build-up methods. This concept is illustrated as follows:

Investment Type	Components
Treasury Bills	Real Rate + Inflation Forecast
Treasury Notes	Real Rate + Inflation Forecast + Intermediate Horizon Premium
Treasury Bonds	Real Rate + Inflation Forecast + Long Horizon Premium
Corporate Bonds	Real Rate + Inflation Forecast + Long Horizon Premium + Default Premium
Large Cap Stocks	Real Rate + Inflation Forecast + Equity Risk Premium
Small Cap Stocks	Real Rate + Inflation Forecast + Equity Risk Premium + Size Premium

The above chart is the foundation for understanding the concept of build-up methodology.

C. BUILD-UP METHOD

Based in the theory reflected in the Capital Asset Pricing Model the build-up formula starts with the risk free rate and adds expected risk premiums designed to reflect the additional risk of an equity investment, as follows:

The primary formula is: $K_e = R_f + ERP + IRP_i + SP + SCR$ *where:*

K_e = *cost of equity*
R_f = *risk free rate of return*
ERP = *expected equity risk premium, or the amount by which investors expect the future return on equity securities to exceed the risk free rate*
IRP_i = *expected industry risk premium for industry i reflecting the relative risk of companies in that industry (if appropriate)*
SP = *size premium*
SCR = *specific company risk for the company*

The elements of the build-up method can be obtained from a number of sources. This material presents some of the more common sources used by valuation professionals.

The table[3] shown below is reproduced from Ibbotson's *SBBI: Valuation Edition*. Starting in 2014, Ibbotson's SBBI Valuation Edition Yearbook data is no longer being published. However, starting in 2014 a new publication is providing the same data in a similar format. *The Valuation Handbook—Guide to Cost of Capital* published by Duff & Phelps presents data similar to this in Appendix 3, "CRSP Deciles Size Premia Study: Key Variables." The table will change according to data gathered in any given year.

It should be clearly noted that the following data is being presented for training and illustrative purposes only and should NOT be used for current valuations.

KEY VARIABLES IN ESTIMATING THE COST OF CAPITAL

	Value
Yields (Riskless Rates)	
Long-term (20-year) U.S. Treasury Coupon Bond Yield	4.8%
Equity Risk Premium	
Long-horizon expected equity risk premium (historical): large company stock total returns minus long-term government bond income returns	7.2
Long-horizon expected equity risk premium (supply side): historical equity risk premium minus price-to-earnings ratio calculated using three-year average earnings	6.1

Size Premium

Decile	Market Capitalization of Smallest Company (in millions)		Market Capitalization of Largest Company (in millions)	Size Premium (Return in Excess of CAPM)
Mid-Cap, 3-5	$1,607.931	-	$6,241.953	0.95%
Low-Cap, 6-8	$506.410	-	$1,607.854	1.81
Micro Cap, 9-10	$1.393	-	$505.437	4.02
Breakdown of Deciles 1-10				
1- Largest	$14,099.878	-	$342,087.219	-0.37
2	$6,258.530	-	$14,096.886	0.60
3	$3,473.335	-	$6,241.953	0.75
4	$2,234.146	-	$3,464.104	1.07
5	$1,607.931	-	$2,231.707	1.44
6	$1,098.284	-	$1,607.854	1.75
7	$746.249	-	$1,097.603	1.61
8	$506.410	-	$746.219	2.36
9	$262.974	-	$505.437	2.86
10-Smallest	$1.393	-	$262.725	6.41
Breakdown of the 10th Decile				
10a	$144.122	-	$262.725	4.54
10b	$1.393	-	$143.916	9.90

[3] Used with permission, *SBBI: Valuation Edition 2005 Yearbook*, updated annually; all rights reserved.

D. RISK-FREE RATE

This rate represents the return available in the market on an investment free of default risk. This is the starting point of the build-up method since any investment should return at least as much as a "riskless" asset. The assumption is that there is an investment asset perceived by all investors as having no risk. There is significant debate among economists regarding what that investment asset actually is and even whether such an asset even exists. For purposes of this method the appraiser must accept that such an asset does exist.

The risk-free rate and the Equity Risk Premium (see next section) are interrelated concepts. Since estimates for ERP are always expressed in relationship to a risk-free rate, it is important for the practitioner to use the same measure of return on risk free investments as used by the source of the Equity Risk Premium.

E. EQUITY RISK PREMIUM

The International Glossary of Business Valuation Terms defines Equity Risk Premium (ERP) as a rate of return added to a risk-free rate to reflect the additional risk of equity instruments over risk free instruments (a component of the cost of equity capital or equity discount rate) The historical equity risk premium shown in the table above is calculated as the arithmetic average return an investor would have received on the S&P 500 in excess of the return on 20-year U.S. government bonds, during the period from 1926 through the present.

Why focus on the long-term period? *The Valuation Handbook* offers the following observations:

1. Long-term historical returns have shown surprising stability.
2. Short-term observations may lead to illogical forecasts.
3. Every period has dramatic historical events and we do not know what major event lie ahead.
4. Law of large numbers: more observations lead to a more accurate estimate.

In addition to these observations, another justification for using long-term data is that investments in closely held businesses generally represent long-term investments. Thus, the use of long term historical equity risk premium are more likely to match investment horizons than premiums calculated with short-term data.

Inherent in this discussion is the assumption that past returns provide a valid estimate of current (and future) cost of capital. Recent research suggests this assumption may be invalid. For example, there has been a recent (over the past 20 years) increase in the average price to earnings ratio (P/E) and this increase accounts for part of the historical equity risk premium. Since similar increases in P/E ratio are not expected, future equity risk premiums are expected to be lower. This lower expected premium can be seen in the "supply side" equity risk premium calculation in the table above.

Much research has been done, and is ongoing, evaluating the reliability of historical returns as an estimate of future performance. The supply side calculation is one result of that research. Other approaches to estimating ERP contemplate issues such as single-period returns vs. multi-year compound returns, geometric vs. arithmetic averages, correcting for World War II interest rate bias, etc.

F. SIZE PREMIUM

The correlation between company size and return has been well documented by Ibbotson and other researchers. Over long periods of time, returns on investments in smaller firms have consistently and significantly exceeded returns on investment in larger firms. The size premium is the extra return a willing investor would expect to receive by investing in smaller equity securities on the NYSE/AMEX/NASDAQ over the large equity security. Since virtually all closely held companies are smaller than even the smallest of the S&P 500 companies, an analyst should consider the inclusion of a size premium in the build-up model.

Long-term returns for all publicly traded stocks are calculated in *The Valuation Handbook*. These returns are then ranked into deciles based on company size. The resulting table (shown on the previous page) clearly illustrates that average returns for small publicly traded companies have been consistently and significantly higher than average returns for large corporations. Since the typical closely held business would fall into the tenth decile in terms of size, the risk premium for this decile is of great interest to the valuation analyst.

To gain greater insight into the small stock risk premium, the tenth decile (containing the smallest companies) is split in half, calculating returns on the smallest five percent (decile 10b) and second smallest five percent (decile 10a) of public companies. The results are striking. As can be seen in the exhibit, the size premium for the smallest five percent (10b) is more than double the premium for the 10a companies. 10a and 10b are then split into two groups each so that 10z reflects the smallest 2.5%. A comparison of size premiums of the smallest 2.5% to the premium for the smallest 10% possibly suggests that there may be a need for additional size consideration when developing a return rate for a small closely held business.

G. INDUSTRY RISK PREMIUM

The equity risk premium and size premia presented in *The Valuation Handbook* are not industry specific. Since some industries are inherently riskier than others, inclusion of an industry specific risk premium can result in a more precise estimate of the cost of capital.

The Valuation Handbook presents an industry premium methodology that valuators may now reference and cite in their valuation reports. This methodology relies on the full information beta estimation process outlined in Chapter 5 of *The Valuation Handbook*. The full information beta methodology uses data from companies participating in an industry to evaluate the risk characteristics of that industry. The full information approach provides a risk index for each industry. The risk index compares the risk level of a specific industry to the total market.

Only industries with full information beta were included in the analysis, with a minimum of five companies in each industry. The equation is as follows:

RP_i = (FIB x ERP) – ERP where:

IRP_i	=	Industry risk premium
$FIBRI_i$	=	Full Information Beta for the industry
ERP	=	The expected equity risk premium

Source: *The Valuation Handbook—Guide to Cost of Capital, Formula 5.5*

Exhibit 5.7 in the *The Valuation Handbook—Guide to Cost of Capital* provides the valuator with industry premia by SIC code. It is highly recommended that the valuator read the material in the book to understand the methodology of developing the premium and the relevance of the data to the specific valuation engagement.

In addition, this additional risk premium or discount may be determined by focusing on how the general economy compares with expectations for the particular industry. Key questions include: How has this industry reacted to similar general economic conditions in the past? What are the industry forecasts and how do they relate to this company? What is its position in the industry? In addition to answering the aforementioned questions, it is necessary to compare the financial analysis of the company to the industry financial analysis; and finally, to assess additional company specific risk based on the financial analysis of the company.

H. SPECIFIC COMPANY RISK PREMIUM

The final variable in the build-up method addresses company-specific risk factors. If used correctly, the previous four factors (risk free rate, equity risk premium, size premium and industry premium) should yield the estimated cost of capital for an equity investment in a smaller, typical company in the identified industry. To assume that this estimated cost of capital is appropriate for the analyst's company would be to ignore possibly critical aspects of that company.

For example, the target company could be relatively new, or it could have a lengthy record of strong performance and a dominant position in its market. Other characteristics, such as poor planning, the quality of management, lack of capital, access to debt and inadequate business experience must be considered. A thorough analysis of the company's risk ratios and how they compare with industry norms can help identify these company-specific risks.

The specific company risk described above is referred to as "unsystematic risk". This risk measures the uncertainty of returns arising from characteristics of the industry and the individual company. In a well-balanced economic portfolio, the unsystematic risk can be eliminated through diversification. This is not the case with an investment in one closely held company's stock.

In evaluating company-specific risks, the authors of Practitioners Publishing Company's *Guide to Business Valuation* suggest that the following factors be considered in the specific company risk premium:

1. The Company's Financial Risk

The term financial risk is defined broadly in this context to include not only risks from debt financing, but also the relative risk from all means of financing the business. This would include current liabilities and the choice to liquidate non-cash assets into cash to finance capital investment or pay a dividend. An assessment of financial risk therefore involves all of the following:[4]

[4] See Practitioners Publishing Company's *Guide to Business Valuation, 15th Edition.*

a) Interest-bearing leverage and coverage ratios
b) Total leverage ratios, such as total liabilities to equity
c) Liquidity ratios, such as the current and quick ratio
d) Volatility of earnings:

Forecasting future earnings growth may add an additional risk premium to the calculations of discount rate. Estimating growth in earnings should be undertaken only in situations where the analyst has strong reason to believe there is a high likelihood of continued growth (see Chapter Four). If this is the case, then much of the risk of forecasting growth is eliminated.

e) Turnover ratios, such as inventory and receivables turnover

A company that runs too lean, or is too highly leveraged with debt, will generally be riskier than a company that is not so highly burdened.

2. The Diversification of the Company's Operations

Generally, the more diversified a company is in terms of products, customer base, geographic locations, etc., the less the risk compared to other companies.

3. Other Operational Characteristics

The analyst should also assess all other factors that could lead to additional positive or negative adjustments. Such factors often include key-man issues and management depth and competence

I. GROWTH RATE SHOULD EQUAL INFLATION PLUS REAL GROWTH THAT CAN BE ACHIEVED WITHOUT ADDITIONAL CAPITAL INVESTMENT

It is generally accepted that an Expected Long-Term Average Growth Rate is impossible to sustain into perpetuity if it exceeds inflation plus population growth. The rate does not include growth in overall company cash flows dependent on future capital investment. A common error is to use a rate of growth that could not be achieved without additional capital investment(s). Often, this is related to the position of the company in its life cycle. What is its state of maturity? Is it experiencing rapid growth, slow growth, stagnation, or decline?

Capitalization models are inherently sensitive to the choice of growth rate, and the analyst should be careful to select a rate that is reasonable. Remember, this is not a short-term growth rate, this must be a long-term sustainable growth rate! To demonstrate how sensitive the model is, consider a company with normalized earnings of $100,000. Assuming the build-up method yields a cost of equity capital of 20 percent, the use of a three percent growth rate will result in a conclusion of value of $588,235. However, use of a more aggressive six percent perpetual growth rate results in a conclusion of value of $714,286, more than 21 percent higher.

The analyst should be careful to select a rate that is reasonable, particularly when using business valuation software which may default to the company's historical growth rate. Many valuators believe the long-term sustainable growth rate for mature companies should be in the range of three to four percent.

Capitalization and discount rates are sometimes referred to, and used, as if they are interchangeable. This is not the case. A capitalization rate is used to value a static or historical benefit stream while a discount rate is used for projected future benefits. The difference between the two can best be described, and remembered, as follows:

Capitalization Rate = Discount Rate – Growth Rate

Discount Rate = Capitalization Rate + Growth Rate

ILLUSTRATION
BUILD-UP METHOD

Risk-free long-term U.S. Government bond rate			+	5.22%	Note A
Equity risk premium	+	7.20%			Note B
Size premium	+	6.41%			Note C
Industry premium (can be positive or negative)	+	0.63%			Note E
Return in excess of risk-free rate	=		+	14.24%	
Total risk premium for company specific risk	=		+	5.50%	Note D
After-tax net cash flow discount rate (This discount rate would be used to calculate the present value of cash flows to equity)			=	24.96%	
Long-term sustainable growth rate			-	3.00%	Note F
After-tax net cash flow capitalization rate for next year			=	21.96%	
Adjustment to current year (one plus growth rate)			÷	1.03	
After-tax net cash flow capitalization rate for current year (This capitalization rate would be suitable for determining the value of the future cash flow stream in the capitalization model)			=	21.32%	
Cash to earnings factor			+	3.37%	Note G
After-tax net income capitalization rate for the current year			=	24.69%	
Intangible earnings factor			+	5.00%	Note H
After-tax intangible capitalization rate for the current year			=	29.69%	
Tax effect [1-tax rate (40%)]			÷	60.00%	
Pre-tax net income capitalization rate for the current year			=	41.15%	
Pre-tax intangible capitalization rate for the current year			=	49.48%	

Note A	20-year yield to maturity on U.S. government bonds at the valuation date
Note B	Long-horizon expected equity risk premium (historical rate).
Note C	Size premium for Decile 10
Note D	Subjective risk premium for company-specific risks.
Note E	Industry risk premium estimate for SIC 1799, Specialty Trade Contractors
Note F	Long-term sustainable growth rate of economic equity returns based on industry outlook and discussions with management.
Note G	Increment to convert to net earnings; EPS less dividend per share, or company's actual increment.
Note H	Additional subjective risk premium associated with intangible earnings.

J. CALCULATION OF CASH TO EARNINGS FACTOR

When future earnings approximate future cash flows, no adjustment is necessary to convert the capitalization rate (or discount rate) for cash flows into a capitalization rate (or discount rate) for accrual earnings. However, when the analyst expects that future cash flows will **not** be consistent with future earnings, adjustment of the cash flow capitalization and discount rates is necessary. The following is one methodology used to determine the cash to earnings factor:

	Earnings	*Depr*	*Working Capital*	*CapX*	*Debt*	*Cash Flow*	*Factor*
Prior Yr.	*$ 3,948,781*	*$ 248,626*	*$ (395,000)*	*$ (529,336)*	*$ -*	*$ 3,273,071*	*82.89%*
2nd Prior Yr.	*2,010,629*	*309,669*	*(201,000)*	*(13,130)*	*-*	*2,106,168*	*104.75%*
3rd Prior Yr.	*5,499,938*	*317,066*	*(550,000)*	*(227,431)*	*-*	*5,039,573*	*91.63%*
4th Prior Yr.	*3,132,499*	*321,356*	*(313,000)*	*(138,137)*	*(45,103)*	*2,957,615*	*94.42%*
5th Prior Yr.	*1,641,937*	*310,768*	*(164,000)*	*(286,059)*	*45,103*	*1,547,749*	*94.26%*
6th Prior Yr.	*837,851*	*291,189*	*(84,000)*	*(317,588)*	*(406,629)*	*320,823*	*38.29%*
7th Prior Yr.	*1,844,016*	*233,631*	*(184,000)*	*(672,544)*	*(128,955)*	*1,092,148*	*59.23%*
	$18,915,651	*$2,032,305*	*$(1,891,000)*	*$(2,184,225)*	*$(535,584)*	*$16,337,147*	*86.37%*
Avgs	*$ 2,700,000*	*$ 290,000*	*$ (270,000)*	*$ (310,000)*	*$ (80,000)*	*$ 2,330,000*	

After-tax net income capitalization rate for the current year (21.32%/86.37%)	*24.69%*
After-tax net cash flow capitalization rate for the current year	*21.32%*
Cash to earnings factor	*3.37%*

Proof

	Earnings	***Cash Flow***
Benefit Stream	*$ 2,700,000*	*$ 2,330,000*
Capitalization Rate	*24.69%*	*21.32%*
Enterprise Value (rounded)	*$10,900,000*	*$10,900,000*

In *The Cost of Capital*, Pratt advises:

> *"Another way of looking at cash flow would be to define it more broadly. Instead of considering only the cash flows investors actually receive, you might define net cash flows as those amounts that could be paid to equity investors without impeding a company's future growth. Of course these cash flows are not those paid to investors, but presumably, investors will ultimately realize the benefit of these amounts either through higher future dividends or, more likely, stock appreciation. Some analysts assume that over the long run, net (after-tax) income should be quite close to cash flow. Therefore, they assume that net income can be used as a proxy for net cash flow. This assumption should be questioned on a case-by-case basis."*

ILLUSTRATION
MODIFIED CAPM BUILD-UP METHOD

Risk-free long-term U.S. Government bond rate			+	5.22%	Note A
Equity risk premium	+	7.20%			Note B
Beta	x	1.511			Note B1
Average company comparative return	=	10.88%			
Size premium	+	6.41%			Note C
Return in excess of risk-free rate	=		+	17.29%	
Total risk premium for company specific risk			+	2.45%	Note D
After-tax net cash flow discount rate (This discount rate would be used to calculate PV of cash flows to equity)			=	24.96%	
Long-term sustainable growth rate			-	3.00 %	Note F
After-tax net cash flow capitalization rate for next year			=	21.96%	
Adjustment to current year (one plus growth rate)			÷	1.03%	
After-tax net cash flow capitalization rate for the current year (This capitalization rate would be suitable for determining the value of future cash flow stream with constant growth)			=	21.32%	
Cash to earnings factor			+	3.37%	Note G
After-tax net income capitalization rate for the current year			=	24.69%	
Intangible earnings factor			+	5.00%	Note H
After-tax intangible capitalization rate for the current year			=	29.69%	
Tax effect [1-tax rate (40%)]			÷	60.00%	
Pre-tax net income capitalization rate for the current year			=	41.15%	
Pre-tax intangible capitalization rate for the current year			=	49.48%	

Note A	20-year yield to maturity on U.S. government bonds at the valuation date
Note B	Long-horizon expected equity risk premium (historical rate)
Note B1	Comparative company beta from selected guideline companies or comparative industry beta
Note C	Size premium for Decile 10
Note D	Subjective risk premium for company-specific risks.
Note E	Industry risk premium estimate for SIC 1799, Specialty Trade Contractors
Note F	Long-term sustainable growth rate of economic equity returns based on industry outlook and discussions with management.
Note G	Increment to convert to net earnings; EPS less dividend per share, or company's actual increment.
Note H	Additional subjective risk premium associated with intangible earnings.

Observation
No matter the individual components of the required rate of return, it is important to keep in mind that the resulting rate is intended to attract an investor to the investment. As such, you may capture certain elements of risk in various components (i.e. ERP, Beta, etc.). In the end, the rate as a whole must make sense given the risks attributable to the investment, and the facts and circumstances unique to each case.

ILLUSTRATION
BUILD-UP METHOD COMPARED TO MODIFIED CAPM

		Build-Up		*Modified CAPM*		*Modified Build-Up*	
Risk-free long-term US Government bond rate	+	*5.22%*	+	*5.22%*	+	*5.22%*	
Equity risk premium		*7.20%*		*7.20%*		*7.20%*	
Beta			*x*	*1.511*			
Average company comparative return	+	*12.42%*	+	*16.10%*	+	*12.42%*	
Size premium	+	*6.41%*	+	*6.41%*	+	*9.34%*	*A*
Industry premium (can be positive or negative)	+	*0.63%*		*0.00%*	+	*0.63%*	
Return in excess of risk-free rate	=	*19.46%*	=	*22.51%*	=	*22.39%*	
Total risk premium for company specific risk	+	*5.50%*	+	*2.45%*	+	*2.57%*	
After-tax net cash flow discount rate (This discount rate would be used to calculate PV of cash flows to equity)	=	*24.96%*	=	*24.96%*	=	*24.96%*	
Long-term sustainable growth rate	-	*3.00%*	-	*3.00%*	-	*3.00%*	
After-tax net cash flow capitalization rate for next year (This capitalization rate would be suitable for determining the terminal value)	=	*21.96%*	=	*21.96%*	=	*21.96%*	
Adjustment to current year (one plus growth rate)	÷	*1.03*	÷	*1.03*	÷	*1.03%*	
After-tax net cash flow capitalization rate for current year (This capitalization rate would be suitable for determining the value of future cash flow stream with constant growth)	=	*21.32%*	=	*21.32%*	=	*21.32%*	
Cash to earnings factor	+	*3.37%*	+	*3.37%*	+	*3.37%*	
After-tax net income capitalization rate for the current year	=	*24.69%*	=	*24.69%*	=	*24.69%*	
Intangible earnings factor	+	*5.00%*	+	*5.00%*	+	*5.00%*	
After-tax intangible capitalization rate for the current year	=	*29.69%*	=	*29.69%*	=	*29.69%*	
Tax effect [(1-tax rate (40%)]	÷	*60.00%*	÷	*60.00%*	÷	*60.00%*	
Pre-tax net income capitalization rate for the current year	=	*41.15%*	=	*41.15%*	=	*41.15%*	
Pre-tax intangible capitalization rate for the current year	=	*49.48%*	=	*49.48%*	=	*49.48%*	

Note A *Modified build-up represents the size premium utilized in the equity risk premium unadjusted by beta. Whereas, the straight build-up represents the size premium in excess of CAPM.*

V. EQUITY RISK PREMIUM: DUFF & PHELPS RISK PREMIUM REPORT AND RISK PREMIUM CALCULATOR™ [5]

Another source of equity risk premiums (ERPs) used in the development of discount and capitalization rates can be found in *The Valuation Handbook – Guide to Cost of Capital Risk Premium Report* published by Duff & Phelps, LLC. (formerly known as the *Duff & Phelps Risk Premium Report* published by Duff & Phelps, LLC.) The Risk Premium Report is an invaluable resource for developing size-adjusted equity risk premiums for small companies. An excerpt of the 2005 report is located in Appendix X.

A premium resource for determining discount rates, the Risk Premium Report provides equity risk premiums for companies sized by eight different criteria: market capitalization, book value, net income, market value of invested capital, total assets, EBITDA, sales, and number of employees. The underlying data for the Risk Premium Report is drawn from both the CSRP and Compustat databases, (from 1963 to present date) of financial reports from companies listed on the New York Stock Exchange, the NASDAQ, and the AMEX. The web-based Risk Premium Calculator is both easy to use and will save the appraiser time in calculating cost of equity (COE) for the subject company's size and risk characteristics, the Risk Premium Calculator will: 1) Automatically estimate levered and unlevered cost of equity; 2) Automatically make an Equity Risk Premium (ERP) adjustment to account for differences between ERP as of valuation date and market risk premium used to calculate the risk premiums published in the Risk Premium Report; 3) Automatically generate an Executive Summary of COE estimates in Word, including CAPM, Build-Up, and unlevered COE, which includes Excel output of the values and calculations. The Report consists of two parts; Part I presents data related to historical equity risk premiums and company size and Part II presents data quantifying the relationship between historical equity risk premiums and company risk.

A. COMPANIES INCLUDED IN THE DATA

Companies included in the measurement data must meet certain criteria including the following:

1. Must be included in both the CRSP and the Compustat databases
2. Excludes financial service companies (Standard Industrial Classification = 6)
3. Must be publicly traded for 5 years
4. Must have sales greater than $1 million in any of the previous 5 years
5. Must have a positive 5-year average earnings before interest, taxes, depreciation and amortization (EBITDA) for the previous five fiscal years

Duff & Phelps also created a separate "high financial risk" portfolio consisting of companies:

1. Identified by Compustat as in bankruptcy or liquidation
2. With 5-year average net income available to common equity for the previous five years less than zero
3. With 5-year average operating income for the previous five years less than zero
4. With negative book value of equity at any of the previous five fiscal year-ends
5. With debt-to-total capital of more than 80%

[5] Duff & Phelps Risk Premium Report and Risk Premium Calculator is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

B. SIZE MEASUREMENT

Company data is sorted by eight measures of size and each measurement of size is included as a separate exhibit in the Risk Premium Report. The measures of size include:

1. Market value of common equity (common stock price times number of common shares outstanding)
2. Book value of common equity (does not add back the deferred tax balance)
3. 5-year average net income for previous five fiscal years (net income before extraordinary items)
4. Market value of invested capital (market value of common equity plus carrying value of preferred stock plus long-term debt (including current portion) and notes payable)
5. Total assets (as reported on the balance sheet)
6. 5-year average EBITDA for the previous five fiscal years
7. Sales (net)
8. Number of employees (either at year-end or yearly average, including part-time and seasonal workers)

Companies that meet the criteria noted above are then divided evenly into twenty-five portfolios for each measure of size. Companies included in the high financial risk portfolio are shown as a separate line item in each of the size categories.

C. DATA PRESENTATION

The Risk Premium Report data are presented in a series of exhibits.

Exhibits A-1 through A-8 Size study used in the build-up method

Exhibits B-1 through B-8 Size Study used in Capital Asset Pricing Model (CAPM)

Exhibits C-1 through C-8 Comparative Risk Study

Exhibits D-1 through D-3 Analyzes relationship between equity returns and three accounting-based fundamental risk measures

Exhibits H-A, H-B, and H-C High Financial Risk Study

The three company risk measures used in Exhibits D-1 through D-3 are as follows:

- Operating margin (the lower the margin, the greater the risk)
- Coefficient of Variation in Operating Margin (the greater the coefficient of variation, the greater the risk)
- Coefficient of Variation in Return on Equity (the greater the coefficient of variation, the greater the risk)

D. DATA USE

The ERPs developed by the Duff & Phelps data can be used to calculate a cost of equity using a build-up method (using the data reported in Exhibits A-1 through A-8) or the modified capital asset pricing model (MCAPM) (using the data reported in Exhibits B-1 through B-8).

The Report suggests that the "smoothed" average premium is the most appropriate indicator for most of the portfolio groups. The "smoothed" premium refers to how the premium is determined. It can be calculated based on a regression analysis, with the average historical ERP as the dependent variable and the logarithm of the average sorting criteria as the independent variable. One benefit of the "smoothed" premium is if an analyst is estimating the required rate of return for a company significantly smaller than any of the companies found in the smallest of the 25 portfolios, it is appropriate to extrapolate the ERP using the slope and constant terms from the regression relationships used in deriving the "smoothed" premiums.

The determination of the ERP's using this data can be made either by (1) selection of the nearest portfolio or (2) a calculation based on regression analysis formulae that are provided for each separate Exhibit. It should be noted that caution is necessary in using the regression analysis formulae as this is an area of continuing controversy in the professional community. A thorough understanding of the use of the regression analysis formulae is necessary.

E. BUILD-UP METHOD EXAMPLE

Using the build-up method to determine a required cost of equity, assume the subject company has the following characteristics:

Eight Measures of Size	***Amount***
Market value of equity	*$120 million*
Book value of equity	*$100 million*
5-year average net income	*$10 million*
Market value of invested capital	*$180 million*
Total assets	*$300 million*
5-year average EBITDA	*$30 million*
Sales	*$250 million*
Number of employees	*200*

Using each of the exhibits A-1 through A-8 (for each of the size measurements) we extract the following ERP data:

Eight Measures of Size	*Company Size*	*Exhibit*	*Guideline Portfolio*	*Smoothed Average ERP **
Market value of equity	*$120 million*	*A-1*	*24*	*12.3%*
Book value of equity	*$100 million*	*A-2*	*24*	*11.3%*
5-year average net income	*$10 million*	*A-3*	*23*	*11.4%*
Market value of invested capital	*$180 million*	*A-4*	*24*	*12.0%*
Total assets	*$300 million*	*A-5*	*23*	*11.2%*
5-year average EBITDA	*$30 million*	*A-6*	*24*	*11.8%*
Sales	*$250 million*	*A-7*	*23*	*11.1%*
Number of employees	*200*	*A-8*	*25*	*12.6%*
Mean				*11.7%*
Median				*11.6%*

* over the riskless rate

The Report states that it has used the income return on long-term Treasury bonds as their measure of the historical riskless rate, therefore a 20-year Treasury bond yield is the most appropriate measure of the riskless rate to use with the Risk Premium Report ERPs.

Thus, if we have a riskless rate of 4.7% as of the valuation date, the Duff & Phelps data would indicate a required rate of return on equity ranging from 15.8% to 17.3%, with an average of 16.4%. From this point, the valuator needs to consider the company specific risk factor. For more, refer to discussion on this subject earlier in this Chapter.

Observation

As with all other methodologies presented in this course, it is important to acquire and read the underlying analysis and supporting data provided in the Risk Premium Report before using the data.

VI. WEIGHTED AVERAGE COST OF CAPITAL (WACC)

Another calculation used to develop a discount or capitalization rate is known as the weighted average cost of capital or WACC. A company's capital structure may consist of the following, in any combination:

- Common Equity
- Preferred Equity
- Long-term Debt

As its name implies, WACC actually blends a company's cost of equity with its cost of debt to arrive at the company's overall cost of capital. WACC is used when the valuation analyst wants to determine the value of the entire capital structure of a company, such as in an acquisition scenario.

WACC adds versatility to the valuation in that it can be developed based on a number of assumptions involving the company's debt in its capital structure. These assumptions can include greater debt, less debt, or debt under different terms.

A. CALCULATION OF THE WEIGHTED AVERAGE COST OF CAPITAL

Assuming a simple capital structure consisting only of common equity and long-term debt, the formula to develop WACC is as follows:

$WACC = (k_e \text{ x } W_e) + (k_{d/(pt)} [1\text{-}t] \text{ x } W_d)$ where:

WACC	=	Weighted Average Cost of Capital
k_e	=	Cost of common equity capital
W_e	=	Percentage of common equity in the capital structure, *at market value*
$K_{d/(pt)}$	=	Cost of debt capital (pre-tax) for the company
t	=	Effective income tax rate for the company
W_d	=	Percentage of debt in the capital structure, *at market value*

Note that if the capital structure includes preferred equity, the formula would change to reflect the third component as follows:

$$WACC = (k_p \text{ x } W_p) + (k_e \text{ x } W_e) + (k_{d/(pt)} [1\text{-}t] \text{ x } W_d)$$

Where k_p is the cost of preferred equity and W_p is the percentage of preferred equity in the capital structure at market time.

The WACC as computed is an "after-tax WACC," as it is normally applied to cash flows after entity-level taxes.

An important point to note in calculating the WACC for a privately-held company is that since no market value exists for the capital structure weightings, the analyst must *estimate* the market values in order to eventually arrive at their market value. Another point to note is that the analyst will typically assume that the book value of the debt approximates its market value, particularly if the debt is from a third-party institution (i.e., bank).
Calculation of the WACC for a privately-held company is a circular process and can be illustrated as follows:

Example:

Assume the following information applies to Terra Company:

- *Book value* of long-term debt = $300,000 (30%)
- *Book value* of common equity = $700,000 (70%)
- Interest rate on the long-term debt = 5.0%
- Cost of equity (using a build-up method) = 22%
- Effective tax rate = 40%
- Net cash flow to invested capital = $250,000

First Iteration

The analyst must first *estimate* the market values of the capital structure weightings and include the estimations in the formula. For this example, the book values are the first estimate of the market value weights. Applying the estimates to the WACC formula, the result is as follows:

$$
\begin{aligned}
\text{WACC} &= (k_e \text{ x } W_e) + (k_{d/(pt)} [1\text{-}t] \text{ x } W_d) \\
&= (0.22 \text{ x } 0.70) + (0.05 [1 – 0.40] \text{ x } 0.30) \\
&= (0.154) + (0.03 \text{ x } 0.30) \\
&= 0.154 + 0.009 \\
&= 0.163 \\
&= 16.3\%
\end{aligned}
$$

Proof—First Iteration

With the first iteration resulting in a WACC of 16.3%, the analyst then applies this to the net cash flow to invested capital to calculate a value. For this example a capitalization valuation model is used although a discounting valuation model could also be used. Using an assumed growth rate of 3.0%, the proof calculation is as follows:

Estimated value = Net cash flow to invested capital / (WACC – Growth Rate)
= $250,000 / (0.163 – 0.03)
= $250,000 / 0.133
= $1,879,699

Subtracting the book value of the debt, $300,000, from the estimated value of $1,879,699 implies a market value of the equity of $1,579,699. This results in capital structure weights of 16% for debt and 84% for equity. The calculated weights are significantly different from the book value weights of 30% for debt and 70% for equity that the analyst started with. Therefore, the analyst must adjust the weightings and recalculate using a second iteration.

Second Iteration

The calculated weights were lower for debt (15% vs. 30%) and higher for equity (85% vs. 70%) than the assumed weights. Using the first iteration as a guide, the analyst may adjust the capital structure weights to 20% for debt and 80% for equity. Including these amounts in the formula yields the following WACC calculation:

$$
\begin{aligned}
\text{WACC} &= (k_e \text{ x } W_e) + (k_{d/(pt)} [1\text{-}t] \text{ x } W_d) \\
&= (0.22 \text{ x } 0.80) + (0.05 [1 – 0.40] \text{ x } 0.20) \\
&= (0.176) + (0.03 \text{ x } 0.20) \\
&= 0.176 + 0.006 \\
&= 0.182 \\
&= 18.2\%
\end{aligned}
$$

Proof—Second Iteration

Once again using an assumed growth rate of 3.0%, the proof of the second iteration is as follows:

Estimated value	=	Net cash flow to invested capital / (WACC – Growth Rate)
	=	\$250,000 / (0.182 – 0.03)
	=	\$250,000 / 0.152
	=	\$1,644,737

The resulting calculated capital structure weights are:

Common equity	=	(\$1,644,737 - \$300,000) / \$1,644,737	=	81.7%
Long-term debt	=	\$300,000 / \$1,644,737	=	18.2%

Note that the calculated weights are much closer to the assumed weights than in the first iteration, 81.7% vs. 80% for equity and 18.2% vs. 20% for debt. This implies that a WACC of 18.2% is reasonable for this company.

Additional iterations may be performed in order to arrive at calculated weights that are even closer to the assumed weights.

Practice Pointer

The process of going through these iterative calculations is greatly simplified by use of automated spreadsheet functions such as the Iteration function in Excel or certain software programs that perform the iteration automatically.

Alternatively, here is an algebraic formula that bypasses the iterations:

$$E_{FMV} = \frac{NCF_{I/C} - D\,(C_D - g)}{C_E - g}$$

Legend:
E_{FMV} – Fair Market Value of Equity
$NCF_{I/C}$ – Net Cash Flow to Invested Capital
D – Total Interest Bearing Debt
C_D– After Tax Interest Rate
C_E – Cost of Equity
g – Long Term Sustainable Growth Rate

B. WACC—WHICH CAPITAL STRUCTURE TO USE

As noted earlier, use of the WACC can add versatility to the valuation in that it can be developed based on a number of assumptions involving the company's debt in its capital structure. These assumptions can include greater debt, less debt, or debt under different terms and may be based on the existing capital structure, a potential buyer's capital structure, an industry-average capital structure, or an optimal capital structure.

For example, if a controlling interest is being valued and the standard of value used is fair market value, the analyst can use an industry-average capital structure since a controlling interest would have the ability to change the capital structure of the company. On the other hand, if a non-controlling (minority) interest is being valued, the existing capital structure should be used as a non-controlling (minority) interest would not have the ability to change the existing capital structure.

If the analyst is valuing a controlling interest for a possible sale of the company and a potential buyer is known (investment value standard), then the potential buyer's capital structure or an optimal capital structure may be warranted for the calculation.

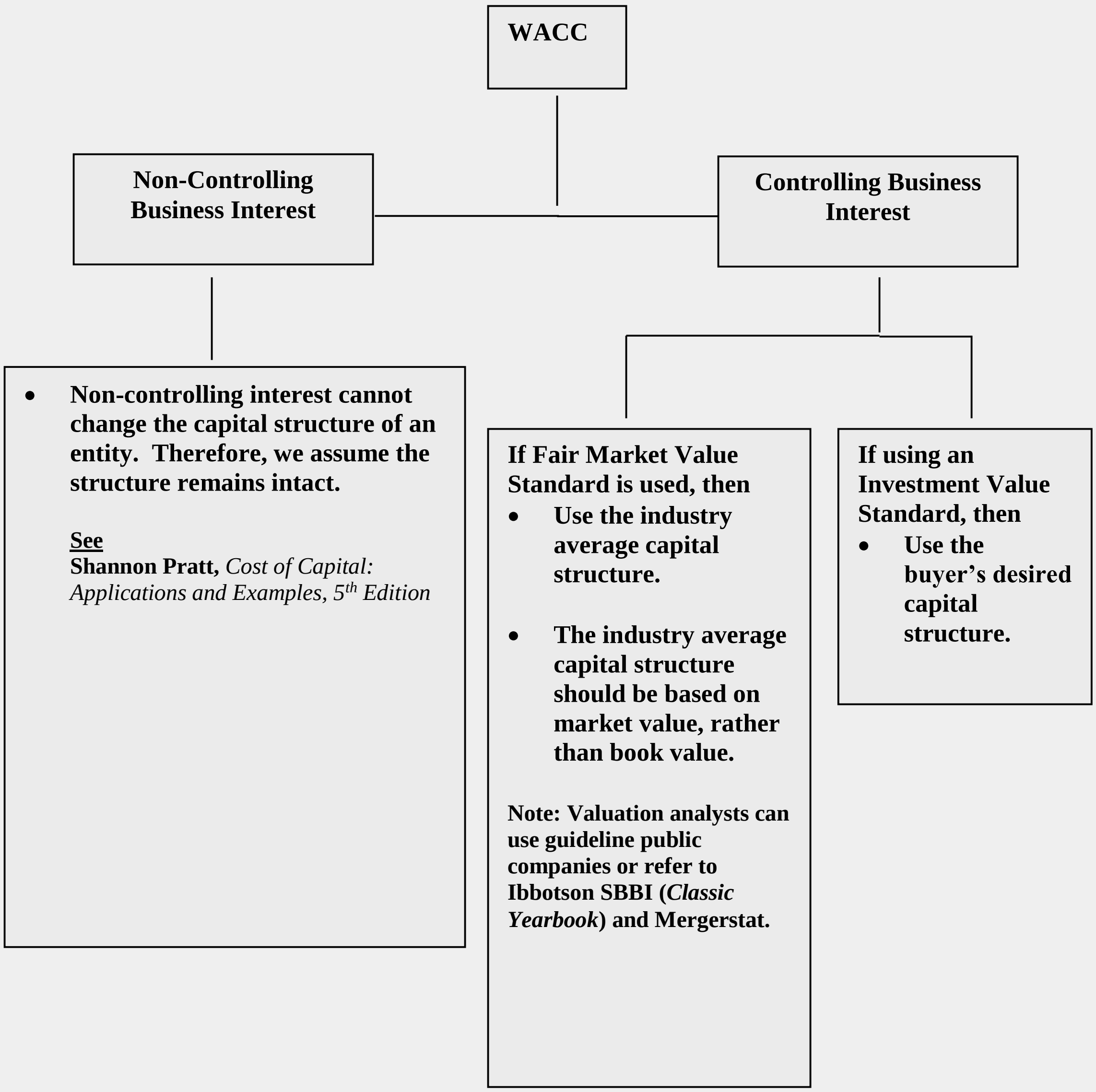
C. WACC—DETERMINING THE VALUE OF EQUITY

WACC is used primarily when the analyst is valuing the entire capital structure of a company (debt plus equity), and is applied to net cash flow to invested capital. WACC can still be used to value only the equity of a company. This is accomplished by calculating the value of the entire capital structure and then subtracting the company's debt, resulting in the value of the company's equity.

Practice Pointer

- **The Weighted Average Cost of Capital (WACC) used to value a closely held business may differ depending on whether non-controlling or controlling interest is being purchased.**

  The following flow chart provides an overview of current practice



VII. MARKET MULTIPLES

Market multiples can help an analyst compare a privately held company to the market, based on expectations the public has of similar publicly traded companies. The valuation analyst will need to determine which, if any, of the market-based multiples might apply to the subject company. Using market data, the valuation analyst calculates a number of ratios, such as P/E, P/CF, P/R, D/P and P/BV, and uses these same ratios, if applicable, to calculate the value of a share in a privately held company.

A. PRICE EARNINGS RATIO (P/E)[6]

Price Earnings is probably the most commonly used market method to describe the price of a share of stock. This method utilizes price/earnings (P/E) ratios of comparable publicly traded companies involved in the same industry as the subject company. The rate is determined by calculating the weighted average of the inverse of the P/E ratios of publicly traded companies, possibly using multiple time periods.

Proponents of this method argue that the inverse or reciprocal P/E ratio of public companies in the same industry as the subject company is the best available comparable capitalization or discount rate for valuing a small, closely held business. P/E ratios are the inverse of the capitalization rate.

This method has some appeal due to the fact that P/E ratios for thousands of publicly traded companies are published daily.

The primary argument against this method is that large, diversified, publicly traded companies are not reasonably comparable to a smaller closely held business. Some factors behind this conclusion are:

1. Minority interests versus controlling interest
2. Capital structure
3. Stock market fluctuations
4. Supply versus demand for particular stocks
5. Diversity in reported financial information

P/E ratios are based on earnings after depreciation, amortization, interest on all debt, compensation to all employees (including stockholder/employees) and all federal and state corporate income tax. In order to use a P/E ratio, the analyst must be working with an earnings figure that is similar in all respects.

[6] Mergerstat Review Price to Earnings Ratios is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

Using five-year average P/E ratios from five public companies, the rate is derived as follows:

Company 1	P/E	=	6.3
Company 2	P/E	=	7.6
Company 3	P/E	=	8.4
Company 4	P/E	=	5.2
Company 5	P/E	=	5.9
Total			33.4
Average	(33.4 /5)		6.68

Discount or Capitalization Rate (after-tax) $= \frac{1}{6.68} = 14.97\%$

Use of publicly-traded company market multiples (also known as Guideline Public Company data) to estimate private-company market enterprise value should be done with caution. Numerous courts have ruled that public companies are so materially different from private companies that no comparison is possible. Frequently, the valuation analyst will discuss guideline public company data in their private company valuation reports but will only use the data as a sanity check.

B. PRICE/CASH FLOW (P/CF)

Price per share divided by cash flow.

1. Cash flow is typically defined, for purposes of this calculation, to be net income plus depreciation and amortization.
2. This measure is considered relevant for companies with high non-cash charges reflected in the income statement—usually found in depreciation and amortization.

C. PRICE/REVENUE (P/R)

Price per share divided by the revenue.

1. This multiple works well for service type companies, or those with few assets. These kinds of companies will often sell at prices related to their revenues.
2. The assumption behind this ratio is that a certain level of revenue will generate a certain "level" of earnings, or earnings potential. The higher the return on revenue (earnings divided by revenue) the higher the price to revenue will be.
3. A regression analysis can often be fit nicely to this market multiple.

D. DIVIDEND/PRICE (D/P)

Dividend divided by price is usually called the dividend yield.

1. Most closely held companies don't pay dividends due to the double taxation, making this approach to pricing a share of closely held stock very difficult.
2. Some public stocks do not sell well based on dividend yield, as the companies pay minimal dividends or none at all. Others, such as REITS, pay a high proportion of earnings as dividends and will have a correspondingly high yield. In either case, the decision to pay or

not pay a dividend is not influenced by any minority owner so the approach is likely not relevant when one is valuing a minority interest.

3. Companies, public or private, that do not pay dividends often may actually have the capacity to pay a dividend, which can be calculated. If the analyst can show that such a payout would not appreciably deny the company its ability to finance operations and growth, the price to dividend ratio might be applicable.

E. PRICE/BOOK (P/BV)

The market price per share divided by book value per share.

1. Book value, or common equity, per share is total owners' equity minus preferred stock divided by the number of common shares outstanding.
2. The purpose of this ratio is to test whether the market price is worth more (or less) than the cost of the assets. If the result is greater than one, it indicates market value exceeds book value and can often be used as a sign of competent management.

F. EARNINGS PER SHARE (EPS)

EPS is net income minus preferred stock dividends divided by the number of common shares outstanding.

1. A trailing EPS is calculated for the past year.
2. The valuation analyst must also decide whether to make this calculation based on fully diluted earnings or primary (undiluted) earnings.

VIII. LESS FREQUENTLY USED SMALL BUSINESS BUILD-UP MODELS

The analyst's main objective in developing a discount or capitalization rate is the assessment of an appropriate risk premium. Therefore, a method which analyzes many different components of risk could be the most theoretically sound. Many approaches for this method exist to determine an appropriate capitalization or discount rate.

A business build-up model presents the valuation analyst with an alternative for computing a capitalization or discount rate when the subject company is materially smaller than those companies used to derive cost of capital estimates. Instead of relying upon market data from large publicly traded entities, this approach requires the valuation analyst to inspect the small business from various aspects of risk in order to conclude an appropriate risk premium for the enterprise.

The theoretical basis for this approach is the same as that of the capital asset pricing model (CAPM), which is: "Investors in 'risky' investments require a higher rate of return, above and beyond a risk free or safe investment rate, as compensation for bearing the risk associated with holding the investment."

A. SCHILT'S RISK PREMIUM GUIDELINES

Schilt's Risk Premium for Discounting Projected Income Streams

Category	Description	Risk Premium
1.	Established businesses with a strong trade position, well financed, with depth in management, whose past earnings have been stable and whose future is highly predictable.	6 - 10%
2.	Established businesses in a more competitive industry that are well financed, have depth in management, have stable past earnings and whose future is fairly predictable.	11 - 15%
3.	Businesses in a highly competitive industry that require little capital to enter, no management depth, a high element of risk and whose past record may be good.	16 - 20%
4.	Small businesses that depend upon the special skill of one or two people. Larger established businesses that are highly cyclical in nature. In both cases, future earnings may be expected to deviate widely from projections.	21 - 25%
5.	Small "one person" businesses of a personal services nature, in which the transferability of the income stream is in question.	26 - 30%

Note: "The risk premium chosen is added to the risk-free rate...." The resulting figure is the risk-adjusted capitalization rate for use in discounting the projected income stream. Because of the wide variation in the effective tax rates among companies, these pre-tax figures are designed to be used with pre-tax income.

Source: James H. Schilt, "Selection of Capitalization Rate – Revisited" Business Valuation Review, June 1991, p. 51.

Use of this chart to develop a cost of capital has been widely criticized in the professional literature. Therefore, valuation analysts should only use this with extreme caution and only used as a reasonableness test.

B. THE RISK RATE COMPONENT MODEL (RRCM)

The RRCM[7] is a business build-up model designed to identify an appropriate cost of capital based on the perceived risks associated with an enterprise. Many valuation analysts believe that a business build-up model is a better approach to use when the enterprise is considered too small for market data methods.

The RRCM begins by taking a safe or reasonable rate of return (e.g., intermediate term bond rate) and adds to that rate a weighted average risk premium for each of the following general risk factor categories:

[7] Available in BVM *Pro* which is available from NACVA (800-677-2009) and ValuSource (800-825-8763)..

1. Primary Factors

a) Competition
b) Financial strength
c) Management ability and depth
d) Profitability and stability of earnings

2. Other Factors to Consider

a) National economic effects
b) Local economic effects

The Risk Rate Component Model identifies more specific risk factors that fall within the four primary risk factor categories. Each of these specific risk factors is evaluated and assigned a risk premium percentage and then weighted according to the relative degree of influence it has on the general category where it resides. Then a weighted average of all of the specific risk factors for each category is calculated. These weighted averages then become the risk premium factors for each of the general risk factor categories. The general risk categories can then be weighted relative to the perceived importance that each general category has relative to the others.

Section 5 of Revenue Ruling 59-60 requires the valuation analyst to use informed judgment when weighing the various factors or components. Necessarily the valuation analyst using the RRCM should document in working papers how each component has been considered. Valuation analysts can reduce the subjective nature of the analysis of the various components by conducting site visits, gathering industry information, conducting interviews with management and other informed persons and performing detailed analytical analysis through ratio analysis. Risk can be quantified in several ways: as weak, no effect, or strong; or High, Medium, Low and No Risk, or; Heavy, Moderate, Light, None. The valuation analyst setting up a quantification chart should be consistent in his or her application.

Each risk factor that can be analyzed in ratio analysis should, where possible, be compared to similar ratios from industry publications (e.g., RMA, etc.) in order to compare the position/performance of the subject company to comparable companies.

3. RRCM Risk Factors

The four general risk factor categories: Competition, Financial Strength, Management Ability and Depth and Profitability and Stability of Earnings are synthesized from the Black/Green Build-up Summation Method, the James Schilt Risk Premium Guidelines, The Complete Guide to Buying a Business by Arnold Goldstein (1983), How to Value a Small Business, Real Estate Today, by Harold S. Olafson (1984), Selling Your Business, Business Week, Bradley Hitchings (1985) and the BNA Tax Management: Estates, Gifts and Trusts Portfolios (221d) (1985).

The following table lists suggested underlying risk components the analyst should review for each category: Each risk component can be analyzed by ratio analysis [R], questionnaires to be completed with management [Q] or through other analysis and worksheets [A] [8].

RRCM Risk Factors

Competition		**Financial Strength**	
Q	Proprietary content (including patents and copyrights)	R	Current ratio
A	Relative size of company	R	Quick ratio
Q	Relative product or service quality	R	Sales to working capital ratio
Q	Product or service differentiation	R	Accounts receivable to working capital ratio
Q	Covenant not to compete	R	Inventory to working capital ratio
Q	Market strength – competition	R	Net sales to inventory turnover
A	Market size and share	R	Total sales to assets
Q	Pricing competition	R	Net fixed assets to net worth
Q	Ease of market entry	R	Miscellaneous assets to net worth
	Other pertinent factors specific to the subject company	R	Total debt to net worth
		R	Total assets to total equity
Management Ability and Depth		R	Total debt to assets
R	Accounts receivable turnover	R	Long-term debt to equity
R	Accounts payable turnover	R	Interest coverage
R	Inventory turnover		Other pertinent factors specific to the subject company
R	Fixed asset turnover		
R	Total asset turnover	**Profitability and Stability of Earnings**	
R	Employee turnover	Q	Years in business
R	Management depth	Q	Industry life cycle
Q	Facilities condition	R	Return on sales (before taxes)
Q	Family involvement	R	Return on assets
Q	Books and records – quality and history	R	Return on equity
Q	Contracts for sales	R	Operating earnings growth rate
Q	Contracts for purchases	R	Sales growth rate
Q	Contracts for management	R	Trading ratio (sales to net worth)
Q	Contracts – other	R	Standard Deviation
R	Gross margin		Other pertinent factors specific to the subject company
R	Operating margin		
R	Operating cycle		
	Other pertinent factors specific to the subject company		

The Risk Rate Component Model assumes that the risk premiums and the safe rate of return are on a pre-tax basis; therefore, this method generates a capitalization rate for use on a pre-tax basis. If the valuation analyst using the RRCM desires a discount rate, then a factor for long-term growth should be added.

The business build-up summation table, below, shows how the RRCM can work.

[8] Suggested questionnaires and analytical worksheets can be found in The Value of Risk© 2001 and 2002, Hanlin and Claywell.

BUILD-UP SUMMATION TABLE

Risk Factors	(1) Risk Indicator[9]	(2) Weight	(3) WEIGHTED RISK INDICATOR
Competition:			
Proprietary Content (including Patents & Copyrights)	6.0	1.00	6.0
Relative Size of Company	2.0	1.00	2.0
Relative Product or Service Quality	4.0	1.00	4.0
Product/Service Differentiation	4.0	1.00	4.0
Covenant not to compete	0.0	0.00	0.0
Market Strength – Competition	2.0	1.00	2.0
Market Size and Share	2.0	1.00	2.0
Pricing Competition	6.0	1.00	6.0
Ease of Market Entry	2.0	1.00	2.0
	8.0	1.00	8.0
Total Weight Factors		**9.00**	**36.0**
Total Weighted Average			**4.0%**
Financial Strength:			
Current Ratio	4.0	1.00	4.0
Quick Ratio	4.0	1.00	4.0
Sales to Working Capital	4.0	1.00	4.0
Accounts Receivable to Working Capital	4.0	1.00	4.0
Inventory to Working Capital	6.0	1.00	6.0
Net Sales to Inventory turnover	7.0	1.00	7.0
Total Assets to Sales	5.0	1.00	5.0
Net Fixed Assets to Net Worth	3.0	1.00	3.0
Miscellaneous Assets to Net Worth	0.0	1.00	0.0
Total Debt to Net Worth	8.0	1.00	8.0
Total Assets to Total Equity	7.0	1.00	7.0
Total Debt to Assets	8.0	1.00	8.0
Long–term Debt to Equity	7.0	1.00	7.0
Interest Coverage	4.0	1.00	4.0
Total Weight Factors		**14.00**	**71.0**
Total Weighted Average			**5.07%**
Management Ability and Depth:			
Accounts Receivable Turnover	2.0	1.00	2.0
Accounts Payable Turnover	8.0	1.00	8.0
Inventory Turnover	2.0	1.00	2.0
Fixed Asset Turnover	4.0	1.00	4.0
Total Asset Turnover	4.0	1.00	4.0
Employee Turnover	8.0	1.00	8.0
Management Depth	8.0	1.00	8.0
Facilities Condition	6.0	1.00	6.0
Family Involvement	8.0	1.00	8.0
Books & Record – Quality & History	6.0	1.00	6.0
Contracts	8.0	1.00	8.0
Gross Margin	4.0	1.00	4.0
Operating Margin	6.0	1.00	6.0
Total Weight Factors		**13.00**	**74.0**
Total Weighted Average			**5.69%**
Profitability & Stability Of Earnings:			
Years In Business	2.0	1.00	2.0
Industry Life Cycle	4.0	1.00	4.0
Return On Sales (before taxes)	6.0	1.00	6.0
Return On Assets	4.0	1.00	4.0
Return On Equity	4.0	1.00	4.0
Operating Earnings Growth Rate	5.0	1.00	5.0
Trading Ratio (Sales/Net Worth)	5.0	1.00	5.0
Earnings Standard Deviation	6.0	1.00	6.0
Total Weight Factors		**8.00**	**36.0**
Total Weighted Average			**4.50**
TOTAL RISK PREMIUM FACTOR			**19.26%**

[9] A High risk would receive a score value of 10.0; a Medium High risk 7.5; Medium risk 5.0; Medium Low risk 2.5; Low risk 1.0; No risk 0.0. See *The Value of Risk* ©, Hanlin & Claywell, 2002, p. 23.

4. SUMMARY OF RRCM SUMMATION METHOD

Risk Factor (By General Category):

Competition	4.00%
Financial Strength	5.07%
Management Ability and Depth	5.69%
Profitability and Stability of Earnings	4.50%
Total Weighted Average Risk Factor Premiums:	**19.26%**

Calculation of Capitalization Rate:	
Total Weighted Average Risk Factor Premium	19.26%
Assumed Safe (Reasonable) Rate of Return	5.50%
National Economic Premium (or Discount)	1.00%
Local Economic Premium (or Discount)	1.00%
Indicated Capitalization Rate	**26.76%**
Rounded capitalization rate	27.00%

C. THE JEFF JONES METHOD—DEVELOPMENT OF A PRICING MULTIPLE

"Most business brokers who use the multiple of discretionary earnings method have some kind of a worksheet listing the factors that affect the multiple. *(The multiple is an inverted capitalization rate, where a 20 percent capitalization rate infers a multiple of five (100%/20%).* In addition, there is a rating and weighting system for each factor. The factors and rating and weighting scheme may vary considerably from one broker to another. This variability depends to a great extent on the types of businesses the brokers specialize in or typically tend to sell."[10]

"There is general recognition that the factors and the ratings and weightings are quite subjective. However, brokers who have the experience of selling certain types of businesses several times a year tend to develop a feel for how buyers perceive those businesses in the particular market at the particular time. This ongoing connection with the transactional market helps the brokers use their respective analytical systems in advising sellers and buyers about prices that the market is likely to accept."[14]

The multiple of discretionary earnings method clearly produces an indicated value for a controlling owner. Further, the model was developed to aid in pricing an entire business for sale. There have been no mechanisms developed to estimate a minority ownership interest.

Use of this method to develop a cost of capital should only be used with caution and as a reasonableness test. It is somewhat dated and, currently, is not widely adopted by the professional valuation community. This method provides a helpful outline for considering and articulating the qualitative risk factors represented by the company specific risk premium.

[10] Quoted: *Valuing Small Businesses & Professional Practices-3rd Edition*, Pratt, Reilly & Schweihs, McGraw-Hill, 1998 p. 32-333 and Handbook of Business Valuations, West and Jones, Wiley & Sons, 1992.

D. BLACK/GREEN BUILD-UP SUMMATION METHOD

This method, introduced in 1991, begins by taking a safe or reasonable rate of return (e.g., intermediate term Treasury bond rate) and adds to that rate a weighted average risk premium for each of the following general risk factor categories:

1. Competition
2. Financial strength
3. Management ability and depth
4. Profitability and stability of earnings
5. National economic effects
6. Local economic effects

This method formed the basis for several build-up models, including RRCM and Value-Netex. The Black/Green Method assumes that the risk premiums and the safe rate of return are on a pre-tax basis; therefore, this method generates a capitalization rate for use on a pre-tax basis. This rate can be converted to a discount rate by adjusting for growth.

At the time of its inception, this model relied upon the analyst's experience and intuition to assign a value to each risk component. Many valuation analysts came to the conclusion that the Black/Green Method was too subjective and lacking in detailed support for the value of each of the risk components. This method provides a helpful outline for considering and articulating the qualitative risk factors represented by the company specific risk premium.

E. ARBITRAGE PRICING THEORY

Arbitrage Pricing Theory (referred to from this point forward as APT) is a model in which multiple betas and multiple risk premia are used to generate the expected return of a security.[11] CAPM only recognizes systematic risk and, in turn, requires the valuator to further adjust for small company and specific company risk. APT builds on the concept of CAPM through the recognition of a variety of risk factors associated with an investment's required rate of return, with just one of these factors being the systematic risk, or "market timing" risk relative to holding an equity security over a risk free instrument.

APT treats the expected return of an investment as the sum of the payoffs for an indeterminate number of risk factors. There could be one, two, or any number of risk factors. The exposure to each risk factor inherent in a given security is estimated and the factors are called factor loadings. The general risk factors considered in building a rate through APT, in addition to systematic or market risk, include the following five factors[12]:

1. Changes in industrial production
2. Changes in anticipated inflation
3. Unanticipated inflation
4. The return differential between low-grade corporate bonds and government bonds
5. The return differential between long-term government bonds and short-term Treasury bills

[11] Ibbotson Associates, *Stocks Bonds Bills and Inflation Valuation Edition, 2010 Yearbook*, page 201

[12] Chen, Nai-Fu. "Some Empirical Tests of Arbitrage Pricing," *Journal of Finance*, Vol. 18, no. 5, December 1983, pp. 1393-1414. Chen, Nai-Fu, Richard Roll, and Stephen Ross. "Economic Forces and the Stock Market: Testing the APT and Alternative Pricing Theories," *Journal of Business*, Vol. 59, July 1986, pp. 383-403

An alternative explanation of APT Risk Factors is presented in "*Valuing a Business*" as Exhibit 9-9. The factors are described as follows[13]:

1. Confidence Risk

The return differential between risky corporate bonds and government bonds.

2. Time Horizon Risk

The return differential between 20 year government bonds and 30 day T-bills.

3. Inflation Risk

The combination of unexpected components of short- and long-term inflation rates.

4. Business Cycle Risk

Unanticipated changes in the level of real business activity.

5. Market Timing Risk

Computed as the part of the S&P 500 total return not explained by the first four macroeconomic risks.

Like the CAPM, APT risk premia are additive. The formula can be stated as follows:

$$K = R_f + \beta_{s1}RP_1 + \beta_{s2}RP_2 + \ldots + \beta_{sn}RP_n$$

Where:
K = Cost of Equity
R_f = Risk-free rate
RP = Various risk premia
β_s = Factor loadings (exposure of the security to each of the risks)

Obviously, to use this method, significant and reliable research and market data must be obtained and documented. There is internet and software based sources that provide bond ratings, pricing data, etc. In practice, it is rare to see this method used—particularly for small and mid-size businesses.

F. FAMA-FRENCH THREE STAGE MODEL

Eugene Fama and Kenneth French developed a model based on their findings that the return on stocks are better explained as a function of the company's size and its book-to-market ratio in addition to the single market factor of the CAPM. Their findings did not support the key assumption of CAPM: that returns on stocks are not positively related to market betas. This began a debate regarding the predictive value of beta that rages on today.

[13] Source: Presented in a talk based on a paper, "A Practitioner's Guide to Arbitrage Pricing Theory," by Edwin Burmeister, Richard Roll, and Stephen A. Ross, written for the Research Foundation of the institute of Chartered Financial Analysts.

They found that the return on a firm's cost of equity is negatively related to its size and positively related to its book-to-market ratio. Firms with smaller capitalization have higher cost of equity expectations meaning that investors will want to be rewarded for taking on the additional risk. Firms with higher book value relative to market value are riskier and accordingly, also have higher cost of equity expectations. This work resulted in a three factor model for determining expected returns for a security: covariance with the market, size, and financial risk as determined by the book to market ratio

In addition to the market factor present in CAPM (covariance with the market), both size and financial risk are introduced that determine a security's expected returns. Size is measured by market capitalization. The Fama-French Three Factor Model is represented by the following formula:

$$E(R_i) - R_f = \beta_m RP_m + \beta_s RP_s + \beta_R P_v$$

Where:
$E(R_i)$ = Expected return on security i
R_f = Risk-free rate
β_m = Market coefficient in the Fama-French regression
RP_m = Expected market risk premium
β_s = Small-minus-big (SMB) coefficient in the Fama-French regression
RP_s = Expected SMB risk premium[14]
β_v = High-minus-low (HML) coefficient in the Fama-French regression
RP_v = The expected HML risk Premium[15]

Generally, it is a fair characterization to note that over time the Fama-French method results in higher estimates of the cost of equity than CAPM. This may be the result of the model over-correcting for the effects of size and/or financial distress. Data is also presented that seems to show that CAPM over time is a more stable estimate of the cost of capital than Fama-French is. This is an expected result as additional factors are added to the analysis.

[14] Estimated as the difference between the historical average annual returns on the small-capitalization and large-capitalization portfolios.
[15] Estimated as the difference between the historical average annual returns on the high book-to-market stocks and low book-to-market stocks.

IX. COMMON ERROR

The following illustration demonstrates the impact when the analyst is not consistent with the application of a single method when performing a valuation.

Assumptions:

Weighted average economic earnings (pre-tax) = $157,500

Appropriate capitalization rate (pre-tax) = 30%; after-tax = 18%

Income Tax Rate = 40%

Pre-Tax	**After-Tax**
$\frac{\$157{,}500 \text{ (Pre-tax)}}{30\% \text{ (Pre-tax)}}$	$\frac{\$157{,}500 \text{ (Pre-tax)}}{18\% \text{ (After-tax)}}$
Correct Indicated Value = $525,000	Incorrect Indicated Value = $875,000

$350,000 Difference!

X. CONVERTING PRE-TAX RATES TO AFTER-TAX RATES

A. OBSERVATION

It would obviously be an error to apply pre-tax capitalization or discount rates to after-tax earnings and after-tax capitalization or discount rates to pre-tax earnings. Therefore, the analyst may find it necessary to convert rates.

B. CONVERT PRE-TAX CAPITALIZATION RATES TO AFTER-TAX RATES

Formula:

After-tax cap rate = Pre-tax cap rate x (1 – Tax rate)

Example:

Assume:

Pre-tax capitalization rate	=	30%
Tax rate	=	40%

Calculate after-tax rate:

After-tax rate	=	30% x (1 - .40)
After-tax capitalization rate	=	18%

C. CONVERT AFTER-TAX CAPITALIZATION RATES TO PRE-TAX RATES

Formula:

Pre-tax capitalization rate = After-tax cap rate ÷ (1 – Tax rate)

Example:

Assume:

After-tax capitalization rate	=	18%
Tax rate	=	40%

Calculate after-tax rate:

Pre-tax rate	=	18%÷ (1 - .40)
Pre-tax capitalization rate	=	30%

Recommended reading includes, but is not limited to:

- Abrams, Jay, *Quantitative Business Valuation, A Mathematical Approach for Today's Professionals*, Chapter 2 (Using Regression Analysis), and Chapter 3 (Annuity Discount Factors and the Gordon Model).
- Blackman, Irving L., *Valuing Your Privately Held Business, The Art & Science of Establishing Your Company's Worth*, Chapter 11 & 12 (Recapitalizations).
- Copeland, Tom, et. al., *Valuation Measuring and Managing the Value of Companies*, Chapter 8 (Estimating the Cost of Capital).
- Damodaran, Aswath, Damodaran, *Damodaran on Valuation–Security Analysis For Investment and Corporate Finance*
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 4 (Income Approach, Part 11, Determination of The Future Benefit Stream (Cash Flows) and 12 (Defining the Benefit Stream) and 13 (Defining Net Cash Flow), Chapter 5 (Cost of Capital/Rates of Return).
- Ibbotson Associates, *Stocks, Bonds, Bills and Inflation, Valuation Edition Yearbook*, Chapter 2 (Introduction to the Cost of Capital), Chapter 3 (The Buildup Method), Chapter 4 (Overview of Cost of Equity Capital Methods), and Chapter 6 (Beta Estimation Methodologies).
- Pratt, Shannon P., *Valuing a Business, The Analysis and Appraisal of Closely Held Companies, 5th Edition*
- Pratt, Shannon P. and Grabowski, Roger J., *Cost of Capital: Applications and Examples, 5th Edition*
- Grabowski, Roger J., Harrington, James P., and Nunes, Carla, *2014 Valuation Handbook – Guide to Cost of Capital*

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BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 5

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 5: Capitalization/Discount Rates

1. What is a capitalization rate?

   a. The calculated external factor and internal factor multiplied by the investment factor
   b. Divisor (or multiplier) used to convert a defined stream of income to present value
   c. The price/earnings ratio divided by the dividend paying capacity
   d. Rate of return used to convert a series of future income amounts to their present value

2. What is a discount rate?

   a. The calculated external factor and internal factor multiplied by the investment factor
   b. Divisor or multiplier used to convert a defined benefit stream to present value
   c. The price/earnings ratio divided by the dividend paying capacity
   d. A rate of return used to convert a series of future income amounts to their present value

3. Earnings for Jasper Company for the last five years are shown below. What are the weighted average historical earnings?

Year	Earnings	Weight
1999	1,230,000	1
2000	1,240,000	2
2001	1,245,000	3
2002	1,230,000	4
2003	1,230,000	5

   a. 1,230,000
   b. 1,234,333
   c. 3,703,000
   d. 7,714,581

4. Using the weighted average historical earnings from question #3, if the calculated discount rate is 15% and long-term growth is 3%, what is the indicated value of Jasper Company based on a capitalization of single=period earnings method?

   a. $ 8,228,900
   b. $15,429,200
   c. $10,286,100
   d. $10,594,700

5. A capitalization rate and a discount rate are essentially the same thing.

   a. True
   b. False

6. The price earnings ratios for five public companies are: 8.20, 4.60, 5.00, 4.86, and 2.10. The after-tax capitalization rate is:

   a. 16.00%
   b. 18.08%
   c. 20.19%
   d. 24.76%

7. The primary formula for the Capital Asset Pricing Model (CAPM) is:

   a. Expected return = risk-free rate divided by beta multiplied by the expected return on a market portfolio
   b. Expected return = risk-free rate multiplied by beta multiplied by the expected return on a market portfolio less the risk-free rate.
   c. Expected return = risk-free rate plus beta multiplied by the expected return on a market portfolio less the risk-free rate.
   d. Expected return = beta divided by the risk-free rate multiplied by the expected return on a market portfolio less the risk-free rate

8. To calculate the weighted average cost of capital (WACC):

   a. Calculate the cost of debt plus the cost of equity in proportion to their book values
   b. Calculate the weighted average earnings and divide by the ratio of debt to equity
   c. Calculate the after-tax weighted cost of debt and add the weighted cost of equity
   d. Calculate the interest rate on a mid-range treasury bond and divide by beta

9. An estimate of a long-term sustainable growth rate should:

   a. Equal inflation plus the real volume growth that can be achieved with additional capital investment
   b. Equal inflation less the real volume growth that can be achieved with additional capital investment
   c. Equal inflation plus the real volume of growth that can be achieved without additional capital. Investment
   d. None of the above

10. Earnings per share is:

   a. The price of risk less the difference between the expected rate of return on a portfolio and the reasonable rate
   b. The price of the dividend divided by the price
   c. The market price per share divided by the book value per share
   d. The net income less preferred stock dividends divided by the number of common shares outstanding

11. To convert a pre-tax capitalization rate to after-tax capitalization rate:

    a. Multiply the pre-tax capitalization rate by 1 minus the expected tax rate
    b. Divide the after-tax capitalization rate by 1 minus the expected tax rate
    c. Multiply the pre-tax capitalization rate by 1 plus the expected tax rate
    d. Divide the after-tax rate by 1 plus the expected tax rate

12. Practice Exercise:

    Match the appropriate discount or capitalization rate to the benefit stream.

Benefit Stream	***Discount/Capitalization Rate***
Capitalization of Earnings/Cash Flow	*Build-Up Method*
	+ Risk-free rate
	+Equity risk premium
Pre-tax earnings (income before taxes)	*+Size premium*
	+ Company specific risks
After-tax earnings (net income)	*= After-tax net cash flow discount rate*
	– Long-term sustainable growth rate
Net cash flow to invested capital	*= After-tax net cash flow capitalization rate for next year*
	÷ Adjustment for current year
Net cash flow to equity	*= After-tax net cash flow capitalization rate for current year*
	+ Cash to earnings factor
Pre-tax excess earnings	*= After-tax net income capitalization rate for current year*
	+ Intangible earnings factor
After-tax excess earnings	*= After-tax intangible capitalization rate for the current year*
	Tax effect
Discounting Future Cash Flows	*= Pre-tax net income capitalization rate for current year*
	= Pre-tax intangible capitalization rate for the current year
Projected cash flows	
	Weighted Average Cost of Capital (WACC)
	+ Weighted Cost of Debt
	+ Weighted Cost of Equity
	= WACC

13. General expectations of the particular business being valued, the size of the business being valued, and the nature of the business being valued are examples of:

    a. External factors that may influence the capitalization or discount rate
    b. Internal factors that may influence the capitalization or discount rate
    c. Investment factors that may influence the capitalization or discount rate
    d. Marketability factors which affect the capitalization or discount rate

14. It is generally accepted that the capitalization rate is equivalent to the discount rate less:

    a. Short-term growth rate
    b. Long-term sustainable growth rate
    c. Equity risk premium
    d. Risk free rate

15. Which variable below is NOT included in the Build-Up Method?

    a. Risk free rate of return
    b. Beta
    c. Size premium
    d. Specific company risk

16. Which component of the Build-Up Method relates to the "unsystematic risk" associated with a particular business entity?

    a. Risk free rate
    b. Equity risk premium
    c. Beta
    d. Specific company risk premium

17. Which of the following is NOT an assumption of the Capital Asset Pricing Model (CAPM)?

    a. Investors are risk averse
    b. There are no taxes and no transactional costs
    c. The rate received from lending money is the same as the cost of borrowing
    d. All investors do not have identical investment holding periods

18. Using the Modified Capital Asset Pricing Model a valuation analyst determines beta = 1.08. This means:

    a. The subject company is no more or no less volatile than the industry
    b. The subject company is less volatile than the industry
    c. The subject company is more volatile than the industry
    d. The subject company has no relative market risk

19. WACC can add versatility to the valuation, in that a valuation analyst could change the capital structure of an entity when valuing a non-controlling (i.e., minority) interest.

    a. True
    b. False

20. If a valuation analyst uses the weighted average cost of capital (WACC) and is valuing only the equity of the company, the valuation analyst would:

    a. Capitalize equity and ignore the debt
    b. Capitalize invested capital then subtract existing deb
    c. Determine the present value of the debt only
    d. Capitalize the cash flow net of debt

21. The criteria for companies included in the measurement data used to determine the equity risk premiums found in the Duff & Phelps Risk Premium Report would include all EXCEPT:

    a. Must be publicly traded for 5 years
    b. Must have sales greater than $1 million in any of the previous 5 years
    c. Cannot be a financial service company
    d. EBITDA can either be negative or positive based on the most recent 5 year average

22. The Duff & Phelps equity risk premium measurements are sorted into ___________________ measures of size.

    a. five
    b. eight
    c. ten
    d. twelve

23. What component of cost of capital using a build-up method would the Duff & Phelps data help you determine?

    a. Company specific risk
    b. Equity risk premium
    c. Risk free rate
    d. Beta

24. What are the four general risk factor categories of the risk rate component model (RRCM)?
    a. Competition, financial strength, profitability and stability of earnings, and management ability and depth
    b. Competition, national economic effects, local economic effects, and depth of management
    c. Local economic effects, financial strength, market stability, and profitability and stability of earnings
    d. National and local economic effects, financial strength, management ability, and competition

CHAPTER SIX

COMMONLY USED METHODS OF VALUATION

"October. This is one of the particularly dangerous months to speculate in stocks. The others are July, January, September, April, November, May, March, June, December, August and February."
Mark Twain

I. OVERVIEW

Mark Twain's reasoning could sometimes be appropriately applied to business valuations. Business owners frequently have the need or desire to establish a value for their business. As was discussed in Chapter One, there are many reasons for valuing a business. Professionals involved in valuing closely held businesses know it is not a simple task. The complexity is further compounded by the fact that each business owner's purpose, motive, and goal in valuing the business varies greatly from those of others. No two businesses are alike; therefore, no one size fits all. The effect these issues may and usually do have on the valuation process gives rise to the concept that the valuation process is more of an art than a science.

There are several commonly used methods of valuation. Each method may at times appear more theoretically justified in its use than others. The soundness of a particular method is entirely based on the relative circumstances involved in each individual case. The valuation analyst responsible for selecting the most appropriate method must base his or her choice of methods on knowledge of the details of each case. When this knowledge is appropriately applied, much of the art factor is eliminated from the process and valuation becomes more of a science. The objective of the Business Valuation Certification Training Center is to make the entire process more objective in nature.

The commonly used methods of valuation can be grouped into one of three general approaches, as follows:

A. ASSET BASED APPROACH

1. Book Value Method
2. Adjusted Net Asset Method

   a) Replacement Cost Premise
   b) Liquidation Premise
   c) Going Concern Premise

B. INCOME APPROACH

1. Capitalization of Earnings/Cash Flows Method
2. Discounted Earnings/Cash Flows Method

C. MARKET APPROACH

1. Guideline Public Company Method
2. Comparable Private Transaction Method
3. Dividend Paying Capacity Method
4. Prior Sales of interest in subject company

D. OTHER APPROACHES

1. Income/Asset

   a) Excess Earnings/Treasury Method[1]
   b) Excess Earnings/Reasonable Rate Method[1]

2. Sanity Checks

   a) Justification of Purchase
   b) Rules of Thumb

These lists, while not 100 percent inclusive, represent the commonly used methods within each approach a valuation analyst will use.

II. ASSET BASED APPROACH

The asset based approach is defined in the International Glossary of Business Valuation Terms as "a general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities." Any asset-based approach involves an analysis of the economic worth of a company's tangible and intangible, recorded and unrecorded assets in excess of its outstanding liabilities. Thus, this approach addresses the book value of the Company as stipulated in Revenue Ruling 59-60:

> *"The value of the stock of a closely held investment or real estate holding company, whether or not family owned, is closely related to the value of the assets underlying the stock. For companies of this type the appraiser should determine the fair market values of the assets of the company ... adjusted net worth should be accorded greater weight in valuing the stock of a closely held investment or real estate holding company, whether or not family owned, than any of the other customary yardsticks of appraisal, such as earnings and dividend paying capacity."*

While the quote above clearly applies to holding companies, asset based approaches can also be valid in the context of a company which has very poor financial performance. An important consideration when using an asset approach is the premise of value, both for the company and for individual assets.

A. BOOK VALUE METHOD

This method is based on the financial accounting concept that owners' equity is determined by subtracting the book value of a company's liabilities from the book value of its assets. While

[1] Excess Earnings methods may be classified as hybrid methods as they include consideration of both net assets and earnings capacity of the enterprise.

the concept is acceptable to most analysts, most agree that the method has serious flaws. Under generally accepted accounting principles (GAAP), most assets are recorded at historical cost minus, when appropriate, accumulated depreciation or cumulative impairments. These measures were never intended by the accounting profession to reflect the current values of assets. Similarly, most long-term liabilities (bonds payable, for example) are recorded at the present value of the liability using rates at the time the liability is established. Under GAAP, these rates are not adjusted to reflect market changes. Finally, GAAP does not permit the recognition of numerous and frequently valuable assets such as internally developed trademarks, trade names, logos, patents and goodwill. Thus, balance sheets prepared under GAAP make no attempt to either include or correctly measure the value of many assets. Thus, by definition, owners' equity will not normally yield a valid measure of the value of the company. Despite these significant limitations, this approach can frequently be found in buy/sell agreements.

B. ADJUSTED NET ASSETS METHOD

This method is used to value a business based on the difference between the fair market value of the business assets and its liabilities. Depending on the particular purpose or circumstances underlying the valuation, this method sometimes uses the replacement or liquidation value of the company assets less the liabilities. Under this method the analyst adjusts the book value of the assets to fair market value (generally measured as replacement or liquidation value) and then reduces the total adjusted value of assets by the fair market value of all recorded and unrecorded liabilities. Both tangible and identifiable intangible assets are valued in determining total adjusted net assets. If the analyst will be relying on other professional valuators for values of certain tangible assets, the analyst should be aware of the standard of value used for the appraisal. This method can be used to derive a total value for the business or for component parts of the business.

The Adjusted Net Assets Method is a sound method for estimating the value of a non-operating business (e.g., holding or investment companies). It is also a good method for estimating e value of a business that continues to generate losses or which is to be liquidated in the near future.

The Adjusted Net Assets Method, at liquidation value, generally sets a "floor value" for determining total entity value. In a valuation of a controlling interest where the business is a going concern, there would have to be a reason why the controlling owner would be willing to take less than the asset value for the business. This might occur where the assets are under-performing, resulting in a conclusion of value that is less than the adjusted net assets value but more than the liquidation value. Before concluding the Adjusted Net Assets Method has established the floor value, the valuator should consider the potential of overstating the value of assets, existence of non-operating assets, and other omissions in his/her determination.

The negative aspect to this method is that it does not address the operating earnings of the business. Therefore, it would be inappropriate to use this method to value intangible assets, such as patents or copyrights, that are typically valued based on some type of operating earnings (e.g., royalties). However, replacement cost methodology may be utilized in determining values of certain intangibles such as patents.

Illustration—the following reconciliation between book values and fair market values incorporates four major adjustments:

1. To remove non-operating assets, for example: excess cash and cash surrender value of life insurance.
2. To convert LIFO inventory to FIFO inventory.
3. To estimate NPV of the deferred income tax liability associated with the built-in gain on LIFO reserve and PP&E based on a seven-year liquidation horizon discounted to NPV using a 5% discount rate (risk free rate).
4. To adjust property and equipment to estimated fair market value based on appraisal performed by ABC Appraisals, Inc.

	Book Value	Ref	Adjustment	Fair Market Value
Current Assets:				
Cash and Cash Equivalents	$ 1,119,300	1	$ (518,000)	$ 601,300
Accounts Receivable	1,668,232		-	1,668,232
Raw Materials	306,752	2	187,706	494,458
Work in Process and Finished Goods	70,930		-	70,930
Deferred Income Taxes	86,000	3	(86,000)	-
Prepaid Expenses	60,850		-	60,850
Total Current Assets	3,312,064		(416,294)	2,895,770
Property, Plant and Equipment, at Cost:				
Land	88,828	4	4,572	93,400
Buildings and Improvements	1,122,939	4	(305,488)	817,451
Machinery and Equipment	2,560,044	4	(1,379,710)	1,180,334
Vehicles	804,336	4	(628,871)	175,465
Office Equipment	419,284	4	(363,859)	55,425
Total Property and Equipment	4,995,431		(2,673,356)	2,322,075
Less Accumulated Depreciation	(3,376,371)	4	3,376,371	-
Net Property and Equipment	1,619,060		703,015	2,322,075
Other Assets:				
Cash Value of Life Insurance	252,860	1	(252,860)	-
Deposits	30		-	30
Total Other Assets	252,890		(252,860)	30
Total Assets	5,184,014		33,861	5,217,875
Current Liabilities:				
Note Payable to Shareholders	17,000		-	17,000
Accounts Payable	314,554		-	314,554
Income Taxes Payable	(80,199)		-	(80,199)
Accrued Liabilities	411,512		-	411,512
Total Current Liabilities	662,867		-	662,867
Long-Term Debt, Less Current Portion	100,000		-	100,000
Deferred Income Taxes	–	3	253,000	253,000
Total Liabilities	762,867		253,000	1,015,867
Net Assets	$ 4,421,147			
Adjusted Net Tangible Operating Asset Value (Rounded)				4,202,000
Non-Operating Assets:				
Excess Cash				518,000
Cash Surrender Value Of Life Insurance (Rounded)				253,000
Adjusted Net Tangible Assets				4,973,000

Please Note: In this example, an adjustment for deferred taxes was made. Not making an adjustment for deferred taxes would be theoretically justified in a situation where the analyst is valuing a business for purposes of an Asset Purchase/Sale. However, an adjustment for deferred taxes may be appropriate in a valuation of a C-Corporation when the equity securities of the corporation are to be valued and adjustment has been made to adjust the value of assets from historical amounts to an economic/normalized balance sheet.[2]

The IRS has taken the position that it is inappropriate to take a discount for the income tax liability arising from asset liquidation when it is unlikely the liquidation will occur. In the *Estate of Davis*[3], the issue was deferred tax on built-in gains (these potential taxes, also referred to as taxes on "trapped-in gains" in some Tax Court cases, is hereafter referred to as a "BIG tax") on marketable securities. In *Davis*, the Tax Court indicated some discount should be considered and allowed a 15 percent discount. The Court was convinced that even though no liquidation was planned or contemplated, a hypothetical willing seller and willing buyer would have taken into account the potential BIG tax in determining the price to be paid for the holding company stock. In the *Estate of Jameson*[4], the Court measured the BIG tax discount on timberland based on the NPV of the tax using an expected liquidation date. In the *Estate of Dunn*[5], the Tax Court allowed a discount on the asset approach but not the income approach. In *Dunn*, the estate held stock in a C-Corp that rented heavy equipment and the valuator weighted the asset and capitalization of cash flow approaches. In the *Estate of Welch*[6], the Sixth Circuit confirms the BIG tax discount.

In summary, the BIG tax discount should be considered in valuing closely held C-Corp stock. Adjustments have ranged from 100% of the tax at the date of valuation, to 100% of the tax on a present value basis over the time frame in which the tax is expected to be incurred, depending on the facts and circumstances in the case.

A crucial point to consider in dealing with taxes is the nature of the investment being valued. A buyer who is considering acquiring an interest in a company as an asset purchase should be aware that a step-up in basis will be received, resulting in additional depreciation and tax benefits. In this case, the tax liability for any capital gains will be with the former owner. As such, the buyer should be willing to pay full market price for the assets (less any commissions or brokers' fees).

III. INCOME APPROACH

Revenue Ruling 59-60 clearly requires that an income approach be used when it lists "the earning capacity of the company," as a factor to be considered. The income approach is defined in the *International Glossary of Business Valuation Terms* as, "A general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount."

A. CAPITALIZATION OF EARNINGS/CASH FLOWS METHOD

The Capitalization of Earnings Method is an income-oriented approach. This method is used to value a business based on the future estimated benefits, normally using some measure of earnings or cash flows to be generated by the company. These estimated future benefits are

[2] *In Estate of Dunn v. Commissioner*, T.C. 2000-12; *Estate of Davis v. Commissioner*, 110 T.C. 530, and the appeal of *Dunn in Dunn v. CIR*, 301 F.3d 339 (5th Cir. 2002) which are explained in detail in *Valuation Issues and Case Law Update A Reference Guide*, Third Edition, written by Mel H. Abraham, CPA, CVA, ABV, ASA) provide the valuation analyst good perspective with current tax court reasoning on issues relating to built-in tax liability. Other cases also apply. The valuation analyst should be aware of court rulings on such issues.
[3] *Estate of Artemus D. Davis vs. Commissioner* – June 30, 1998, USTC Docket 9337-96
[4] *Jameson vs. Commissioner* – February 9, 1999, T.C. Memo 1999-43
[5] *Estate of Dunn* – January 12, 2000, T.C. Memo 2000-12
[6] *Welch vs. Commissioner* – T.C. Memo 1998-167

then capitalized using an appropriate capitalization rate. This method assumes all of the assets, both tangible and intangible, are indistinguishable parts of the business and does not attempt to separate their values. In other words, the critical component to the value of the business is its ability to generate future earnings/cash flows. This method expresses a relationship between the following:

- Estimated future benefits (earnings or cash flows)
- Yield (required rate of return) on either equity or total invested capital (capitalization rate)
- Estimated value of the business

It is important that any income or expense items generated from non-operating assets and liabilities be removed from estimated future benefits prior to applying this method. The fair market value of net non-operating assets and liabilities is then added to the value of the business derived from the capitalization of earnings.

This method is more theoretically sound in valuing a profitable business where the investor's intent is to provide for a return on investment over and above a reasonable amount of compensation and future benefit streams or earnings are likely to be level or growing at a steady rate.

Example

Company ABC has five-year weighted average earnings on an after-tax basis of $591,000. It has been determined that an appropriate rate of return for this type of business is 21.32 percent (after-tax). (See Ibbotson Build-Up Method in Chapter Five.) Assuming zero future growth and non-operating assets of $771,000 the value of ABC Company based on the capitalization of earnings method is as follows:

This exhibit generated from *Business* Valuation Manager™ *Pro* software[7].
(Numbers rounded)

[7] BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

B. DISCOUNTED EARNINGS/CASH FLOWS METHOD

The Discounted Earnings Method is sometimes referred to as the Discounted Cash Flow Method, which suggests the only type of earnings to be valued, using this method, would be some definition of cash flow, such as operating cash flow, after-tax cash flow or discretionary cash flow. The Discounted Earnings Method is more general in its definition as to the type of earnings that can be used.

The Discounted Earnings Method allows several possible definitions of earnings. It does not limit the definition of earnings only to cash flows. The Discounted Earnings Method is an income-oriented approach. It is based on the theory that the total value of a business is the present value of its projected future earnings, plus the present value of the terminal value. This method requires that a terminal-value assumption be made. The amounts of projected earnings and the terminal value are discounted to the present using an appropriate discount rate, rather than a capitalization rate.

1. Description

The Discounted Earnings Method of valuing a closely held business uses the following steps:

a) Determine the estimated future earnings of the business (in this example we have projected earnings for five years and have assumed no growth beyond this period).
b) A terminal or residual value is often determined at the end of the fifth year. The terminal value that is often used is merely the fifth-year earnings projected into perpetuity.
c) The discount rate determined incorporates an appropriate safe rate of return, adjusted to reflect the perceived level of risk for the business being valued.
d) The estimated future earnings and the terminal value are then discounted to the present using the discount rate determined in Step c) and summed. The resulting figure is the total value of the business using this method.

2. Example

Assume the following pre-tax fully adjusted cash flows as they relate to Homer Co.:

Projected annual cash flows to be received at the end of:

Year 1	$10,500
Year 2	40,700
Year 3	80,600
Year 4	110,100
Year 5	150,300

- Year 1 of the projected cash flows is the year following the valuation date.
- The pre-tax discount rate is 24 percent.
- The pre-tax capitalization rate is 24 percent.

Calculation of present value factors:

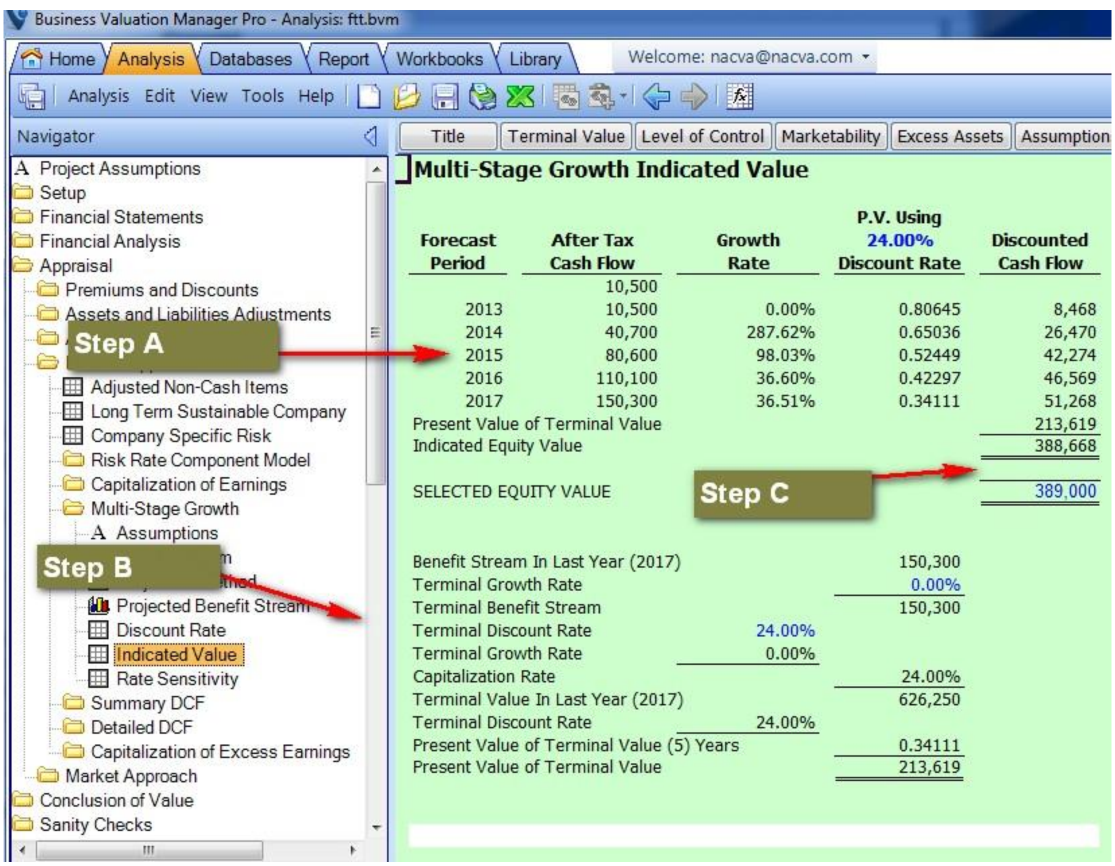
Year	Formula for Present Value Factor	Present value factors for 24% rate of return
1	$1/(1.24)^1$	0.8065
2	$1/(1.24)^2$	0.6504
3	$1/(1.24)^3$	0.5245
4	$1/(1.24)^4$	0.4230
5	$1/(1.24)^5$	0.3411

Calculate the value of the business (see exhibit below for steps a, b, and c generated from *Business* Valuation Manager™ *Pro* software[8]).

a) Calculate the present value of the annual cash flows
b) Calculate the present value of the terminal value

No long-term sustainable growth is assumed. (Had we assumed sustainable growth at three percent, our discount rate would have to be reduced by three percent to arrive at an appropriate capitalization rate.) The company's terminal value is $626,250 at the end of year 5 (150,300 ÷ 24%). This value, also know at the "terminal value," is equal to the present value of a perpetual annual cash flow of $150,300.

c) Add both present values



[8] BVM *Pro* is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

Practice Pointer

The valuator must use caution when using Cash Flows to Invested Capital as a benefit stream in a Discounted Cash Flow Model, where the capital structure of the Company is changing over the projected period. In order to understand this issue, it is important to address whether the subject interest is a controlling interest or a minority interest.

3. Controlling Interest

A controlling interest has the ability to change the capital structure. When valuing a controlling interest, the valuator will generally (subject to the valuator's purpose and standard of value) base the weighted average cost of capital (WACC) on the optimum capital structure or the average industry capital structure. In most cases, the optimum capital structure and the average industry capital structure is the same. If a difference did exist between the optimum capital structure and the average industry capital structure, the valuator will generally utilize the optimum capital structure for the subject interest. The cost of capital will generally be based on the following:

a) Debt Capital

The cost of debt capital can generally be determined based on the current borrowing rate (credit risk) of the Subject Interest. However, in cases where the Subject Interest does not have debt capital, the valuator can determine the cost of debt capital from various sources that monitor the cost of debt capital including Mergerstat Quarterly Cost of Capital, Gold Sheets, etc.

b) Equity Capital

The cost of equity capital can generally be determined based on a build-up approach, CAPM, or published sources of cost of equity capital including Mergerstat Quarterly Cost of Capital, etc.

4. Lack of Control Interest

A lack of control interest cannot change the capital structure of the Company. If the valuator uses Net Cash Flow to Invested Capital as a benefit stream in a DCF model with a constant WACC where the capital structure is changing over the forecast period, the net present value of the future cash flows will be distorted by utilizing an inappropriate application of a constant WACC (when the cost of capital is constantly changing) as a discount rate applied to the net cash flows to invested capital representative of a constantly changing capital structure. The valuator should avoid using Net Cash Flow to Invested Capital as a benefit stream in a DCF model when the capital structure is constantly changing during the forecast period.

5. Mid-Period vs. End-of-Period Discounting Method

The method used for discounting a future benefit stream will depend on the availability of the cash flows to the equity holder. If the equity holder has access to the cash flows throughout the year, then the valuator should use a mid-period discounting method. If the equity holder only has access to the cash flows at the end of the year, then the valuator should use an end of period discounting method.

The following illustration serves to underscore the point made here:

End of period discounting:

NPV = sum of (cash flow at time t) / (1 + discount rate) ^ t

Mid-period discounting:

NPV = sum of (cash flow at time t) / (1 + discount rate) ^ t – 0.5

Assume discount rate = **40%** per annum and that cash flows are received/paid throughout each period.

		DISCOUNT FACTOR USING:		PV USING:		
Period (t)	**Nominal Cash Flow**	**Mid-Period Discounting**	**End Period Discounting**	**Mid-Period Discounting**	**End Period Discounting**	**% of Mid-Period PV**
1	-1,000	1.1832	1.4	-845	-714	85%
2	1,000	1.6565	1.96	604	510	85%
3	3,000	2.3191	2.744	1,294	1,093	85%
4	4,000	3.2467	3.8416	1,232	1,041	85%
5	5,000	4.5454	5.3782	1,100	930	85%
6	6,000	6.3636	7.5295	943	797	85%
7	7,000	8.9091	10.5414	786	664	85%
8	8,000	12.4727	14.7579	641	542	85%
9	9,000	17.4618	20.661	515	436	85%
10	10,000	24.4465	28.9255	409	346	85%
NPV		NET PRESENT VALUE		**6,679**	**5,644**	85%

Source: International Valuation Handbook, Leadenhall Australia Limited, Adelaide, South Australia, 2001

C. GORDON GROWTH MODEL

The Gordon Growth Model assumes that cash flows will grow at a uniform rate in perpetuity. Under this model, value can be calculated as:

$$\text{Present Value} = \frac{CF_o\,(l + g)}{k - g}$$

Where,

CF_o = Cash flow in period o (the period immediately preceding the valuation date.)

k = Discount rate (or cost of capital)

g = Expected long-term sustainable growth rate of the cash flow used (remember, in the context of valuation of closely held companies, valuation analysts will generally use either Net Cash Flow to Equity or Net Cash Flow to Invested Capital)

Two-Stage Gordon Growth Model assumes that cash flow growth will change (the growth rate is not constant under this model, the present value is calculated as follows):

$$\text{Present Value} = \frac{CF_1}{(l+k)} + \frac{CF_2}{(l+k)^2} + \ldots + \frac{CF_n}{(l+k)^n} + \frac{\frac{CF_n\,(l+g)}{k-g}}{(l+k)^n}$$

Where,

$CF_1 \ldots CF_n$ = Cash flow expected in each of the periods one thru n, n is the last period of the cash flow projection

k = Discount rates (or cost of capital)

g = Expected long-term sustainable growth rate of the cash flow used (remember, in the context of valuation of closely held companies, valuation analysts will generally use either Net Cash Flow to Equity or Net Cash Flow to Invested Capital)

In the two-stage model, the terminal year calculation (CF_n (l+g)/k-g/$(l+k)^n$) refers to the years during which cash flows are expected to grow at a constant rate into perpetuity.

1. Two Stage Model Using Mid-Year Convention

The Capitalization and Discounting Models presented thus far assume Cash Flow (CF) is received at year-end. That assumption does not always hold. More often than not CF is received evenly throughout the year. In this situation, the use of the "mid-year convention" is appropriate.

The mid-year convention, as opposed to the year-end convention always results in a higher value since the investor receives the CF sooner. The Mid-year Discounting Convention Equation is presented as follows:

$$PV = \frac{CF_1}{(l+k)^{.5}} + \frac{CF_2}{(l+k)^{1.5}} + \frac{CF_3}{(l+k)^{2.5}} + \ldots + \frac{CF_n}{(l+k)^{n-0.5}}$$

The Mid-year Capitalization Convention is written similarly to the traditional capitalization convention; however, it reflects the receipt of CF throughout the year:

$$PV = \frac{CF1(l+k)^{.5}}{k-g}$$

The Mid-year Convention in the two- stage model is written as follows:

$$PV = \frac{CF_1}{(l+k)^{.5}} + \frac{CF_2}{(l+k)^{1.5}} + \frac{CF_3}{(l+k)^{2.5}} + \ldots + \frac{CF_n}{(l+k)^{n-0.5}} + \frac{\left[\frac{CF_n\,(l+g)}{k-g}\right]}{(l+k)^{n-0.5}}$$

IV. MARKET APPROACH

The market approach is covered in a survey manner in this part of the course. The complexity and importance of understanding this approach is to cover this topic in greater depth in separate material. What follows, therefore, is an overview of this important topic.

The idea behind the market approach is that the value of a business can be determined by reference to reasonably comparable guideline companies ("comps") for which transaction values are known. The values may be known because these companies are publicly traded or because they were recently sold and the terms of the transaction were disclosed.

This approach is commonly used especially in contexts where the user(s) of the analyst's report do not have specialized business valuation knowledge. There is an obvious parallel in a lay person's mind to consulting with a real estate agent prior to listing your home for sale to find out for what amount similar homes in your neighborhood have sold. The market approach is the most common approach employed by real estate appraisers. Real estate appraisers generally have from several to even hundreds of comps from which to choose.

For a business valuation professional, a good set of comps may be as many as two or three – and sometimes no comparable company data can be found. (The objective of analyzing these components is to determine if the comparable company has a similar risk profile.) There are three sources of comparable company transaction data:

- Public company transactions
- Private company transactions
- Prior transactions of the subject company

A. ADVANTAGES AND DISADVANTAGES

As with any valuation approach, there are significant advantages and disadvantages.

1. Advantages

a) *It is "user friendly."* Companies with similar product, geographic, and/or business risk and/or financial characteristics should have similar pricing characteristics. People outside of business valuation can understand this logic. Users of valuation reports (transaction participants, juries, judges, etc.) tend to find market based methods to be familiar and easy to understand in comparison to other approaches.

b) *It uses actual data.* The estimates of value are based on actual transaction prices, not estimates based on number of complex assumptions or judgments. The data can be independently obtained, verified, and tested.

c) *It is relatively simple to apply.* The market approach derives estimates of value from relatively simple financial ratios, drawn from a group of similar companies. The most complicated mathematics involved is multiplication. However, this is an advantage more in perception than in reality.

d) *It does not rely on explicit forecasts.* The income approach requires a set of assumptions used in developing the forecasted cash flows. The market approach does not require as many assumptions.

2. Disadvantages

a) *Sometimes, no recent comparable company data can be found.* This may be the biggest reason the approach is not used in valuation; the analyst may not be able to find guideline companies that are sufficiently similar to the subject. Some companies are so unusual, small, diversified, etc. that there are no other similar companies.

b) *The standard of value may be unclear.* Most transaction databases provide financial and pricing data but do not explicitly indicate whether the reported transaction was arms-length, strategic, synergistic, fire sale, asset vs. stock, etc. Some argue that the occurrence of actual fair market value transactions reported in transaction databases is probably less than 50%. If the guideline transaction was synergistic, the resulting values multiple will likely produce a synergistic value – not fair market value.

c) *Most of the important assumptions are hidden.* Among the most important assumptions in a guideline price multiple is the company's expected growth in sales or earnings. In the income approach the growth rates are disclosed. When applying multiples from guideline companies the implicit subject company growth will be a function of the growth rates built into the prices of the guideline companies on which the value of the subject is based.

d) *It is a costly approach.* Done correctly, the valuation analyst must perform significant financial analysis on the subject company and equally on each of the comparable companies. The analysis must be done to verify comparability as well as to identify underlying assumptions built into the pricing multiple. This is after and in addition to the significant time and effort to first identify possible comps.

e) *It is not as flexible or adaptable as other approaches.* Unlike the income approach, the market approach is sometimes difficult to include unique operating characteristics of the firm in the value it produces.

f) *Reliability of the transaction data is questionable.* Great strides have been made in improving the accuracy, completeness, and depth of the data reported by various subscription services (discussed below). However, particularly with private company transactions, the analyst would do well to use such data with caution.

B. BASIC IMPLEMENTATION

As discussed earlier, one of the advantages to the market approach is the apparent simplicity in implementing it. At its simplest, it requires only multiplication and perhaps some subtraction, depending on the multiple selected. The basic format is:

$$\text{Value} = (\text{Price/Parameter})_{\text{comp}} \times \text{Parameter}_{\text{Subject}}$$

(For invested capital multiples, debt should be subtracted.)

C. SOURCES OF GUIDELINE COMPANY DATA

The first part of the pricing multiple is the numerator—the price measure of the guideline company.

Guideline company transactions refer to acquisitions and sales of entire companies, divisions, or large blocks of stock of either private or publicly traded firms. There are several sources available to obtain pricing date for public and private companies. The following is not an exhaustive presentation of sources. Instead, it is a presentation of commonly used sources.

1. Data Sources—Private Companies Transactions

A number of publications collect and disseminate information on transactions. Most publications make their databases accessible on the Internet for a fee on a per-use basis or annual subscription access. Among the most widely used are:

a) Institute of Business Appraisers (IBA)
b) BIZCOMPS®
c) *Pratt's Stats*™
d) Done Deals™
e) Mid Market Comps™ (ValuSource)
f) Mergerstat®

The IBA and BIZCOMPS® databases cover transactions of relatively small companies. For example, the IBA database has over 37,000 transactions in 800 industries. There are over 6,000 transactions occurring in the last 5 years. This data is available via a web interface or will download into the software BVM *Pro*, ValuSource Pro, and Express Business Valuation.[9]

Pratt's Stats™ included about 10,000 transactions with 46% below $1 million in value. The companies covered tend to be larger, with median revenue of $1.6 million and a median selling price of $1.5 million. It reported transactions from 700 SIC and 840 NAICS codes, respectively. Deal prices range from under $1 million to $14.5 billion. The information provided for each transaction is much more detailed than it is for either the BIZCOMPS or IBA databases.

The Done Deals™, Mid Market Comps™, and Mergerstat® data sets generally include transactions where one of the companies, primarily the buyer, was publicly traded. *Pratt's Stats*™ also include publicly traded transactions for an additional fee.

[9] BVM *Pro*, ValuSource Pro, and Express Business Valuation are available from NACVA (800-677-2009) and ValuSource (800-825-8763).

Done Deals and Mid Market Comps have approximately 7,300 transactions as of 2006. The deal prices range from $1 million to $1 billion with 79% of the companies sold being privately owned. One-half of the prices were under $15 million. Most of the data comes from SEC filings. As with the other databases covering actual transactions, the range of observations is very large.

2. Data Sources—Public Companies Transactions

Publicly traded companies are required to file their financial statements electronically with the Securities and Exchange Commission (SEC). These filings are public information and are available on the SEC website at www.sec.gov.

Documents can also be obtained from a number of commercial vendors, who add value by allowing the user to extract selected items (i.e., the balance sheet, income statement, etc.) or to search all filings for those meeting certain criteria. In addition, vendors put the data for most or all publicly traded companies in a standardized format. A partial list of those vendors who reformat the data into standardized formats is:

a) Mergerstat Review Premiums and Discounts[10]

Provides reliable quantitative market data for accurate calculation of control premiums and discounts. This database comes from FactSet's Mergerstat Review, and covers five years of premiums and discounts, with company data for 50 industries.

b) Mergerstat Review Price to Earnings Ratios

Although public company price-to-earnings (P/E) ratios are rarely appropriate for small business conclusions, they can—and often do—provide a useful and important benchmark of an entity's worth. This database offers P/E ratios segregated by industries for the current year and for a five-year weighted average.

c) Public Company Data Plus the Guideline Analyzer

When you employ the Guideline Public Company Method, you face two expensive challenges: first, finding a source of public data that is complete and provided in a standard financial statement format; and, second, selecting appropriate comparable companies (i.e., those companies that are comparable based on the specifics of the subject company). The Public Company Data allows you to enter simple selection criteria to quickly and easily obtain potential public company matches. The product contains both annual and quarterly data (including full financial statements) for five years.

d) Alacra
e) Compustat
f) Disclosure
g) Reuters

[10] Mergerstat Review Premiums and Discounts, Mergerstat Review Price to Earnings Ratio, and Public Company Data Plus the Guideline Analyzer are available from NACVA (800-677-2009) and ValuSource (800-825-8763).

h) Mergent Company Data Direct
i) OneSource
j) Fetch XL

It is also important to remember that in this, the information age, there is a vast amount of financial information available for free. For example, historical financial data, pricing, disclosures, SEC filings, and analyst reports are available at free web sites such as Yahoo! Finance. If the analyst has identified a public company as a possible comparable, they would do well to go to that company's web site and go to the "Investor Relations" page. Very often, all SEC filings are available and downloadable for free.

D. PARAMETERS

The second part of the pricing multiple is the denominator, the financial statement parameter that scales the value of the company.

Some specific common measures include:

1. Revenues
2. Gross profit
3. EBITDA
4. EBIT
5. Debt-free net income (net income plus after-tax interest expense)
6. Debt-free cash flow (debt-free net income plus depreciation/amortization)
7. Pretax income
8. Net after-tax income
9. Cash flows
10. Asset related
11. Tangible assets
12. Book value of equity
13. Book value of invested capital (book value of equity plus debt)
14. Tangible book value of invested capital (book value of equity, less intangible assets, plus book value of debt)
15. Number of employees

E. MATCHING PRICE TO PARAMETER

"Price" should be matched to the appropriate parameter based on which providers of capital in the numerator will be paid with the monies given in the denominator. For example, in price/EBIT, price is the market value of invested capital (MVIC), since the earnings before interest payments and taxes will be paid to both the debt and equity holders. In price/net income, price is the market value of equity (MVEq) only, since net income is after interest payments to debt holders and represents amounts potentially available to shareholders. Any denominators that exclude interest (e.g., EBIT or EBITDA) should usually be matched with corresponding numerator (e.g., MVIC).

MVIC is usually the numerator paired with:

1. Revenues
2. EBITDA
3. EBIT

4. Debt-free net income
5. Debt-free cash flows
6. Assets
7. Tangible book value of invested capital

MVEq is usually the numerator paired with:

1. Pretax income
2. Net income
3. Cash flow
4. Book value of equity

F. BASIC FINANCIAL INDICATORS

Finally, when determining whether you have found comparable company data, some financial measures that should be included in an analysis for both guideline and subject companies include:

1. Size Measures

These include sales, profits, total assets, market capitalization, employees, and total invested capital. Given how size may affect value, at least one, and maybe all, of these should be included.

2. Historical Growth Rates

Consider growth in sales, profits, assets, or equity.

3. Activity and Other Ratios

Examples are the total asset and inventory turnover ratios. Depending on the type of business being analyzed, other ratios also may be important.

4. Measures of Profitability and Cash Flow

Consider the four most common measures:

a) Earnings before interest, taxes, depreciation and amortization (EBITDA)
b) Earnings before interest and taxes (EBIT)
c) Net income
d) Cash flow

5. Profit Margins

The current level of profits is probably less important than the ratio of profits relative to some base item—usually sales, assets, or equity.

6. Capital Structure

It is essential to use some measures derived from the current capital structure. The most common measures are the values of outstanding total debt, preferred stock (if it exists), and the market value of common equity, since book equity generally has very little to do with how stock investors view their relative position with a company. The ratio of debt to market value of equity can be included since this represents the true leverage of the company.

7. Other Measures

These will be a function of what is important in the industry in which the subject company operates.

G. MARKET APPROACH: DIVIDEND PAYING CAPACITY METHOD

The Dividend Paying Capacity Method, sometimes referred to as the Dividend Payout Method, is an income-oriented method but is considered a market approach as it is based on market data. It is similar to the capitalization of earnings method. The difference between this method and the capitalization of earnings method lies in the difference in the type of earnings used in the calculations and the source of the capitalization rate. This method of valuation is based on the future estimated dividends to be paid out or the capacity to pay out. It then capitalizes these dividends with a five-year weighted average of dividend yields of five comparable companies. Please note this method must be considered for estate and gift tax purposes per Revenue Ruling 59-60.

1. Description

This method expresses a relationship between the following:

a) Estimated future amount of dividends to be paid out (or capacity to pay out)
b) Weighted average "comparable" company dividend yields of comparable companies, further weighted by degree of comparability each year using a sufficient number of comparable companies, generally more than three
c) Estimated value of the business

This method is particularly useful for estimating the value of businesses that are relatively large and businesses that have had a history of paying dividends to shareholders. It is highly regarded because it utilizes market comparisons.

Similar to the Price/Earnings Ratio or other methods relying on market data, this method may not be appropriate for valuing most small businesses because they do not have comparable counterparts in the publicly traded arena. Another problem with this method is that most closely held businesses avoid paying dividends. For tax reasons, compensation is usually the preferred method of disbursing funds.

In determining dividend-paying ability, liquidity is an important consideration. A relatively profitable company may be illiquid, as funds are needed for fixed assets and working capital.

2. Example (Pre-Tax Basis)

StinCo, Inc. has a five-year history of weighted average profits of $250,000. Its weighted average dividend payout percentage over the last five years has been 30 percent.

Dividend Payout Ratio	=	$250,000 x 30%
Amount of Dividend	=	$75,000

The weighted average dividend yield rate of five comparable companies over the last five years is 7.5 percent. Therefore, the value of StinCo, Inc., under the dividend payout method is as follows.

$$\frac{\$75{,}000}{.075} = \$1{,}000{,}000$$

3. Observation

It has been suggested that large, "well-heeled" corporations pay out to their shareholders about 40 to 50 percent of their earnings. Therefore, keep this fact in mind when estimating dividend payout potential for companies without a history of paying dividends.

V. OTHER APPROACHES: INCOME/ASSET APPROACHES

A. EXCESS EARNINGS/TREASURY METHOD

The Excess Earnings Treasury Method is a derivative method stemming from what is often called the Excess Earnings Return on Assets Method. This method acquired its name from the IRS in ARM 34 and Revenue Ruling 68-609. Revenue Ruling 68-609 also refers to this methodology as the "formula approach" and asserts that "the formula approach may be used for determining the fair market value of intangible assets of a business only if there is no better basis therefore available."

Unlike all of the other methods discussed thus far, this method combines the income and asset based approaches to arrive at a value of a closely held business. Its theoretical premise is that the total estimated value of a business is the sum of the values of the adjusted net assets (as determined by the adjusted net assets method) and the value of the intangible assets. The determination of the value of the intangible assets of the business is made by capitalizing the earnings of the business that exceed a "reasonable" return on the adjusted (identified) net assets of the business.

1. Description

A valuation of a business using the Excess Earnings Treasury Method uses the following steps:

a) Determining the estimated future earnings of the company without regard to growth. Usually this is the historical economic unweighted or weighted average earnings over the last five years, adjusted for any non-recurring items or any other normalizing adjustments.

b) Determining the unweighted or weighted average of the GAAP (or tax basis) net assets. This calculation should exclude goodwill or other intangible assets, whose value is also to be estimated by this method. The analyst uses GAAP net assets in this step in order to ensure as much comparability with industry data as possible, from which a reasonable rate of return will be obtained in Step c).

c) Selecting a reasonable rate of return to apply to the GAAP net assets whose value was determined in Step b). The most appropriate rate of return is the average return on assets (unweighted or weighted) for comparable companies, or as determined from industry averages.

d) Multiply the value of the GAAP net tangible assets of the business, as determined in Step b), by the rate of return determined in Step c). The product is that portion of total earnings of the business attributable to a reasonable return on the weighted average or unweighted average net adjusted assets.

e) The earnings determined in Step d) are then subtracted from the total earnings determined in Step a). The difference is the excess earnings attributable to the intangible assets being valued by this method.

f) Select a capitalization rate that corresponds to an appropriate rate for a safe return, adjusting it accordingly to reflect the perceived level of risk associated with the company.

g) The amount of excess earnings determined in Step e) is then divided by the capitalization rate determined in Step f). The amount thus derived is the estimated total value of intangible assets.

h) Determine the adjusted net assets at fair market value, as of the valuation date; use the adjusted net assets method. This determination excludes goodwill and all other intangible assets.

i) The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step g)) to the adjusted net tangible assets (determined in Step h)).

2. Example (After-Tax Basis)

a) Assume the following data as they relate to Poker Co.:

(1) The five-year weighted average historical after-tax economic earnings are $250,000
(2) The GAAP weighted average net assets are $980,000
(3) The value of adjusted net assets are $1,050,000
(4) The industry weighted average after-tax return on equity is 12 percent
(5) The appropriate after-tax intangible capitalization rate for Poker Co. is 29.69 percent
(6) The company's current adjusted net assets are $1,050,000

b) Determine the value of the entire business of Poker Co.:

Calculate the value of intangibles

Weighted average historical after-tax economic earnings			$250,000
Less earnings attributable to tangible assets:			
GAAP net assets (weighted average)	$980,000		
x industry ROE(weighted average)	x .12	=	(117,600)
Excess earnings attributable to intangible assets			$132,400
Divided by intangible capitalization rate		÷	.2969
Estimated value of intangibles (Rounded)			**$446,000**

c) The total value of the business is the sum of the value of net adjusted assets and the value of intangible assets. Therefore, the total value of Poker Co. under the excess earnings-return on assets (treasury method) is as follows:

Determine the value of the entire business

Value of intangibles	$ 446,000
(+) Value of adjusted net assets (date of valuation)	$1,050,000
TOTAL VALUE OF BUSINESS	**$1,496,000**

See Appendix II Revenue Ruling 68-609.

B. EXCESS EARNINGS/REASONABLE RATE METHOD

The Excess Earnings Reasonable Rate Method (formally referred to as "Safe Rate Method") is another derivative of the Excess Earnings Return on Assets Method. This method has acquired its name from the fact it applies a reasonable rate of return to the adjusted net assets rather than an industry rate of return as in the Treasury Method. Another distinction between this method and the Treasury Method is the reasonable rate of return is applied to the latest year's balance of adjusted net assets rather than to an unweighted or weighted average of net assets (as in the Treasury Method). Similar to the Treasury Method, this method is an income-and-asset-oriented approach. It is also based on the theory that the total value of a business is the sum of the adjusted net assets and the value of the intangibles, as determined by capitalizing the "excess" earnings of the business. The amount of earnings capitalized is those earnings which exceed a reasonable rate of return on the adjusted net assets of the business.

1. Description

To value a business using the Excess Earnings Reasonable Rate Method, follow these steps:

a) Determine the estimated future earnings of the company.
b) Determine the current adjusted net assets at fair market value, using the adjusted net assets method. This determination must exclude goodwill and other intangible assets.

c) Select a reasonable rate of return to apply to adjusted net assets whose value was determined in Step b). The rate chosen should correspond to the relative liquidity and risk of the underlying assets to which it is being applied.

d) Multiply the value of the adjusted net tangible assets of the business determined in Step b) by the rate of return determined in Step c). The product is the part of total earnings attributable to a return on adjusted net assets. Adjusted net assets, once again, exclude intangible assets.

e) The earnings determined in Step d) are then subtracted from the total earnings determined in Step a). The difference is the excess earnings considered to be attributable to the intangible assets being valued by this method.

f) Select a capitalization rate that corresponds to an appropriate rate for a reasonable return and that has been adjusted for any perceived level of risk and other relevant concerns associated with the company.

g) The amount of excess earnings determined in Step e) is then divided by the capitalization rate selected in Step f), to arrive at the estimated value of the intangible assets.

h) The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step g)) to the value of the adjusted net tangible assets (determined in Step b)).

2. Example (Pre-Tax Basis)

a) Assume the following as they relate to Lesbro, Inc.

(1) The five-year weighted average historical pre-tax economic earnings are $380,000

(2) Value of the latest year's net adjusted assets are $1,050,000

(3) The company's assumed reasonable rate on adjusted net assets is 10 percent

(4) The appropriate pre-tax intangible capitalization rate for Lesbro, Inc. is 49.48 percent

b) Determine the value of the entire business of Lesbro, Inc.

Calculate the value of intangibles

Weighted average historical pre-tax economic earnings			$380,000
Less earnings attributable to tangible assets:			
Adjusted net assets	$1,050,000		
x reasonable rate (cost of debt in this example)*	.10	=	(105,000)
Excess earnings attributable to intangible assets			$ 275,000
Divided by intangible capitalization rate**		÷	.4948
Estimated value of intangibles (Rounded)			**$556,000**

The total value of the business is the sum of the value of net adjusted assets and the value of intangible assets. Therefore, the total value of Lesbro, Inc. under the Excess Earnings (Return on Assets) Reasonable Rate Method follows:

Determine the value of the entire business

Value of intangibles	$556,000
(+) Value of adjusted net assets	$1,050,000
TOTAL VALUE OF BUSINESS	**$1,606,000**

*The valuator should be aware of what the local courts are looking for with regard to the cost of debt, for example, prime plus 1 or 2 percent.

**See Appendix II for RR 68-609 review of formula guideline.

NOTE: The Excess Earnings (Return on Assets) Treasury Method is applied to after-tax economic earnings. By comparison, the Excess Earnings (Return on Assets) Reasonable Rate Method example is applied to pre-tax economic earnings. Different types of earnings (after-tax versus pre-tax) have been used to demonstrate that these methods can be applied regardless of the benefit stream. This is not intended to imply that after-tax economic earnings are the only appropriate benefit stream to be used with the Treasury Method. Similarly, this is not intended to imply that pre-tax economic earnings are the only appropriate benefit stream to be used with the Reasonable Rate Method. Any appropriate benefit stream (pre-tax or after-tax, earnings or cash flow, etc.) can be used with either the Treasury Method, the Reasonable Rate Method or any of the other income or market approaches discussed in this chapter.

VI. APPLICATION OF METHODS FOR VALUING INTANGIBLE ASSETS

Once the analyst has analyzed the value of tangible assets, the value of the intangible assets must be analyzed. This is the case because the value of the earnings ability of a company (assuming a profitable company) is often more valuable than the value of the tangible assets.

The earning ability of a company is partly attributable to the intangible assets (e.g., goodwill, special processes, patents, organization, staffing, etc.) whether or not they are carried on the books.

A. TYPES OF INTANGIBLE ASSETS

The ending economic or normalized balance sheet must include the value of any existing intangible assets. However, since the determination of the value of intangibles is reliant on earnings, economic or normalized income statements must first be developed. Some of the possible intangible assets that may be addressed are as follows:

1. Goodwill
2. Trademarks
3. Patents
4. Location
5. Customer lists
6. Employment contracts
7. Covenants not to compete
8. Franchise agreements
9. License agreements
10. Leasehold interests (favorable)
11. Relationships
12. Copyrights
13. Going concern value
14. Software codes
15. Others – see FAS 141 for a more comprehensive list

B. CHARACTERISTICS OF INTANGIBLES

Russell L. Parr, in Investing in Intangible Assets, describes the essential characteristics of intangibles:

> *"Most valuable intangible assets provide an economic advantage in the form of lower manufacturing or operating costs, such as the following:*
>
> 1. *Enabling the use of low cost materials.*
> 2. *Enabling the use of less material.*
> 3. *Reducing the amount of labor required to manufacture, inspect, package or account for a product.*
> 4. *Reducing shipping costs by creating a product that is lighter, smaller or specially shaped.*
> 5. *Producing higher manufacturing speeds.*
> 6. *Reducing waste or rejects.*
> 7. *Reducing the fuel or electric power requirements.*
> 8. *Eliminating or reducing environmental hazards or improving safety conditions.*
> 9. *Commanding premium pricing.*
> 10. *Controlling dominant market share positions.*

Barriers to competition are also an important aspect of intangible assets. Intangible assets confront competitors with formidable obstacles. Development time may be a barrier. Huge research costs may be a barrier. The absence of important background skills may be a barrier. Whatever the reason, intangible assets contribute great value when they represent a barrier to competition. Such barriers can allow intangible asset owners to control market share and set sustainable premium prices."

Court decisions[11] have referred to goodwill as representing not only continued excess earnings capacity, but also some competitive advantage or continued patronage. Revenue Ruling 59-60 describes goodwill in terms of earnings as follows:

"4.1(f) In the final analysis, goodwill is based upon earnings capacity. The presence of goodwill and its value, therefore, rests upon the excess of net earnings over and above a fair return on the net tangible assets. While the element of goodwill may be based primarily on earnings, such factors as the prestige and renown of the business, the ownership of a trade or brand name, and a record of successful operations over a prolonged period in a particular locality, also may furnish support for the inclusion of tangible value."

FAS 141 and 142 modified value considerations for goodwill and other intangible assets. The valuation analyst should be familiar with these statements and ways in which this accounting rule might affect the valuation assignment at hand. We suggest the analyst review the financial reporting footnotes relating to the company's intangible assets.

C. APPROACHES TO INTANGIBLE ASSET VALUATION

Intangible assets are valued as part of the economic/normalizing process or they may be separately valued as intangibles by themselves. The following discussion is relevant in both instances.

Revenue Ruling 59-60 states: "goodwill is based upon earnings capacity." Therefore, most methods of valuing intangibles focus on earnings generated by the specific intangible.

Since there is no single or exclusive method for valuing intangibles, each case should be viewed on its own merits. Five commonly used approaches are:

1. Arms-length Bargaining

Under IRC Section 1060, the basis of assets involved in a sale is to be allocated under seven classes (defined by IRS Reg 1.338–6). However, the Tax Court is not bound by the allocation of values set forth in a purchase contract and is free to increase or decrease the amounts allocated in accordance with the facts. A purchase agreement may be given weight where the parties bargain at arms-length and the parties have competing financial interests.

[11] KeyValueData maintains several court case databases which provide key-word search enabling the valuation analyst to more quickly find applicable court cases/decisions which affect the current valuation engagement.

Certain problems are inherent in the allocation process:

a) Difficulty in allocation between tangible versus intangible assets, amortizable versus non-amortizable assets

(1) Taxpayer tendency to allocate to tangible (depreciable assets)
(2) Courts have attempted to define goodwill (but have failed)
(3) The Tax Court has stated goodwill exists if:

(a) The business has a competitive advantage
(b) The business has continued patronage
(c) The purchaser expects continued excess earnings capacity

2. Residual Value

This method is referred to as the residual method for deriving the value of intangibles. This approach assumes the purchase price of a business represents its full fair market value.

The assumption is then made that the fair market value of the goodwill and/or going concern value is equal to the purchase price of the business less the fair market value of all tangible assets and all identified intangible assets, net of all liabilities.

Example

$500,000	Purchase price of company
(300,000)	FMV of net identifiable tangible assets
(100,000)	FMV of all net identifiable intangible assets
$100,000	Goodwill and/or going concern value[12]

When using this method, questions may arise as to whether the sales price accurately reflects fair market value and whether tangible and intangible assets are accurately appraised.

3. Earnings–based Approach (Capitalization of Excess Earnings)

a) Methodologies

In practice, earnings based methods are frequently used to value intangibles. The commonly used methods use the following formulae:

(1) $\text{Value of Intangibles} = \dfrac{\text{Excess Earnings}}{\text{Capitalization Rate}}$

(2) Value of Intangibles = Excess Earnings x Earnings Multiples

(3) Value of Intangibles = Present Value of Excess Earnings[13]

[12] Goodwill and going concern value are amortizable for tax purposes under Section 197, but tested for impairment under GAAP.
[13] Discounted at an appropriate discount rate, plus the terminal value of the intangible discounted to the present.

Since intangible value has generally been described in terms of earnings capacity, one method to calculate intangible value is based upon a capitalization of earnings approach. One of the early attempts to arrive at the value of goodwill by capitalization was set forth by the government in ARM 34 and modified by Revenue Ruling 68-609, both of which were discussed earlier in this chapter.

b) Example-Leasehold Interests

Definition: "An interest in land or equipment contractually committed to by a lessee and lessor for a specified period of time under the terms of the lease contract."

To determine the value of a favorable lease, use the following formula: Present value of the benefits over the term of the lease contract, discounted to the present using a discount rate similar to the rate the lessee would be subject to under similar terms as those contained in the lease contract.

Example

XYZ Company leases its manufacturing facility from Lessor Inc. The lease contract is a triple net lease requiring XYZ Company to pay Lessor, Inc. $10,000 per month for 60 months. An MAI analysis of lease rates for similar space and location indicates that the market rate for this space is approximately $15,000 per month under similar terms and conditions. It is also estimated XYZ Company's incremental borrowing rate for similar debt is 16 percent.

Calculation:

FMV of Lease Payments		$ 15,000
Less: Existing Lease Payments		10,000
Monthly Benefit	=	$ 5,000
Present Value Factor (present value of a monthly annuity for 60 months @ 16% annual rate)	x	41.12171
Value of Leasehold Interest		$205,609

4. Royalty Avoidance Approach

One method to determine the fair market value of Intellectual Property assets like patents, trademarks, and copyrights is to use the royalty avoidance approach. This approach determines the value of Intellectual Property assets by estimating what it would cost the business if it had to purchase the Intellectual Property (IP) it uses from an outsider.

This approach requires the valuator to: (1) project future sales of the products that use the technology, (2) determine an appropriate reasonable royalty rate, and (3) determine either a present value factor or an appropriate discount rate. The result is the present value of the Intellectual Property to the company. See the following example of the valuation of a patent:

a) Example-Patents

The valuation of a patent is similar to other intangibles, in that computations principally focus on earnings ability. There are many issues that affect patent valuation:

(1) A new patent on a new product or process has no history of earnings.
(2) A patent may have a history of earnings although the history may or may not be indicative of the future.
(3) In valuing patents, the analyst may have the following questions:

(a) Are there comparable patents?
(b) What are the royalty rates paid for comparable patents?
(c) What is the nature and scope of the license?
(d) What is the current popularity of the patented property?
(e) What are the advantages of the patented property over the old models or devices?
(f) What is the demand for the patented property?
(g) Are there acceptable non-infringing substitutes?
(h) Do manufacturing and marketing capabilities exist to exploit total demand?
(i) Should projected income be attributed to other intangible or tangible assets?
(j) What is the remaining economic life?
(k) What is the company's financial ability to defend the patent?

(4) Method of Valuation

A common method of patent valuation is to estimate the earnings a patent could realize from future royalties if the owner granted an exclusive unlimited license during the use of the patent for its remaining useful life (assume 15 years in the following example):

Example

Projected annual sales		$1,000,000
Royalty rate	x	5%
Projected annual royalties		50,000
Presented value factor (presented value of $1.00 annual annuity for 15 years discounted at 12%)	x	6.8109
Value of Patent		$340,545

5. The Value Using R&D Expenditures

The R&D costs incurred by a company to develop an intangible asset are an attractive metric to use in setting the FMV of an intangible asset by a valuator. Unfortunately, over reliance on R&D costs to establish fair market values can result in an inaccurate conclusion of the FMV of an intangible asset. This is due to the fact that there is normally little correlation between a company's R&D expenditures and the future economic benefits it receives from those expenditures.

VII. SANITY CHECKS

A. RULES OF THUMB METHOD

Rules of Thumb Methods are theoretical market-derived units of comparison. Trade associations routinely develop rules of thumb related to the businesses of their members. Rules of thumb are a variation of the direct market comparison approach to valuation. While Rules of Thumb can give what is usually termed a "quick and dirty" approximation of the value of a business, their use presents several problems.

The limited knowledge of users about the actual transactions upon which the Rules of Thumb Method is based can lead to confusion concerning the property acquired by a buyer during a particular transaction. Buyers may purchase either the assets or the equity of a business. Thus relying on a rule of thumb that produces a value for the assets of a business can fundamentally misstate the value of the equity for the subject business or vice versa.

Limited data creates confusion about the actual purchase price paid for a supposedly comparable business. Certain opinions of market value presume a 100 percent cash price at the valuation date. With limited knowledge about the actual transaction upon which a given group of comparable transactions are based, the analyst is unable to determine the real purchase price paid for the comparable businesses. When the analyst is unaware of the specific terms of a transaction, it is difficult and usually impossible to make adjustments for specific circumstances.

Most rules of thumb in textbooks, trade publications, and other sources presume an average business. A business owner generally considers the business he or she owns to be above average. Limited knowledge of actual transaction terms and conditions can often lead to misstatement of value due to differences in profitability, capital structure, management, location, and other important factors a buyer would consider when purchasing a business. Lack of information makes it extremely difficult to make assumptions as they relate to the subject business. The inadequate information makes it impossible to determine the comparability of the subject business with the companies upon which the data is based, and as such, usually leads to an undervalued or overvalued business.

Because of these problems inherent to rules of thumb, the analyst should only use them as a sanity check.

Rules of Thumb information is most often available from a local business broker. Local Rules of Thumb may vary from national industry Rules of Thumb. The valuation analyst is well advised to check rules of thumb that may be in vogue for the market area in which the business is located.

For more detailed information on Rules of Thumb, see *How to Value over 100 Closely Held Businesses* by Stephen M. Zamucen, MBA, CPA, CVA, ABV, CFE, available on NACVA's website: www.nacva.com; or the *Business Reference Guide* by Tom West, published by the Business Brokerage Press, available at www.bizbooksoftware.com.

B. JUSTIFICATION OF PURCHASE METHOD

This method represents another sanity check. It raises the question of whether or not a buyer of the business would be able to afford to buy at the estimated fair market value, given certain financing terms and minimum cash flow requirements. A buyer who is looking to buy a job will want to know if the business will provide a living wage.

1. Justification of Purchase Method Affordability Check

a) Assumptions

Seller's Discretionary Earnings*	$125,000
Financing Term (months)	36
Financing Rate (interest)	10%
Down Payment	$100,000
Buyer's Return on Investment as a %	25%
Buyer's Living Wage	$ 60,000

*SDE = Net operating cash flow after all cash expenses except owner compensation.

b) Calculation

Seller's Discretionary Earnings	$125,000
Less Return on Investment	(25,000)
Less Living Wage	(60,000)
Total available for debt service before taxes	$ 40,000
Less income taxes at 40%	(16,000)
Total available for debt service after tax	$ 24,000
Total available for debt service per month (24,000 ÷ 12)	$ 2,000
Present value of monthly payments for debt service at 10% for 36 months	$ 62,000
Plus down payment	100,000
ESTIMATED BUSINESS VALUE	$ 162,000

Note: The above example adjusts for income taxes to be paid by the Buyer before considering the funds available for debt service as shown above. However, to keep this example both relatively simple and understandable, it does not adjust for certain other income tax factors. These are: (1) the depreciation expense on purchased assets (if in fact the assets themselves were purchased) and (2) the income tax saving resulting from deducting the interest expense on the debt service.

C. COMBINATION METHOD/AVERAGING MULTIPLE METHODS

Revenue Ruling 59-60 states:

> *"Because valuations are not made on the basis of a prescribed formula, it is difficult for the various applicable factors in a particular case to be assigned mathematical weights in deriving the fair market value. For this reason, no useful purpose is served by taking an average of several factors (e.g., book value, capitalized earnings and*

capitalized dividends) and basing the valuation on the result. Such a process excludes active consideration of other pertinent factors and the end result cannot be supported by a realistic application of the significant facts in the case except by mere chance."

The valuation professional needs to be aware of this statement contained within Revenue Ruling 59-60. However, it is also important to note that some court decisions involving tax valuations have allowed averaging of factors. In addition, some valuation professionals believe that averaging of more than one factor is acceptable and appropriate depending upon the circumstances. The valuation analyst should select the most appropriate method of valuation considering all the facts of the individual assignment.

VIII. TAX AFFECTING PASS-THROUGH ENTITIES

This entire section has been extracted with permission from James R. Hitchner's book, *Financial Valuations: Applications and Models, Second Edition*. This book is available for purchase through NACVA and is used as the basis for the Advanced Valuation and Case Study Workshop offered at the Consultants' Training Institute.

The discussion regarding valuation of pass-through entities and interests in them has evolved enormously over the last three to five years. With respect to minority interests, a limited number of theories have emerged and taken prominence in much of the literature. There are some significant theoretical departures between each one.

With respect to valuation of controlling interests, there is also some theoretical departure among commentators. However, analysts now have a number of transactional studies available to draw upon. Despite how one interprets the studies, the fact remains that there is an impressive list of specific questions to guide analysts.

A. WHY DEDUCT TAXES FROM AN ENTITY THAT DOES NOT INCUR THEM?

For years, analysts have routinely been deducting taxes at either C corporation rates or personal rates in valuing pass-through entities, despite the fact that such entities do not themselves incur such taxes. And for years, analysts would have to explain why they were doing so. The explanations given have been many and varied including the following:

1. The analyst has to consider the whole range of buyers, most of whom are C corporations.
2. The analyst has to use recognized methods of valuation, which includes taking a deduction for taxes from the income stream.
3. The interest holder is at a risk that the S election could be lost.
4. The income stream has to be matched to the capitalization rate, which includes consideration of corporate taxes in the income stream.
5. The shareholder will have to recognize the phantom income, potentially without a receipt of equivalent cash flow, or at least potentially without enough to pay the taxes on the income he or she is allocated.
6. The IRS Appeals Officer Manual says income taxes have to be deducted from the earnings stream.
7. Tax-affecting is meant to address various costs such as the difficulty in raising or selling capital and the difficulty obtaining debt.

Interestingly, these issues were each addressed in four Tax Court cases where the Court considered the issue of tax-affecting. On the following pages, exhibits 6-1, 6-2, and 6-3 present, in summary format, the four Tax Court cases that have become famous for this issue, the arguments made by the taxpayers' expert and the government's expert, and the finding of the Court in the case.

Exhibit 6-1 Approach Used by Expert for the Taxpayer

Case/ Expert for the Taxpayer	**Gross/ McCoy**	**Wall/ Walker**	**Heck/ Bajaj**	**Adams/ Shriner**
Taxpayer Expert Approach	• 40% tax rate on corporate earnings • Ibbotson data used in capitalization rate	• 34% tax rate on corporate earnings • Ibbotson data used in capitalization rate	• No tax-affect • Ibbotson data used in capitalization rate	• No tax-affect • "Grossed-up" Ibbotson derived capitalization rate to pretax
Support for Approach	• Must employ recognized methods • IRS's own guide says to deduct taxes • Cites various disadvantages of being S corporation that tax-affecting is meant to address	• Potential buyers of S corporations are C corporations	• Additional risk added for S-corporation	• Capitalization rate and cash flow should agree

Exhibit 6-2 Approach Used by Expert for the Government

Case/ Expert for the Gov't	**Gross/ Bajaj**	**Wall/ Shroeder**	**Heck/ Spiro**	**Adams/ Spiro**
IRS Expert Approach	• 0% tax rate • Ibbotson data used in capitalization rate	• 40% tax rate • BBA Bonds/ Ibbotson data used in capitalization rate	• No tax-affect • 10% discount: cited "additional risks of S corps"	• No tax-affect • 10% premium added to discount rate in part due to S corporation statues
Support for Approach	• Subject will remain an S Corporation • Illogical to impute taxes when none will be paid • Virtually all earnings are distributed	• Not relied upon	• Cited restrictions impairing liquidity	• Not used

Exhibit 6-3 Finding of the Tax Court

Case	Gross	Wall	Heck	Adams
The Court held:	• Tax- affecting "inappropriate under facts presented" • Judges un-persuaded by "lemmings to sea" argument (just because everyone else does it, that's no good reason to tax-affect.) • Split on appeal	• Relied on market approach • Cited Gross case in decision • Said that tax-affecting S corporations attributes no value to S status • Note both experts deducted taxes, but the Court did not	• Used Bajaj's rate of return against un-tax-affected earnings • Spiro's 10% "S Corp" discount considered in lack of control discount	• Cited Gross as authority • S corporation tax rate is zero, therefore discount rate already "matches" cash flow • Disallowed Shriner's "gross-up" of discount rate

B. CONTROLLING INTERESTS IN PASS-THROUGH ENTITIES

This section will briefly expose you to the market evidence and findings of various studies for controlling interests. While not everyone considers theses studies to be conclusive, they have provided valuable insight into the issues analysts may need to consider when valuing pass-through entities. These studies include:

1. Dr. Terrance Jalbert, "Pass-Through Taxation and the Value of the Firm," *American Business Review*, June 2002.
2. Merle Erickson, "To Elect or Not to Elect: That Is the Tax Question," *Capital Ideas, Vol.2, No. 4, Winter 2001*.
3. Merle Erickson, "Tax Benefits in Acquisitions of Privately Held Corporations," *Capital Ideas, Vol. 3, No. 3, Winter 2002*.
4. James Alerding, Yassir Karam, and Travis Chamberlain, "S Corporation Premiums Revisited: The Erickson-Wang Myth," Shannon Pratt's *Business Valuation Update*, January 2003.
5. Michael J. Mattson, Donald S. Shannon, and David E. Upton, "Empirical Research Concludes S Corporations Values Same as C Corporations" (Part I), Shannon Pratt's *Business Valuation Update,* November 2002.
6. Michael Mattson, Donald S. Shannon, and David E. Upton, "Empirical Research Concludes S Corporations Values Same as C Corporations" (Part 2), Shannon Pratt's *Business Valuation Update*, December 2002.
7. Joseph Vinso, "Distributions and Entity Form: Do They Make Any Difference in Value?" *Valuation Strategies,* September/October 2003.
8. John R. Phillips, "S Corp or C Corp? M&A Deal Prices Look Alike," Shannon Pratt's *Business Valuation Update,* March 2004.

Much of the discussion regarding valuation of pass-through entities revolves around the issue of tax-affecting the earnings stream. The market data studies of transactions of pass-through entities provide a valuable framework for analysis. In reviewing the studies that have been conducted of transactions of pass-through entities, some of the issues that are raised for consideration include:

1. The effect of earnings available for distribution on the value of the firm
2. The possible benefits of a Section 338(h)(10) election, and when it is appropriate to consider such election
3. The size of the company being transacted, and the impact of size on value
4. The issue of basis step-up
5. The impact of the company's capital structure on value
6. Consideration of the structure of the deal (asset versus stock)

To approach the valuation of a controlling interest in a pass-through entity, the analyst must initially know the base that he or she is starting from in order to know what is subject to adjustment. For example, using the market approach, the analyst needs to consider whether he or she is starting from the perspective of a C corporation asset sale or a C corporation stock sale. Using the income approach, an analyst should consider if he or she is starting with the value of an equivalent C corporation minority, marketable interest distributing 100 percent of its earnings or distributing after-tax earnings. This starting point drives many of the adjustments for the benefits of the pass-through entity that follow.

Analysts must be careful using market data for transaction pricing for either S or C corporations without understanding the basis for the data we are using and considering:

1. Asset or stock sale
2. Assets transacted
3. S or C corporation
4. Size of the transaction
5. Capital structure of the liabilities assumed

Failure to take these factors into consideration when using the market approach to value a pass through entity could result in inappropriate valuation conclusions or reduced reliance.

1. Tax Rates

One of the arguments typically raised for tax affecting the earnings stream is to match the income stream to the capitalization rate that has been developed using Ibbotson data. Ibbotson, in turn was developed from the Center for Research in Securities Pricing Data. Many analysts mistakenly assume that the tax rate implicit in such data is at the highest marginal rate, or 40 percent. A review of the data reveals much lower actual tax rates, particularly in the lowest deciles.

Many analysts value companies that fall in the tenth decile category. Therefore, many of these companies that valuators typically deal with pay less income tax. Some commentators have concluded that these data, taken together with the market data, indicate that we should be deducting no taxes when we value pass-through entities.

Perhaps the most important consideration is that the rate of return we utilize is pre-personal income taxes. The corporate income tax expense "is whatever it is," and should be accounted for appropriately in whatever valuation model the valuator utilizes. What is important is to match after-tax cash flow to after-tax discount and cap rates regardless of the level of tax in the public company data or the subject company.

Much of the debate regarding pass-through entity valuation is centered on the issue of whether to deduct taxes and in what amount. An understanding of several of the valuation models reveals that while they deduct an amount for income taxes, they correspondingly recognize a benefit for dividend taxes saved. When using these models, failure to recognize the purpose and intent of all the steps in the model can lead to a great amount of confusion.

2. Summary: Controlling Interests in Pass-Through Entities

Each controlling-interest valuation is special and individual and cannot necessarily be subjected to only one set of rules. However, there are at least 12 questions to consider to help guide the valuation of such interests:

a) Who is the most likely pool of buyers?
b) Could the buyer elect "for free" on his or her own?
c) What degree of control will the buyer have, and would others make the S election anyway?
d) What is the possibility that the S election will be broken?
e) Will a buyer of a company in this industry pay a premium for a corporate entity form that affords tax-advantaged distributions?
f) What is the expected distribution level?
g) What is the opportunity to build up retained net income?
h) What is the likely holding period?
i) What is the opportunity for 338(h)(10) election (now and in the future)?
j) Is there an opportunity to step up the basis of the underlying assets?
k) What is the date of S election and is there an opportunity to avoid built-in gains tax?
l) What is the capital structure of the company, and how does the fact that it is an S corporation affect its ability to obtain capital?

This list of considerations is not all-inclusive, but it includes many of the issues analyst may consider when approaching the valuation of pass-through entities. The analyst is encouraged to investigate the referenced studies. However, for purposes of these materials a more detailed presentation of approaches will be done in the following section regarding noncontrolling interests and the following section synthesizes the studies for controlling and noncontrolling interests.

C. NONCONTROLLING INTERESTS IN PASS-THROUGH ENTITIES

The valuation of noncontrolling interests in pass-through entities has many of the same issues as for controlling interests, discussed in the previous sections. The obvious distinction is that the noncontrolling interest holder cannot control whether to distribute cash flows and the amount and timing of distributions. Lacking direct access to cash, the noncontrolling interest holder is at the behest of those in control of the corporation. Shareholders' investments, access to cash, and returns for a noncontrolling interest holder in a pass-through entity are impacted by issues such as:

1. Amount and timing of distributions
2. Retained net income
3. Holding period and exit strategy
4. Tax rates—personal versus corporate and capital gains
5. Further effect of minority or marketability discounts
6. Possible ability to participate in step-up-of-basis transaction

Four theories will be presented in the sections that follow: those of Chris D. Treharne, ASA, MCBA; Daniel Van Vleet, ASA, CBA; Z. Christopher Mercer, ASA, CFA; and Roger J. Grabowski, ASA. Each of these noncontrolling theories for valuing pass-through entities has gained recognition in the valuation community. Each handles these issues somewhat differently, yet largely agree on key issues. In addition, a "summary approach" that combines the key findings of the controlling interest studies with the common themes of the minority theories can be found later in this chapter.

No matter which model the analyst uses, if any, the key is to think through the foundation for the valuation model and carefully select the valuation inputs in order to reach a logical conclusion that a buyer and seller would be likely to agree upon.

1. Treharne Model

Treharne's model begins with the value of an equivalent C corporation after reinvestment of all necessary cash flows. To this value determination, one makes adjustments to the equivalent C corporation value depending on:

- Distributions to the noncontrolling owner
- Tax rate differentials
- Basis build-up, if relevant

Using Treharne's model, value distinctions are made for each level of distribution.

2. Van Vleet Model

Van Vleet's model begins with the economic benefits of a C corporation equity interest, fully burdened with income tax at the corporate level, as well as dividend tax on distributions and capital gains tax on retained earnings. That benefit is compared to the S corporation economic benefit that bears only one layer of income tax. The mathematical formula that results from this difference becomes the SEAM adjustment.

The SEAM assumes that shareholders of publicly traded companies are indifferent between distributions and capital gains. This is generally true because both forms of investment return are equally liquid to the public company shareholder. Therefore, the SEAM inherently assumes that the subject S corporation is paying 100 percent of its earnings in distributions, as this is the only way that an investment return on a privately held security can be completely liquid. Van Vleet's model recognizes that the level of distributions for the subject company can impact value and recognizes it through the extent of the discount for lack of marketability.

3. Mercer Model

Mercer's model begins with the value of identical C and S corporations at the marketable minority level, which he determines to be of equivalent value, regardless of the level of distributions. He calculates the S corporation premium or discount at the shareholder level by reference to C corporation equivalent yields on distributions and employs the Quantitative Marketability Discount Model (QMDM) to determine the values. Such analysis can lead to a positive or negative value differential between the S and the C corporation, depending on the facts and circumstances. The issues to consider include:

a) The length of the holding period that the S shareholder may continue to enjoy the benefits of the S election
b) The extent of the expected distributions
c) The risk of loss of benefits. Such loss may come about by changes in law, a disqualifying event, a change in the distribution policy of the firm, or any number of reasons that cause the S election benefits to diminish or cease.

Mercer estimates the differing relative values to retained earnings resulting from tax-sheltered dividends and expected distribution policies.

4. Grabowski Model

Grabowski's modified traditional method begins with the value of a C corporation interest, fully burdened with income tax at the corporate level, adding back the savings gained by virtue of being an S corporation, and making adjustments for tax differentials on pass-through income.

The model recognizes that the distributions for the subject company can impact value. One may either alter the net cash flow available to distribute by increasing retention for reinvestment in the cash flows themselves or recognize the difference between available cash and distributions through the minority interest and/or lack of marketability discounts.

The model assumes that a willing buyer of stock in an S corporation estimates his or her expected holding period and takes into consideration the build-up of basis from retained net income over distributed cash flow. And where circumstances dictate, the model considers the effect of a possible asset or stock sale with 338(h)(10) election on a sale of the business in year X.

5. Summary: Non-Controlling Interest in Pass-Through Entity Theory

Four models for the valuation of noncontrolling interests in pass-through entities have been presented. Each of these theories has foundation in the logical issues that a noncontrolling buyer and seller would consider upon a transaction of their interest. However, to quote Daniel Van Vleet, none of these models is a black box, into which data can be thrown and meaningful results can be expected.

The analyst should carefully consider the inputs in order to get a meaningful valuation conclusion. While each of the theories treats these issues somewhat differently, if the analyst is diligent in the understanding and/or application of the model, carefully considering the inputs and output, he or she should get a logical valuation conclusion.

A review of the issues follows:

a) Amount and Timing of Distributions

All four models recognize that distributions impact value. Treharne's model holds that minority owners receiving distribution amounts greater than the amount needed for taxes have greater value than equivalent C corporation interests, interests in entities distributing funds sufficient to pay taxes are likely of about equivalent value to C corporation interests, and interests in entities distributing insufficient funds are likely worth less than equivalent C corporation interests. Van Vleet's model holds that the S corporation publicly traded equivalent value is not affected by the level of distributed or retained funds, just as is the case in the C corporation publicly traded equivalent value. As such, the Van Vleet model inherently assumes that the subject S corporation is distributing 100 percent of its net income. To the extent that this is not true, Van Vleet recommends that the analyst adjust the value determination through the lack of marketability discount. Mercer concludes that the amount of distributions causes no difference in value, regardless of whether the subject company in an S corporation or a C corporation, at the enterprise level. However, he goes on to make value distinctions by use of the QMDM. Grabowski's model assumes that 100 percent of net cash flow is distributed and recommends that adjustments be made through the minority interest discount to the extent that this is not true.

b) Retained Net Income (Build-up Basis of Stock)

Each of the four theories recognizes that there is potential value in retained net income as that which the buyer could build up for himself or herself and therefore shelter his or her future capital gains. Because such basis has the potential to create additional cash flow to the buyer, they say that it could create additional value. Treharne says that this value is negligible, because his model assumes that the entity is held into perpetuity. The S corporation publicly traded equivalent value provided by the Van Vleet model recognizes the impact of retained earnings immediately, just as is the case in the C corporation publicly traded equivalent value. Grabowski, as will be discussed in a following section, assumes that the willing buyer projects his or her holding period and present values such benefit from that defined point. Mercer recognizes this as a modest reduction to the discount determined by the QMDM.

c) Holding Period

Each model has different assumptions with respect to the holding period. Treharne's model assumes that the interest is held into perpetuity; however, to the extent that is not true, such impediment can be corrected by converting the model, which is presented as a capitalization model, to a discounting model. The S corporation publicly traded equivalent value provided by the Van Vleet Model assumes the ownership interest can be liquidated at the option of the shareholder in an efficient capital market. Consequently, no holding period is inherently assumed by the Van Vleet Model. Obviously, no such capital market exists for S corporation equity interests. Therefore, Van Vleet recommends that this lack of marketability be taken into account in the lack of marketability discount. Mercer assumes a selected holding period and uses it in the QMDM to determine the lack of marketability discount. Grabowski's model considers two holding periods: The willing buyer estimates a holding period for his stock interest and, where circumstances dictate, assumes that the willing buyer estimates a time when the business may be sold.

d) Tax Rates—Personal Versus Corporate and Capital Gains

With respect to income tax on corporate income, Treharne's, Van Vleet's, and Grabowski's models contemplate the differences in S corporation and C corporation tax rates on ordinary income. Mercer makes note that such rate differences are negligible. Regarding dividend tax, all four models consider dividend tax on C corporation dividends. On the issue of capital gain tax, Van Vleet's model contemplates the capital gains tax benefit associated with retained net income as it is earned; Grabowski calculates capital gains tax on retained net income upon an assumed sale at a selected date in the future. Treharne's model does not explicitly calculate such a tax, but Treharne says it should be considered. Mercer similarly says that basis shelter and the capital gains tax saved should be considered.

e) Further Effect of Minority of Marketability Discounts

Treharne states that his model produces a minority, marketable value. The analyst should consider any lack of marketability discount that would be applicable. To the extent that the analyst considers cash distributions in his or her analysis of such lack of marketability discount, he or she should consider that the cash flow stream to the minority shareholder has already been accounted for by use of his or her model. Van Vleet states that his model produces an S corporation publicly traded equivalent value. As such, the indication of value is on a minority, marketable basis. Consequently, the application of a lack of marketability discount is typically warranted. He further states that the analyst should understand the fundamental assumptions of his model and consider adjusting the lack of marketability discount to the extent that disparities exist between these assumptions and the attributes of the subject S corporation equity security. Mercer begins with the value of a minority, marketable interest, which he holds is the same for S corporation and C corporation shareholders, and recognizes the difference between the S corporation shareholder benefits and the C corporation shareholder by use of the QMDM. The inputs to that model drive the extent of the discount that is taken. Grabowski suggests that both minority interest and lack of control discounts be considered in his model—the former, presumably, if one has used control based cash flows in his model.

f) Possible Ability to Participate in Step-up-of-Basis Transaction

Grabowski recognizes, as a part of his model, that a buyer may consider the ability to command a premium upon the sale of his or her interest through a step-up-in-basis transaction. Grabowski is clear that this component should not be "automatically" included but carefully considered for each valuation. Certainly, for some acquisitions, particularly of larger companies, it can be a consideration. However, for many smaller to midsized companies, it may not be. Like all components of these models, each one needs to be considered as to relevancy for the particular subject company.

It is evident that the four theories agree on the factors that impact the value of S corporation interests. Each arrives at the conclusion by a different path. Analysts must understand and carefully apply whatever method is used, if any.

D. A SUMMARY APPROACH TO PASS-THROUGH ENTITY VALUATION

Perhaps you're confused by the multitude of approaches to pass-through entity valuation and now are left wondering what to do. If so, you're not alone. Since the Gross decision, the sheer volume of commentators offering a diverse variety of good, solid advice on the economic theory associated with pass-through entity valuation has left many wondering just how to sort it all out. The following analysis is presented, along with the grateful appreciation for the insight provided by the controlling-interest studies and S-corporation valuation theories of our colleagues as presented in this text, in an attempt to help clarify and simplify the extensive debate that has gone on regarding pass-through entity valuation.

Most valuation analysts now accept the notion that if an individual has the choice between receiving $1,000 that's subject to double taxation, or the $1,000 that's subject to single taxation, they'll choose the single-tax option. Why? Because if money only has to be taxed once, the individual will keep more of it in their pocket—simple math. The problem has been that the empirical data valuation analysts rely on to value the cash flow that the investor receives that's "only taxed once"—that is, publicly-traded C corporation rates of return—comes from data that is based on investors' expectations of money that is "twice taxed"—first at the corporate level, and again at the individual level.

Many analysts have attempted to cure this problem by simply not deducting taxes from the corporate-level income stream and applying the rate of return from public C corporations. In so-doing, they believe that they have left the investor in the position of having been "only taxed once." However, this is not so; merely not deducting corporate-level taxes grossly overstates the value of the pass-through entity. This is because the second tax, the one that is being avoided, is not the corporate-level tax (generally represented at or near 40 percent), but rather, the dividend tax (generally at or around 20 percent for federal and state combined.)

At the other end of the spectrum, analysts who deduct corporate taxes and take no further steps fail to recognize the benefits that may inure to the investor by virtue of holding an investment through a vehicle that avoids this second level of taxation. Since the earliest days of finance, the impact of taxes on the value of an investment has been recognized; to ignore it is to ignore the economic reality of the investment.

The most significant point of this entire debate is this: The difference between valuing an S corporation and a C corporation is not about whether or not corporate-level taxes should be deducted, and it has never been. Both S corporations and C corporations bear these taxes, and whether they bear them corporately or individually makes no difference. What does make a difference is that rates of return on C corporations are derived from an investor's expectation of having to pay a dividend tax upon receipt of dividends from the corporation, while S corporation investors need pay no such tax. Therefore, if we are using a rate of return that reflects an investor's expectation of having to pay a tax upon receipt of dividends, as is clearly the case when we use Ibbotson data, then it is axiomatic that if we are using this same rate of return data to value a corporation where the investor will not have to pay such a tax, then the financial benefit of not paying a dividend tax must be taken into consideration. The need to consider this benefit is as equally true for a non-controlling interest as it is for a controlling interest where the buyer will continue to receive such benefit; whether it will be realized depends on a whole host of factors.

Given this, the simplest solution to valuing a pass-through entity is to first value the entity "as if" it were a C corporation, and then to separately assess the effect on value of those benefits specific and inherent to pass-through entities and interests in them, but not available to publicly-traded C-corporation interest holders, whose data we have used to value the S corporation. The most significant benefits include the avoidance of dividend tax on distributions, discussed above, as well as the S corporation investor's opportunity to benefit from a build-up in the basis of their stock, which an investor in a C corporation cannot benefit from. This section will present just such a straightforward model and culminate in a single, simple spreadsheet adaptable for use in the valuation of any pass-through entity.

The reader will note that the starting point for most pass-through entity valuation models begin with the valuation of the company "as if" it were a C Corporation. This is for a good reason: The empirical data that analysts have available to them is all from publicly traded C corporations. It is only after the analyst has valued the pass-through entity "as if" it were a C corporation that we then assess the benefits of ownership of the pass-through entity.

There are many questions and considerations for both controlling and minority interests in a pass-through entity. While these questions are relevant for both types of interests, every valuation is case and fact specific, and the analyst's answers might differ dramatically, not only between controlling and non-controlling interests, but also from one non-controlling interests to another, or one controlling interest to another. There are no cookie cutter formulas or set-in-stone mathematical calculations; there are, however, several important questions that, when answered, will help guide the analysts through the valuation of both controlling and non-controlling interests:

1. **Who is the most likely buyer?**

   A review of market transactional data may give the analyst a good indication as to who, and what type of entity, is involved in transactions in the subject company's industry. Discussions with the subject company's management may provide further enlightenment on the subject. The old stand-by, "All of the buyers are C corporations," however, will likely not be as plausible an answer unless backed up with empirical evidence.

2. **What is the possibility that the S election will be broken?** (not applicable to an LLC)

3. **What is the expected distribution level?**

   Historical distributions may be an indicator of future distribution patterns; however, they may not. In a controlling-interest valuation, assuming the cash flow includes all cash flows needed for operations including reinvestment needs, then you may conclude that 100 percent is available for distribution.

4. **What is the opportunity to build-up retained net income, and how will that retained net income be used to build value?**

   Whatever isn't distributed doesn't just disappear, it builds value for the shareholder and should be given consideration. Depending on the likelihood of the shareholder ever realizing a benefit from the retention, the analyst may choose to recognize more, or less, of the retained net income, by making appropriate adjustments to the discount rate.

5. **What is a likely holding period for the interest?**

   While this may, in some instances, be nothing more than educated guesswork, many analysts agree that a reasonable terminal period should be determined. At this point the analyst might choose to recognize the benefits of the retention of earnings and the related build-up in the basis of the investor's stock.

With respect to the first two of these questions, it is often the case that there is no distinct answer. This is caused by several factors. Poor market data would give no obvious indication of whom, or what form of entity, might be a likely acquirer of the company. While a buyer of a controlling interest in a small-sized company would most likely continue the pass-through entity status and it is unlikely that the S election would be broken, the company could also be acquired by a C corporation. Thus, it may be appropriate to consider the pass-through entity benefits and then weight them by the probability that the pass-through entity status will be maintained.

The valuation analyst must also consider the perspective of the pool of hypothetical buyers of the subject company. There are a variety of sources for potential buyers: individuals, including the Management team; the descendents of the owner; outside buyers who would operate the Company in much the same manner as it has been run for many years; or acquisition by an existing corporation or competitor. Therefore, the make-up of the pool of hypothetical buyers for any specific case may shed light on the S or C corporation election question for that valuation.

Depending on the entity status chosen by the hypothetical buyer, a weighting may be placed on the present value to determine the amount added to the value indication "as if C corporation." Assuming that the most likely buyer would maintain the pass-through entity status and that the S election would not be broken, the full amount of the premium may be added to the value indication "as if C corporation." Alternately, with an unknown buyer/entity structure, the resulting present value is weighted.

We readily acknowledge that by making this allocation, we make an imperfect estimate meant as a means of giving recognition to the fact that we simply do not know who the most likely buyer would be. However, recognizing some amount of premium for these purposes makes economic sense. Note that for a controlling interest, however, if the analyst were to determine that the entire pool of hypothetical buyers was comprised of C corporations that this percentage would be zero, in effect resulting in no additional value for a pass-through entity premium. Often, however, it is a blend of C corporations and pass-through entities that makes up the pool of potential hypothetical buyers. For a minority interest, on the other hand, the analyst might be more likely to conclude that the pass-through entity status would continue, and 100 percent of the benefit might be added.

Furthermore, the opportunity to build up retained net income is a possibility for the hypothetical buyer that should not be ignored. Of particular note, Roger Grabowski's model discusses issues at some length, as does that of Daniel Van Vleet. In Grabowski's model, the retained net income is recognized at an assumed terminal (exit) period, while in Van Vleet's model capital gains are recognized immediately, as is true in the public markets; to the extent this is not true, one would make a lack of marketability adjustment against Van Vleet's model.

There is often no way to know what that buyer's exit strategy might be or at what point in time he/she might be inclined, or even able, to sell. One way to take these unknowns into consideration is the rate of return, assuming the analyst can ask questions that provide a reasonable basis upon which to make adjustments to the previously determined rate.

Given the unknowns regarding the timing and use of such a benefit by a hypothetical buyer, the selected rate must be appropriate to apply to the basis build-up. The resulting amount is then added to the value determination. For a particular valuation, an analyst might determine that such benefits are more appropriately recognized at five, ten, or fifteen years or more from the present or, alternatively, even every year, as Van Vleet's model assumes or into perpetuity as Treharne's model assumes.

While this summary analysis is not an exhaustive presentation of either the benefits or detriments of pass-through entity ownership, it does present what are typically the most common and the most material issues the analyst will encounter in determining the value of such an entity. For further analysis, the reader is encouraged to study the models of assumptions that are the foundation of the theories presented in the earlier sections of this chapter.

In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information that many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentor the valuation analyst may know. Those at the top of the field continue to grow.

Recommended reading includes, but is not limited to:

- Abraham, Mel H., *Valuation Issues and Case Law Update*, all cases.
- Abrams, Jay, *Quantitative Business Valuation, A Mathematical Approach for Today's Professionals,* Part III (Adjusting for Control and Marketability).
- Burkert, Rodney P., "In Defense of the Adjusted Net Asset Methodology for Small Operating Companies," *The Valuation Examiner*, D/J 1999.
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests*, Chapter 5 (Discounted Cash Flow Methodology), Chapter 6 Asset Valuation Methodologies) and Chapter 9 (Comparative Analysis).
- Copeland, Tom, et. al., *Valuation Measuring and Managing the Value of Companies*, Part Three (Applying Valuations).
- Elmaleh, Michael S., "The Income Method of Valuation, A False Analogy between Bonds and Stocks," *The Valuation Examiner*, J/A 2003.
- Gulden, Allen J., "Are We Understanding Unsystematic Risk Premium?", *The Valuation Examiner*, N/D 2001.
- Hanlin, W. A. and J. R. Claywell, *The Value of Risk*, all sections.
- Hitchner, James R., *Financial Valuation Applications and Models*, Chapter 4 (Income Approach), Chapter 6 (Market Approach), and Chapter 7 (Asset Approach).
- Kasper, Larry, "Excess Earnings or "Formula" Method for Estimating Goodwill and The Value of a Business" (in 2 parts), *The Valuation Examiner*, J/F 1996.
- Kern & Compton, "Risk Differential Related to Company/Market Comparison", *The Valuation Examiner*, J/F 1003.
- King, Alfred, *Valuation: What Assets Are Really Worth, Chapter* 5 (Cost Approach to Value), Chapter 6 (Income Approach to Value), Chapter 7 (Market Comparable Approach to Value) and Chapter 16 (Adopting SFAS 141 and SFAS 142).
- Mercer Capital, *Valuation for Impairment Testing – Compliance with SFAS 142*, all chapters.
- NACVA, *Restricted Stock Studies*, 3rd Edition, all parts.
- Norton, George M., *Valuation Maximizing Corporate Wealth*, Chapter 6 (Evaluate Alternative Approaches).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Part III (Business Valuation Approaches and Methods).
- Pratt, Shannon, *The Market Approach to Valuing Businesses*, all chapters.
- Reibling, Michael C., "Discounted Cash Flows versus Income Approach," *The Valuation Examiner*, M/A 2003.
- Zamucen, Stephen M., *How to Value Over 100 Closely Held Businesses* Third Edition, all chapters.

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BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 6

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 6: Commonly Used Methods of Valuation

1. The three general approaches that need to be considered by the valuation analyst in each valuation engagement include:

    a. Income, Asset Based, and Excess Earnings
    b. Market, Treasury, and Income
    c. Income, Going Concern, and Market
    d. Income, Asset Based, and Market

2. As a component of the capitalization of future earnings or cash flows method, the future earnings or cash flows as estimated by the valuation analyst:

    a. Are always calculated on an after-tax basis
    b. Exclude any income or expense items generated from non-operating assets and liabilities
    c. Are based only on the historical results of operations in the fiscal year closest to the valuation date
    d. Exclude any compensation to the owner(s) of the business

3. If the capitalization of future earnings/cash flows method is used in a valuation engagement for U.S. Gift Tax purposes, the valuation analyst is required to include how many historical years in the estimate of the future earnings/cash flows?

    a. At least three years, based on Treasury Regulations
    b. As many years as the valuation analyst deems appropriate, based on his/her professional judgment
    c. Five years, based on requirements of the Internal Revenue Service
    d. Two to five years, based on Treasury Regulations

4. In the discounted earnings/cash flows method, the Gordon Growth Model is used:

    a. To determine the period of stabilized earnings/cash flows of the company
    b. To determine the number of periods (years) needed in the projection period
    c. To calculate the "terminal value" of the company
    d. To calculate the present value factor based on an assumed rate of return

5. To find useful and relevant comparable guideline publicly traded companies to use in the market approach is:

    a. Relatively easy because numerous comparable guideline publicly traded companies exist for the privately held businesses that are the subject of the valuation analysts valuation engagements
    b. Relatively easy because finding comparable guideline publicly traded companies is quick and inexpensive as the information is readily available from public sources
    c. Relatively difficult because the methodology relies on explicit financial forecasts which are not readily available for the comparable companies
    d. Relatively difficult because company size differential, management depth, product and services diversity and access to debt capital will seldom match the privately held company being valued

6. The primary methods used to calculate the value of privately held business interests in the income approach are:

    a. Capitalization of Earnings/ Cash Flows Method and Excess Earnings/Treasury Method
    b. Excess Earnings/Treasury Method and Discounted Earnings/Cash Flows Method
    c. Capitalization of Earnings/Cash Flows Method and Discounted Earnings/Cash Flows Method
    d. Discounted Earnings/Cash Flows Method and Price/EBITDA Method

7. According to Russel L. Parr in *Investing in Intangible Assets*, there are ten essential characteristics of an intangible asset. One such essential characteristic is:

    a. To provide an economic advantage in the form of lower manufacturing or operating costs such as substituting high cost high quality materials for low cost materials enabling a higher quality product
    b. To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing the amount of labor required to manufacture, inspect, package or account for a product
    c. To provide an economic advantage in the form of lower manufacturing or operating costs such as lowering high manufacturing speeds by reducing fuel or electric power requirements
    d. To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing shipping costs by eliminating manufacturing environmental hazards

8. The Financial Accounting Standards Board (FASB) has issued Accounting Standards Codifications that address valuation considerations for goodwill and other intangible assets. Which of the following is correct?

    a. ASC 830 did not affect valuations based on arms-length bargaining.
    b. ASC 59-60 does affect valuations, and the valuation analyst must take care to follow the eight factors outlined in ASC 59-60.
    c. ASC 66-49 outlined procedures to all types of non-cash property for which an appraisal is required for gifting and/or charitable contribution.
    d. ASC 350 addresses how intangible assets acquired with a group of assets (but not those required in a business combination) should be accounted for upon their acquisition.

9. When valuing the stock of a real estate holding company, most likely the valuator will give the greatest weight to which method?

    a. Capitalization of earnings method
    b. Book value method
    c. Adjusted net assets method
    d. Rule of thumb

10. Using the adjusted net asset method, the valuation analyst only values the tangible assets of the company.

    a. True
    b. False

11. The adjusted net assets method generally sets a _______________ for determining total entity value.

    a. floor value
    b. high value
    c. forced liquidation value
    d. investment value

12. Which one of the following adjustments would be a normalized adjustment to the balance sheet in the adjusted net assets method?

    a. Convert inventory from FIFO to LIFO
    b. Remove excess cash
    c. Adjust owner's compensation
    d. Remove expenses related to fire damage of a Company's manufacturing plant

13. Which method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value?

    a. Capitalization of earnings
    b. Discounted cash flows
    c. Excess earnings
    d. Adjusted net assets method

14. The mid period method of discounting should be used when the equity holder:

    a. Has access to cash flows at the end of the year (or period)
    b. Has access to cash flows throughout the year (or period)
    c. Does not have access to any cash flows
    d. Both a and b

15. Advantages of the market approach include:

    a. It uses actual data, it is relatively simple to apply, and it is inexpensive to determine.
    b. It uses actual data, it is inexpensive to determine, the data obtain via transaction databases are very reliable.
    c. It uses actual data, it is relatively simple to apply, and it does not rely on explicit forecasts.
    d. It is user friendly, relatively inexpensive to determine, and simple to apply.

16. Which two private company transactional databases cover relatively small companies?

    a. IBA Market Database and Done Deals
    b. BIZCOMPS and IBA Market Database
    c. IBA Market Database and Mergerstat
    d. Mergerstat and BIZCOMPS

17. Using the market approach, "price" should be matched to the appropriate parameter based on which providers of capital in the numerator will be paid with the monies given in the denominator. Market value of invested capital (MVIC) is usually the numerator that is paired with _____________ in the denominator.

    a. EBITDA
    b. pretax income
    c. net income
    d. book value of equity

18. Which method combines the income and asset based approaches to arrive at a value of a closely held business?

    a. Adjusted net assets value method
    b. Discounted cash flows method
    c. Guideline public companies method
    d. Excess earnings method

19. A "pass-through" entity is one which:

    a. Passes the value of the entity to the owners in a taxable transaction
    b. Pays no entity-level income taxes, but passes through any income or losses to the owners of the entity
    c. Calculates its entity-level tax liability and passes it through to the owners of the entity
    d. Pays the individual taxes of the owners as a pass through item

20. Which model for valuing a minority interest in a pass-through entity assumes 100% of the company's earnings is being distributed?

    a. Mercer
    b. Grabowski
    c. Van Vleet
    d. Treharne

21. The S election allows a shareholder to avoid which individual level tax?

    a. Capital gain tax
    b. Income tax
    c. Dividend tax
    d. Foreign tax

22. There are four recognized models for valuing a minority interest in a pass-through entity. Which of the following statements is INCORRECT?

    a. All four models recognize distributions impact value.
    b. All four models recognize there is potential value in retained net income.
    c. All four models assume the same holding period.
    d. All four models consider the dividend tax on C corporation dividends.

Chapter 6 Bonus Questions /Responses:

1. The **Excess Earnings/Treasury Method** presumes that the value of a business is the sum of the values of its adjusted net assets and intangible assets, using what is considered to be a "reasonable" return on the adjusted net assets. List the steps used in the method:

2. List the steps to be used in **Excess Earnings/Reasonable Rate Method**:

3. Geri Co has a 10-year history of weighted average profits of $900,000 and a weighted average dividend paid of 3.5% of earnings. Comparable companies indicate a weighted average yield of 6.2%.

   1st - Calculate the value under the **dividend payout** method:
   Earnings: 900,000
   Dividend amount: 900000 X 3.5% = 31500
   Weighted average yield of comparables: 6.2%
   Dividend payout value: 31500 ÷ 6.2% = 508,065.

   2nd - Calculate if the weighted average dividend payout was:
   45% = 900000 X 45% = 40500 ÷ 6.2% = 6,532,258
   30% = 900000 X 30% = 270,000 ÷ 6.2% = 4,354,839
   50% = 900000 X 50% = 450000 ÷ 6.2% = 7,258,065

   QUESTION: What issues do you see using this method?

4. The steps used when valuing a company using the **discounted earnings** method are:

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CHAPTER SEVEN

VALUATION DISCOUNTS AND PREMIUMS

"Democracy is the recurrent suspicion that more than half of the people are right more than half of the time."
E. B. White (1899–1985)
Columnist, New Yorker, July 3, 1944
Author: Stuart Little; Charlotte's Web

I. OVERVIEW

Determination of the value of an equity interest requires the valuation practitioner to carefully scrutinize the specific investment characteristics inherent in the specific equity instrument. Knowledge of these investment characteristics is critical for a proper risk assessment and, thereby, producing a conclusion of value that addresses these risks.

In addition to understanding the investment characteristics of a specific equity instrument, it is equally important that the valuation practitioner understand the mechanics of the many commonly used valuation methodologies under the three broad valuation approaches (income, market and asset-based). Depending upon valuator inputs into the mathematical models under the various methodologies, each has the ability to produce a valuation conclusion that differs in relation to the specific equity interest.

The difference arises from the varying investment characteristics contained within the methodologies. If these investment characteristics do not parallel those of the equity interest under valuation, it may be necessary to modify the conclusion of value reached there under.

Most often, these modifications are reflected as discounts and/or premiums to the conclusions generated under various valuation methods. The two investment characteristics most often addressed in this manner are those related to control, or lack thereof, and those related to a lack of liquidity or marketability.

It is important to note that, by themselves, discounts and premiums do not exist. That is to say, these items are not traded on an open market, nor is there discernable direct evidence as to the proper level of discount or premium to use in any specific instance.

In effect, "discounts and premiums" are the "fallout" of using "less-than-perfect" market data to measure value.[1] The common acceptance of these methodologies necessitates that the business valuator utilize discounts and premiums to modify the conclusions reached in order to accommodate the characteristics of the equity interest under valuation.

There is often no greater dollar adjustment than that attributable to the business valuator's final determination of discounts and premiums. As a simple example, a pre-discount value conclusion of

[1] Michael Bolotsky, p. xxi, foreword – *Business Valuation Discounts and Premiums*, Shannon Pratt, 2001

$1,000,000 would be reduced by $350,000, should the business valuator select a total discount of 35 percent.

Such significant numbers are not uncommon, resulting in an ever-growing attempt by the Internal Revenue Service, as well as various state inheritance tax authorities to challenge the validity of the valuator's conclusions. The Internal Revenue Service primary guidance is based on a foundation of language contained in Revenue Ruling 59-60.

Revenue Ruling 59-60, 1959-1 Cumulative Bulletin 237, defines fair market value as:

> *"The price at which the subject equity ownership interest would change hands between a willing buyer and a willing seller when the former is under no compulsion to buy and the latter is under no compulsion to sell and both parties having reasonable knowledge of relevant facts."*

Court decisions frequently state that, in addition to a hypothetical buyer and seller being "willing," they must also be "able" to trade and be well informed about the property and the market for such property.

Practice Pointers

Revenue Ruling 59- 60 sets forth the premise that valuation of closely held business interests is not an exact science and reasons that sound valuations result from:

Consideration of all relevant facts
Use of common sense
Exercise of informed professional judgment
Application of reasoned assessment

A. OTHER DISCOUNTS

Other value modifications beyond those considering control and marketability often include:

1. Market absorption and blockage discounts
2. Key person/thin management discounts
3. Investment company discount
4. Information access and reliability discount
5. Lack of diversification discount
6. Non-homogenous assets discount
7. Restrictive agreement discount
8. Small company risk discount
9. Specific company risk discount
10. Built-in gains tax discount
11. Liquidation costs discount

It is important to note that valuation professionals often compensate for value detriment attributable to many of these items in the development of their discount/capitalization rates. As such, it is incumbent upon the business valuator to avoid a "double effect" of these characteristics in his or her valuation conclusion.

The key for successfully utilizing discounts and/or premiums is to truly understand the ownership characteristics and attributes of the subject equity interest and the third party supporting base data.

B. DISCOUNTS AND PREMIUMS/ FUNDAMENTAL CONCEPTS

The fair market value of a business interest is determined by transactions between buyers and sellers. Ultimate estimation of fair market value under commonly accepted valuation approaches and methodologies requires the business valuator to identify and consider those ownership interest characteristics that are specific to the interest being valued.

Investors are risk averse. Ownership interest attributes that increase the risk of holding the investment will inherently depress the value of the ownership interest. Likewise, those specific characteristics that serve to diminish investment risk will increase that ownership interest's value.

The propriety of any discount or premium is undeterminable until the base to which the adjustments are applied is clearly defined. Utilization of discounts and premiums cannot produce a correct result if applied to an inappropriate base conclusion of value.

No "prescribed" levels or ranges of discounts or premiums exist from which the valuator can ascertain the proper adjustments for a specific case. Moreover, the valuator cannot expect to use a common set of computations or formulas to determine the appropriate adjustments in jobs with differing facts and circumstances.

Though not totally mutually exclusive concepts, the discount for a lack of ownership control (minority) and the discount for lack of marketability are generally held to be separate and distinct. While it is true that some crossover exists whereby a non-controlling interest is less marketable than a controlling interest by virtue of the non-control feature, sufficient third party information exists to support separation of the two. Otherwise, insurmountable difficulties arise in determining a proper level of combined discount.

Practice pointer

In those instances where the business valuator deems it appropriate to apply both a discount for lack of ownership control and a discount for the lack of marketability, the application of the discounts is multiplicative, not additive.

The discount for lack of ownership control is generally applied first, principally due to the common understanding that both control and minority ownership interests may be subject to a discount for a lack of marketability. Moreover, the only empirical data for lack of marketability is available at the minority interest level, further supporting the concept of applying the minority discount first.

Due to specific characteristics requiring the application of discounts for both a lack of control and a lack of marketability, minority ownership interests in privately held businesses may be worth much less than their proportionate share of the overall business value. In other words, the sum of the parts may not add up to the whole.

C. GENERAL FACTORS THAT INFLUENCE THE APPLICABILITY AND SIZE OF THE DISCOUNT OR PREMIUM

1. Purpose of the valuation—divorce, estate, ESOP, etc.
2. Attendant rights and characteristics of specific ownership interest being valued
3. Transfer restrictions or put option
4. Ownership structure of the entity being valued—voting vs. nonvoting shares
5. Quality of management team—thin management, strained family relationships
6. Size of company—small "Mom and Pop" vs. large multifaceted business
7. Size of block of stock being valued—swing vote consideration
8. Propriety of management salaries, perquisites, etc.—excess compensation and/or benefits
9. The control of a minority shareholder
10. Stock-related issues—dividend policy and history, stock redemption policies, restrictions on stock sales, right of first refusal, etc.
11. Financial condition of the subject company and volatility of earnings—bank restrictions on dividends, etc.
12. Federal and state regulatory restrictions—Treasury regulations regarding estates/gifts; Department of Labor regarding ESOPs
13. State corporation statutes—New York/Illinois supermajority
14. Market desirability—struggling vs. thriving industry
15. Potential synergies, if any, with potential buyer(s)
16. Investment time horizon
17. Pass-through entities

D. LEVELS OF VALUE

The business valuation community generally assumes four basic levels of value:

1. Synergistic value (assumes a different standard of value)
2. Controlling interest value
3. Marketable minority interest value
4. Non-marketable minority interest value

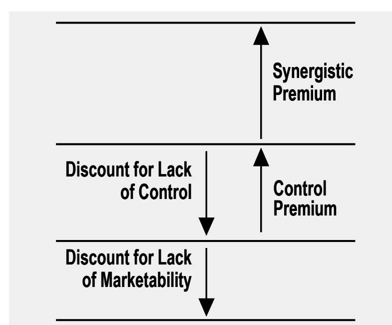
The graphic below illustrates the various levels of value in terms of ownership characteristics.

Control, Marketable Value
(on an investment or synergistic value basis)

Control, Marketable Value
(on a FMV basis)

Minority, Marketable Value

Minority, Non-marketable Value



Note the highest level of value is on an investment or synergistic value basis and not fair market value.

A controlling interest in a privately held business may also be subject to a discount for lack of marketability, but usually not at the same level as a minority or non-controlling interest.

E. CALCULATION OF TOTAL DISCOUNT APPLICABLE TO A SUBJECT INTEREST

The following example is provided to illustrate the multiplicative calculation of an overall discount applicable to a minority interest in a privately held business enterprise.

Example:

Gross value of entity	$1,000
X Subject percentage	10%
10% Interest (pre discounts)	$100
Less: Discount for lack of control (30%)	(30)
Minority, marketable value	70
Less: Discount for lack of marketability (20%)	(14)
Minority, non-marketable value	$56

Calculation of overall discount:	=	1 – [(1-.30) x (1-.20)]
	=	1 – [(.70) x (.80)]
	=	1 – .56
	=	.44
	Overall discount:	**44%**

Note that the total discount in the example is 44 percent, not 50 percent (the sum of the 30 percent discount for lack of control and the 20 percent discount for lack of marketability). Although the Courts have erred in this matter of discount application, it is an accepted business valuation practice to apply the discounts sequentially.

Discounts and premiums can play an important role in the determination of value in a privately held business interest. The type and level of discount and/or premium can depend on numerous factors as listed in C above.

Almost universally accepted is the concept of four levels of value from which adjustments can be made via discounts and premiums to attain the correct conclusion, given the specific characteristics of the ownership interest under valuation.

II. CONTROL PREMIUM AND MINORITY INTEREST BASICS

Of all the intrinsic characteristics related to an equity interest, arguably none may be more important than the element of control. Widely accepted theory within the business valuation community holds that an investment in a privately held company is worth the present value of all of the future benefits inuring to the holder of that equity interest. Clearly, then, if the equity holder has a control position, he or she can accelerate the receipt of those future benefits and via management and operational initiatives, take direct steps to enhance the future benefits, or at least the probability that they will be generated.

On the other hand, a minority or non-controlling position in a privately held company is generally held at the great risk of being subject to the judgment, ethics and management skills of the controlling shareholder(s). Depending on a number of items, the impairment of value can be significant in this circumstance.

It is not really proper to use the term minority discount in all cases. A minority discount is a discount for lack of control applicable to a minority interest. A discount for lack of control is an amount or percentage deducted from the subject pro rata share value of 100 percent of an equity interest to compensate for the lack of any or all powers afforded a control position in the subject entity.

Control premiums and discounts for lack of control, sometimes referred to collectively as "control adjustments," have enjoyed wide acceptance in the federal tax system. The estate and gift tax regulations on valuing publicly traded stock recognize a basic inequality between controlling and non-controlling interests, noting in Treasury regulation sections 20.2031-2(e) and 25.2512-2(e).

> *"If the block of stock to be valued represents a controlling interest, either actual or effective, in a going business, the price at which other lots change hands may have little relation to its true value."*

Regulation sections 20.2031-2(f) and 25.2512-2(f) also list as a factor in valuing closely held stock "the degree of control of the business represented by the block of stock to be valued." These provisions prompt swing vote consideration as well.

The primary IRS ruling on valuation of closely held shares, Revenue Ruling 59-60, clarifies which way this factor cuts. The ruling states:

> *"Although it is true that a minority interest in an unlisted corporation's stock is more difficult to sell than a similar block of listed stock, it is equally true that control of a corporation, either actual or in effect, representing as it does an added element of value, may justify a higher value for a specific block of stock."*

Court decisions and rulings employing minority discounts and control premiums have become the standard over the years, applying these principles not only to stocks, but other types of property as well. The business valuation community in "non-estate/gift tax" venues also broadly accepts the application of these discounts.

A. ADVANTAGES OF MAINTAINING A CONTROL POSITION IN A PRIVATELY HELD ENTERPRISE

1. Setting company policy and influencing the operations of the business
2. Appointing management and determining management compensation and benefits
3. Power to acquire and dispose of business assets
4. Power to select vendors and suppliers
5. Facilitating business reorganizations:
    a) Business acquisitions
    b) Business dispositions
    c) Liquidation
    d) Recapitalization
    e) Initial public offering
6. Sell or acquire treasury shares
7. Power to dictate dividend policy and payments

8. Power to revise company organization documents
9. Ability to establish or revise buy/sell documents
10. Power to block any of the above

B. CONSIDERATION OF OWNERSHIP CHARACTERISTICS IN ASSESSING CONTROL

1. Representation on the Board of Directors

a) Direct representation
b) Indirect via cumulative voting shares

2. Contractual Restrictions

a) Loan agreements with restrictive covenants

3. Other Agreements Including Organization Documents

a) Shareholder agreements setting shareholder responsibilities such as buy/sell agreements
b) Employment agreements
c) Voting Trusts

4. Industry Regulations

a) Limiting many advantages of control

5. State Corporate Law and Statutes

a) Simple majority vs. super majority

6. Voting Rights

a) Related to control—the greater the shareholder's control, the more significant the voting rights become in the valuator's determination of value

7. Financial Condition of Business

a) Potentially severe control limitations can arise in a business suffering from financial difficulties

8. Size of the Block of Stock Being Valued

a) Noted in Revenue Ruling 59-60 as relevant

9. Concentration of Ownership

a) A two percent interest in conjunction with two 49 percent interests would invoke a lower minority discount than where the remaining 98 percent was held by 10 equal equity owners or a single shareholder.

C. THEORETICAL ARGUMENTS *FOR* CONTROL PREMIUMS[2]

1. Performance Improvement Opportunity

A perception by "control buyers" that they can run the company better and increase returns via operational improvements or synergistic benefits. Caution: synergistic benefits may pertain to other than "hypothetical buyer" and thus may alter standard of value.

2. Investment Protection Enhancement

Control is assumed to carry with it the ability to quickly act to modify operational decisions, thereby providing the interest holder with added investment protection not present in a non-control situation.

3. Ability to Self-Deal

Control is assumed to carry with it the ability to withdraw excess financial benefits on terms favorable to the controlling equity holders. Examples include asset and opportunity diversion, as well as receipts of excess cash flow related to compensation, related party rentals, etc.

4. Greater Information Access

A perception exists that controlling shareholders hold a higher level of access to company financial and operational information than that available to non-control shareholders.

5. Psychological and Intangible Benefits

Totally non-financial in nature, there is often thought to be a non-monetary benefit to holding the power of a controlling interest in a company. While difficult to quantify, there is clearly a buyer group in the entire universe of buyers envisioned by Revenue Ruling 59-60 that is willing to pay a premium for this privilege.

D. THEORETICAL ARGUMENTS *AGAINST* CONTROL PREMIUMS

1. Performance Improvement Opportunity

Fair market value assumes a hypothetical buyer from an entire universe of buyers and not an actual buyer. The question of assuming increased profitability is totally judgmental (what of the situation where increased profitability is totally judgmental? what of the situation where the company already appears to be at an optimal performance level?).

[2] Federal Tax Valuation, John A Bogdanski, Warren, Gorman & Lamont, pp. 4-36.

Certain court cases have rejected this argument as a reason for adding a control premium[3]. And, if this motive does indeed exist, would increased profitability not proportionally affect the value of all interests?

2. Investment Protection Enhancement

Again, fair market value assumes a hypothetical buyer from an entire universe of buyers and not an actual buyer. Investment protection enhancement differs somewhat from performance improvement opportunity in that the former acts as a hedge against unfavorable occurrences. The latter embraces an attitude of increasing the benefit stream. Note, however, the necessary operational moves to accomplish this task enhance non-controlling share value, as well.

3. Ability to Self-Deal

The counter agreement to the use of a control premium for self-dealing is the state corporation statutes in the U.S., whereby the control shareholders have a fiduciary responsibility to the non-control shareholders. As such, unfair transactions can be mediated by intervention of the courts, sometimes by having the minority shares redeemed at fair value.

4. Greater Information Access

Securities laws prevent trading on insider information. Additionally, many states prohibit controlling shareholders from trading on insider information. Lastly, state statutes protecting non-control shareholders can play a role in equalizing information access.

5. Psychological and Intangible Benefits

When assuming a hypothetical buyer, it is again difficult to place a quantifiable premium on the base value that would be generally applicable to the entire universe of buyers.

E. METHODOLOGIES FOR VALUING MINORITY INTERESTS

1. **Horizontal**—computed by comparison with other minority interest transactions
2. **Top Down**—control value less applicable discounts
3. **Bottom Up**—start with minority value and add premiums for control interest valuations

Most practitioners prefer horizontal and/or top down; however, all approaches are viable.

[3] Ahmanson Found. vs. United States, supra note 161, 674 F2d at 770 (rejecting management replacement rationale in a particular case on grounds that "companies were already very well managed"). Also, Continental Water Co. v. U.S., 49 AFTR2d 1070, 1078 (Ct. Cl. Tr. Div).

F. THE RANGE OF CONTROL

There are other levels of control/non-control positions in a privately-held enterprise; this chart is intended to provide some examples:

CONTROLLING
100 % Equity Ownership Position
Control Interest with Liquidating Control
51% Operating Control
Two equity holders, each with 50% interest
Minority with largest block of equity interest
Minority with "swing vote" attributes
Minority with "cumulative voting" rights
Pure minority interest – no control features
LACK OF CONTROL

G. SOURCES OF EMPIRICAL DATA ON CONTROL/MINORITY INTERESTS

1. *Mergerstat® Review* – published annually by Applied Financial Information LP (formerly Houlihan, Lokey, Howard & Zukin).

a) Extensive analysis of tender offers and completed transactions by industry
b) Published yearly with historical data included
c) Premium paid over market is based on the seller's closing market price five business days prior to the initial announcement of sale. Negative premiums are excluded
d) May understate the control premiums and implied minority interest discounts because the stock of the target's acquisition may begin to rise more than five days prior to the public announcement
e) Industry-wide average for 2002 – 59.7 percent
f) Industry-wide median for 2002 – 34.4 percent
g) Implied minority discount: 1 – [1/(1+Median premium paid)]

2. Houlihan, Lokey, Howard and Zukin, Inc. (HLHZ) Control Premium Study

a) Issued quarterly
b) Data from 1986
c) Study was undertaken to:

(1) Quantify the difference, if any, in the premiums paid by synergistic buyers and those paid by other types of buyers
(2) Understand the composition of transactions, by type of buyer, in the Control Premium Study

d) The study determined that synergistic buyers generally pay similar or lower premiums than non-synergistic and other types of buyers
e) Those performing the study stated that they found no evidence that an valuator needs to adjust the beta to result in a non-synergistic control premium
f) Attempts to select a price that is unaffected by pre-announcement speculation about the proposed transaction

3. SEC Studies

These can be found in "The Effects of Dual-Class Recapitalizations on the Wealth of Shareholders" Office of the Chief Economist - SEC, June 1987, pp. 1-34.

a) Studies compared the prices of two identical classes of publicly traded common securities in the same company except one had voting privileges and the other did not
b) Mean average discounts – five to eight percent
c) For small minority interests, the value of voting rights is limited because of their inability to influence the prerogatives of control

4. Partnership Profiles

a) For a valuation of an entity such as a family limited partnership owning marketable securities, Partnership Profiles publishes two reports on closed-end funds:

   (1) Stock Closed-End Fund report – covers 43 closed end equity stock funds
   (2) Fixed Income Closed-End Fund Report – covers 30 closed-end bond funds holding municipal, U.S. government, and corporate debt securities
   (3) Historical discount information is included on a monthly basis from 2001 to the present

b) For a valuation of an entity such as a family limited partnership owning real estate, Partnership Profiles publishes a database of over 300 publicly-held limited partnerships that own real estate and real estate mortgages and trade on the secondary market

5. Morningstar Principia

a) Provides a database on a monthly or quarterly subscription basis containing information on closed-end funds that own domestic and international stocks and government, corporate, and municipal bonds
b) Provides discounts used in the Price to Net Asset Value (P/NAV) method under the Market Approach in valuing non-controlling interests

H. QUANTIFICATION OF CONTROL PREMIUMS & MINORITY INTEREST DISCOUNTS

Primary base observations are extrapolated from the sale of controlling interests in freely traded public companies. Numerous sales of this type occur annually with most transaction prices including a premium over the market price at which the stock previously traded.

1. The "premiums" associated with these controlling interest purchases are compiled and published by several services
2. Most notable *is Mergerstat® Review*

I. CALCULATING THE PREMIUM

Control premiums are only applicable in valuations where you are starting with lack of control value and you are trying to arrive at control value. In many valuations, control adjustments are made to the benefit stream. In those cases, to add a control premium would be inappropriate.

The most common practice is to observe the premiums in the public securities markets. The primary source of base information market evidence is *Mergerstat® Review*. As described in the 2006 publication, the Mergerstat database, published by Applied Financial Information L.P.

> *"…includes formal transfers of ownership of at least 5% of a company's equity and where at least one of the parties is a U.S. entity. When a transaction involves less than 100% of an entity, the percentage bought is stated after the seller's name. When REM accompanies this percentage, the buyer already owns a portion of the selling entity and this transaction will lead to 100% ownership. Data is collected for publicly traded, privately owned and foreign companies."*

The primary issue encompassed in utilizing the Mergerstat data is the composition of the premium and the lack of clarity in the conclusions. Mergerstat generally develops the data by comparing prices at which publicly traded companies are acquired with pre-acquisition announcement prices of the same stock. *Mergerstat Review* notes that the calculations are based on the seller's closing market price five business days before the initial announcement.

An example of the basis for the *Mergerstat Review* calculations of observed control premiums is as follows:

Widget Company Computation of Control Premium

Date	*Price per Share*	Days before Transaction
Day 1 –Monday	$21.50	*6*
Day 2 – Tuesday	$21.25	*5*
Day 3 – Wednesday	$23.25	*4*
Day 4 – Thursday	$23.75	*3*
Day 5 – Friday	$24.00	*2*
Day 9 – Tuesday	$28.00	*Date of Announcement*

Observed Premium (28.00 – 21.25)/21.25 = 31.8%
(Announcement to sixth prior day)

Historical Premium Compilation

A historical analysis of the control premiums and the corresponding minority discounts calculated in this study are as follows:

Year of Buyout	Number of Transactions	Average Premium Paid over Market (%)	Median Premium Paid over Market (%)	Implied Minority Interest Discount (%)
1980	169	49.9	44.6	30.8
1981	166	48.0	41.9	29.5
1982	176	47.4	43.5	30.3
1983	168	37.7	34.0	25.4
1984	199	37.9	34.4	25.6
1985	331	37.1	27.7	21.7
1986	333	38.2	29.9	23.0
1987	237	38.3	30.8	23.5
1988	410	41.9	30.9	23.6
1989	303	41.0	29.0	22.5
1990	175	42.0	32.0	24.2
1991	137	35.1	29.4	22.7
1992	142	41.0	34.7	25.8
1993	173	38.7	33.0	24.8
1994	260	41.9	35.0	25.9
1995	324	44.7	29.2	22.6
1996	381	36.6	27.3	21.5
1997	487	35.7	27.5	21.6
1998	512	40.7	30.1	23.1
1999	723	43.3	34.6	25.7
2000	574	49.2	41.1	29.1
2001	439	57.2	40.5	28.8
2002	326	59.7	34.4	25.6

Source: Mergerstat® Review 2003. (Los Angeles: Applied Financial Information L.P.)

Computation of Implied Minority Discount from *Mergerstat Review* Data Formula:

$x = 1 – [1/ (1 + y)]$
x = implied minority discount
y = median premium paid

Application:

$x = 1 – [1/ (1 + .344)]$
$x = 1 - (1/1.344)$
$x = 1 - .7440$
$x = .256$

J. OBSERVATIONS AND ISSUES

Upon analysis of the *Mergerstat Review* data, it can be observed:

1. The annual median control premium observations conducted over this historical period range from 27.3 to 44.6 percent
2. Mean 35.1 to 59.7 percent
3. The dispersion of the premiums is broad with 87 of 326 transactions in 2002 having a premium under 20 percent to 42 of the base transactions having a premium over 100 percent

However, several issues must be addressed in regard to the data:

1. Negative premiums are excluded from the median and mean calculations, thereby inflating the control premium data.
2. Data for the computations is extrapolated from the reported financial information and not the adjusted financial information both parties might consider.
3. The observation methodology does not provide for quantification of buyer differences—specific transactions result from specific buyers with alternating motives. As such, transactions with synergistic buyers are interspersed with transactions with financial buyers.

The conclusion that the valuation analyst must draw from the above noted issues is that utilization of the scheduled *Mergerstat Review* median and/or mean premiums for control without adjustment are likely overstating control premiums in many valuation engagements.

Conversely, as many valuation professionals develop the implied minority ownership interest discount from the observed premiums, these discounts are also often overstated, underestimating the value of minority ownership interests.

K. QUANTIFY THE OVERSTATEMENT

Dealing with the overstatement is difficult at best, given the limitations related to information gathered for *Mergerstat Review*. In 1996, Z. Christopher Mercer attempted to emphasize the overstatement of the reported mean and median control premiums by arbitrarily modifying the data inputs into the *Mergerstat Review* calculations.

In his paper presented to the Joint CICBV/ASA conference in Toronto, Mercer recalculated the control premiums (and the implied minority discount) under three alternatives:[4]

1. First, he excluded, as *Mergerstat Review* does, transactions with control premiums less than zero; but he also excluded those with control premiums over 150 percent.
2. Next, he included negative control premiums (less than zero percent) and again excluded those transactions with control premiums over 150 percent.
3. Lastly, he included negative control premiums and excluded those transactions with control premiums over 100 percent.

[4] Mercer, Z. Christopher. "A Brief Review of Control Premiums and Minority Interest Discounts." The Journal of Business Valuation (Proceedings of the 12th Biennial Business Valuation Conference of The Canadian Institute of Chartered Business Valuators). Toronto: The Canadian Institute of Chartered Business Valuators, 1997, pp. 365-87.

An example of just how influential the modifications are on the listed premiums can be found in the following chart (excerpted from Mercer's 1996 paper):

	***Mergerstat Review* Historical Control Premiums**		**Implied Minority Interest Discounts**	
	Averages	**Median**	**Averages**	**Median**
As reported from 1995*	44.7%	29.2%	31.0%	23.0%
Exclude < 0% and > 150%	35.3%	28.9%	26.0%	22.0%
Exclude > 150%; Include < 0%	28.3%	24.9%	22.0%	20.0%
Exclude > 100%; Include < 0%	24.2%	24.0%	19.0%	19.0%

* *Mergerstat Review* excluded two premiums exceeding 100 percent in the reported averages. Also, the reported figures exclude 37 transactions with calculated premiums of less than or equal to zero,

Simply including the negative premiums for the fourth quarter 2000 transactions reflect a decrease in the average premium from 44.7 to 31.0 percent. Therefore, it is critical that the business valuator consider the implications of the data modifications in general and the exclusion of negative control premiums in particular.

In the January 1999 issue of Shannon Pratt's "Business Valuation Update," Dr. Pratt observed that for the quarter ended September 30, 1998, 20 of 58 reported domestic transactions reported in the HLHZ Control Premium Study sold at discounts from their prior public trading prices. For the fourth quarter, 2000, the numbers are not quite as sharp with 30 of 147 domestic transactions reporting a discount. This equates to 20 percent of all transactions reported selling at a discount instead of a premium.

Obviously a valuator must be careful, but how does one best develop the appropriate control premium? The HLHZ Control Premium Study, which is published quarterly, offers numerous data points with which specific control premium conclusions can be developed.

Each situation should be considered based on its specific facts and circumstances. After an intimate knowledge of the company under valuation is developed, consider the appropriateness of each of the reported transactions considered for comparison purposes. The valuator must then adjust the data to exclude unwarranted/ non-comparable transactions due to the inclusion of acquisition premiums, synergistic premiums and/or consolidation premiums.

III. MINORITY DISCOUNTS FOR FAMILY TRANSFERS

For years, the Internal Revenue Service had tried to eliminate minority interest discounts for transfers of stock in family-owned corporations. Without judicial intervention, such discounts would now be completely disallowed. Despite the directive from the courts to allow discounts in such cases, until 1993 the IRS attempted to disallow them. In Rev. Rul. 93-12, the IRS formally recognized that gifts of closely held stock among family members should be valued separately. However, in subsequent TAMs, the IRS has tried to limit this opportunity by imposing a swing vote premium, collapsing transfers made in contemplation of death and exploiting the discounts in marital deduction scenarios.

In *Estate of Simplot v. Commissioner,* 112 T.C. 130 (1999) rev'g, 249 F.3d 1191 (9th Cir. 2001), ("Simplot" hereafter) the Tax Court held that it was foreseeable that one day the voting characteristic associated with the decedent's Class A shares could have "swing vote" potential.

- TAM 9436005
- TAM 9449001

Given the current IRS position, especially after *Simplot*, swing vote attributes must be taken into account when valuing minority stock interests. Therefore, it is important for taxpayers and practitioners to understand how the IRS defines a swing vote attribute. It is also important to understand that swing vote potential is not tantamount to control. Thus, in many cases, the discount between a control and minority value would be reduced by this potential, but it would not be eliminated.

In May of 2001, the Ninth Circuit reversed the Tax Court's decision and held for the taxpayer, ruling that the minority interest in the voting shares was worth the same price as the non-voting shares. The Ninth Circuit held that the Tax Court committed three errors:

- The Tax Court departed from the hypothetical willing buyer/seller under the fair market value standard. The Court also attempted to construct potential purchasers.
- The calculation of the voting stock premium for the shares held by the Estate. The value attributed to the control of Simplot could not be proportionally attributed to a fraction of the total shares.
- The Tax Court did not provide sufficient evidence to support the application of a control premium. The Ninth Circuit noted that even a controlling block of stock is only to be valued at a premium for estate tax purposes if the Commissioner can prove that the buyer will enjoy an increased economic advantage from the control position. The Ninth Circuit's opinion stated that Tax Court's factors of control were speculative and the 18 shares of Class A voting stock did not offer a clear increased economic advantage.

The Tax Court failed to consider the economic realities of an investment by a "hypothetical willing buyer" in the Class A voting shares held by the Estate. The speculation on the part of the Tax Court was completely out of the realm of the fair market value standard.

Revenue Ruling 93-12 is, perhaps, the most significant IRS pronouncement in many years. The ruling reverses the IRS position of prohibiting discounts due to family attribution. The ruling is the primary impetus for the prolific growth of family limited partnerships as an estate and gift tax-planning vehicle.

Some of the benefits garnered under Revenue Ruling 93-12 were eroded with the release of the "swing vote" letter rulings. However, even in view of the swing vote rulings, understanding of Revenue Ruling 93-12 is critical to the proper consideration of lack of control discounts.

Certain critical judicial interpretations of the concepts included in the rulings are addressed in *Simplot*. This case is important because it deals with numerous aspects relating to control in a family ownership situation.

A. OTHER JUDICIAL DEVELOPMENTS AFFECTING CONTROL PREMIUMS AND MINORITY DISCOUNTS

Discounts for lack of control play an important role in many business valuations. Not surprisingly, in the estate planning arena, these discounts can form the very foundation for a taxpayer's estate plan if he or she is holding controlling interests in privately held businesses. With Revenue Ruling 93-12 firmly in place, family attribution is no longer a source of Internal Revenue Service scrutiny in planning the transfer of non-control interests in family-owned businesses. Although "swing vote characteristics" still envelop overall discount consideration, most valuators and estate planners agree that minority ownership interest should be valued significantly lower than ownership interest conveying control.

Nowhere is more information available for public observation than from the Internal Revenue Service and subsequent judicial follow-up. As the party with the most to lose (via lower gift and estate tax collections), the IRS, through its judicial challenges, continues to be a prime source of valuation theory and interpretation.

The following cases are by no means all inclusive of recent court cases involving minority and/or lack of control issues. The list is only intended to be a sample, representative of the decisions regarding the subject:

1. *Estate of Joseph Cidulka*, T.C. Memo 1996-149
2. *Estate of Elizabeth B. Murphy v. Commissioner*, T.C. Memo 1990-472
3. *Bonner v. United States*, KTC 1996-278 (5th Cir. 1996)
4. *Estate of Mellinger v. Commissioner*, 112 T.C. 26 (January 26, 1999)
5. *Estate of Weinberg v. Commissioner*, T.C. Memo 2000-51(February 2000)
6. *Gow v. Commissioner*, T.C. Memo 2000-93, affd., 19 Fed. Appx. 90 (4th Cir. 2001)
7. *Ferraro v. Ferraro*, 2000 Va. App. LEXIS 164 (March 2000)
8. *Maggos v. Commissioner*, T.C. Memo 2000-129 (April 2000)
9. *HMO-W v. SSM Health Care System*, 228 Wis. 2d 815, 598 N.W.2d 577 (WI Ct. App. 1999) affd., 2000 WI 46, 234 Wis.2d 707, 611 N.W. 2d 250 (June 2000)
10. *Estate of True v. Commissioner*, T.C. Memo 2001-167, affd., F3d (10th Cir. 12/02/2004)
11. *Estate of Heck v. Commissioner*, T.C. Memo 2002-34, U.S. Tax Ct.
12. *Estate of Mitchell v. Commissioner*, T.C. Memo 2002-98
13. *Estate of Godley v. Commissioner*, 286 F.3d 210, 214 (4th Cir. 2002)
14. *Estate of Bailey v. Commissioner*, T.C. Memo 2002-152
15. *Estate of Josephine Thompson*, T.C. Memo 2004-174
16. *Estate of Kelley v. Commissioner*, T.C. Memo 2005-235

Court cases, while not authoritative beyond each specific case addressed, can provide the valuation analyst with significant guidance in jurisdictional matters related to the use of control premiums and minority discounts. Moreover, the cases have, over time, provided a window to how these value adjustments can be utilized and what planning implications are necessary to ensure a defendable result.

IV. DISCOUNT FOR LACK OF MARKETABILITY (DLOM)

Protection from many risks attendant to holding a minority interest in a business can be controlled in the public stock market by selling the equity holdings, should the holder decide that management actions are elevating his or her risk beyond an acceptable level. This same ability to liquidate (convert into cash) an interest in a privately held company rarely exists. Moreover, due to size and other specific company nuances, as well as a lack of a perfect market mechanism for disposition, risk attendant to a lack of liquidity or of marketability can often be an issue for even a control interest in a privately held enterprise.

Clearly, the ability to convert an investment from an illiquid asset to cash is an ownership characteristic of considerable value. Often, when this trait is missing, an investor is subject to substantially higher risk, and valuation of the attendant equity interest must be adjusted accordingly.

Marketability, as a business valuation concept, has been defined a number of ways in business valuation treatises. Dr. Shannon Pratt et al define marketability as:

> *"The ability to convert the business ownership interest (at whatever ownership level) to cash quickly, with minimum transaction and administrative costs in so doing and with a high degree of certainty of realizing the expected amount of net proceeds."*[5]

Another definition can be found in the Encyclopedia of Banking and Finance[6] where marketability is found to connote the existence of a buying interest and a selling interest and is indicated by the average daily volume of current transactions and the size of the bid-ask spread. The smaller the size of the spread (e.g., the smaller the mark-up demanded by the market maker) the more active is the market for the underlying security. Alternatively, the more infrequently an equity interest is traded, the larger the bid-ask spread.

While privately held business interests never have a "market maker," except, perhaps, the ultimate business broker, the general concept accorded the bid-ask theory is equally applicable to these interests. Investors are risk averse and will prefer investment holdings that can easily be converted into cash. Investment holdings lacking this attribute will almost always trade for less. The difference in trading value is that specific equity interest's discount for lack of marketability. Quantification of the discount for lack of marketability is an arduous task, even for the most seasoned of valuation professionals. A great amount of research has been developed over the last four decades in an attempt to quantify the phenomenon of illiquidity as it applies to a specific investment. However, valuators continue to struggle with the reconciliation of the available research to the attendant equity interest under valuation. A logical path from the research to the ultimate discount selected is imperative to attain the proper conclusion of value.

A. INTERNAL REVENUE SERVICE POSITION

The Internal Revenue Service addressed the issue of discounts for lack of marketability in Revenue Ruling 77-287, stating:

> *"Securities traded on a public market generally are worth more to investors than those that are not traded on a public market."*

The Internal Revenue Service Valuation Training for Appeals Officers, 1998 page 4-9, lists two primary court cases as the basis for discounts for lack of marketability.

[5] *Valuing a Business,* Fourth Edition. Shannon P. Pratt, Robert F. Reilly and Robert P. Schweihs. P. 26
[6] *Encyclopedia of Banking & Finance,* Tenth Edition, Charles J. Woelfel, p. 729.

In *Central Trust Co. v. United States*, 305 F 2d 292 (Ct. Cl., 1962) the Court of Claims stated:

> *"It seems clear, however, that an unlisted closely held stock of a corporation, in which trading is infrequent and which therefore lacks marketability, is less attractive than a similar stock which is listed on an exchange and has ready access to the investing public."*

The courts have followed this principle. This discount is meant to act as a means of equalizing an investment in closely held stock with an investment in publicly traded stock. All other attributes being similar, the only resulting issue from not being traded on a public market is marketability or liquidity.

In *Estate of Andrews*, 79 T.C. 938, page 953, the Court stated:

> *"Even controlling shares in a nonpublic corporation suffer from lack of marketability because of the absence of a ready private placement market and the fact that flotation costs would have to be incurred if the corporation were to publicly offer its stock."*

B. CONTROL VS. MINORITY INTEREST

One of the more controversial issues in the area of discounts for lack of marketability is whether any discount is applied to a control interest in a business enterprise. The issue has frequently been addressed by the United States Tax Court, which affirms the use of such discounts when valuing controlling interests.

Theoretical support for the use of a discount for lack of marketability in valuing controlling interests arises from the risks associated with a potential sale of the interest. Dr. Pratt et al categorize these risks into five categories:[7]

1. Uncertain time horizon to complete the offering or sale
2. Cost to prepare for and execute the offering or sale
3. Risk as to eventual sale price
4. Non-cash and deferred transaction proceeds
5. Inability to hypothecate (or inability to borrow against the estimated value of the stock)

The key element to keep in mind is that very diverse considerations go into the determination of a discount for lack of marketability related to a minority interest versus one related to a controlling interest. While many considerations may overlap, rarely will the discount for a controlling interest be as high as one for a minority interest.

[7] Valuing a Business, Fourth Edition, Shannon P. Pratt, Robert F. Reilly and Robert P. Schweihs, p. 393.

C. DISCOUNT FOR LACK OF MARKETABILITY CHECKLIST

1. Factors That May Increase the Discount

a) Restrictions on transfers
b) Little or no dividends or partnership payout
c) Little or no prospect of either public offering or sale of company; especially if so stated in corporate minutes or other documentation
d) Limited access to financial information

2. Factors That May Decrease the Discount

a) "Put" option
b) Limited market available that may be interested in purchasing shares (e.g., ESOP)
c) Imminent public offering or sale of company
d) High dividend or partnership payouts

3. Factors That May Increase or Decrease the Discount

a) Size of block—depending on size and circumstances
b) Buy-sell agreement—depending on provisions

A significant number of studies have been undertaken in an attempt to understand the impact of marketability as a characteristic of equity ownership. The studies themselves are varied and complex. However, they can be generally classified into four categories:

1. Comparison of private placements of restricted shares of public company stocks with publicly traded unrestricted shares of the same company. The restrictions imposed on the private placement shares are generally imposed by Securities and Exchange Commission rules. These are commonly referred to as Restricted Stock Studies.
2. Comparisons of pre-initial public offering stock transaction values with post-initial public offering transactions and stock value of the same company. These are commonly referred to as pre-IPO Studies.
3. Comparisons of public companies price/earnings ratios with price earnings multiples on acquisitions of privately held companies.
4. Measurement of flotation costs as a means of measuring the effects of marketability on control interest value. This method is not commonly used due to numerous practical limitations.

D. A CRITICAL LOOK AT EMPIRICAL STUDIES TO SUPPORT A DISCOUNT FOR LACK OF MARKETABILITY

Practice Pointer

In recent years, the U.S. Tax Court has been critical of inadequate justification provided by valuation analysts for both the DLOM and DLC. For example, in *Estate of Josephine T. Thompson*, T.C. Memo 2004-174 (July 26, 2004) the U.S. Tax Court criticized both experts; the estate experts were criticized since they "based their minority and lack of marketability discounts on general studies and not on the facts of the case. The experts for the estate selected discount rates that were extremely and highly favorable for the estate, without any credible substantive discussion of how the facts of this case support such particular discount"; respondent expert did not apply a minority discount, no explanation was provided. As a result of these deficiencies, the U.S. Tax Court devised its own discount minority and marketability discounts.

It is critically important that valuation analyst focus on the reasons underlying the discount(s) and that the studies cited hereunder not merely be regurgitated or cited.

Lack of marketability is defined as the absence of a ready or existing market for the sale or purchase of the securities being valued. Tax cases are not determinative of discounts in non-tax related valuations, but the valuator must be aware of these cases when performing a valuation for a tax-related purpose. The courts have repeatedly indicated that prior decisions are an important element for the valuator to consider when determining the level of discount and the method of determining those discounts. The courts have tended to be conservative in the level of lack of marketability discounts they have allowed.

The studies discussed in this chapter give some support to the level of discount to apply in lack of marketability situations. The key to the successful application of discounts in a valuation situation (whether tax related or not) is to properly support and explain the basis for the discount. Traditionally, this is an area where valuators have failed the most.

It is not uncommon for business valuators to devote 30-50 pages of text determining a pre-discounted value of a privately held business. It is also not uncommon for a valuator to devote a few paragraphs discussing pre-IPO studies and restricted stock studies and reducing an entity's value by 25-40 percent with little explanation or support. The courts have become much more sophisticated and are less likely to blindly accept such a discount without proper explanation or support.

The studies noted throughout the remainder of this chapter are the better-known studies that are being used by valuation professionals. Each restricted stock or pre-IPO study examines transactions in the shares of public companies to gauge the impact of the absence of marketability on shares of closely held businesses. A table summarizing the studies is included at the end of each section.

1. Restricted Stock Studies

Restricted stock (also known as *letter stock*) is stock of a publicly traded company that is restricted from trading for a specific period of time. It is identical to the publicly traded stock except that it is not freely traded. Although restricted stock cannot be sold in the public markets, it can be sold in private transactions. These transactions usually must be reported to the Securities and Exchange Commission and therefore become public record, allowing a comparison be done of the price of the restricted stock to the publicly traded stock.

a) SEC Institutional Investor Study (1971)

(1) Restricted stock study
(2) Compared the difference in value of restricted stock (letter stock) as compared to identical unrestricted stock sold on the open market
(3) Resulted from responses by over 300 institutional investors to an SEC generated questionnaire covering the period 1966-1969
(4) Found that restricted securities generally involve smaller issuing companies than the companies whose marketable securities are held in institutional portfolios
(5) Discounts were smallest for NYSE-listed securities and increased, in order for AMEX-listed stocks, OTC reporting companies and OTC non-reporting companies
(6) 93.5 percent of all transactions with discounts of 40-50 percent involved OTC stocks
(7) The overall mean discount was 25.8 percent – the average discounts rose over the period January 1, 1966 through June 30, 1969; and the average discounts were 27.9 percent in the first half of 1969
(8) (For non-reporting OTC companies, that are more likely to resemble most closely held companies in terms of size, the average discount was 32.6 percent
(9) Unfortunately, the study is more than 30 years old

b) Gelman Study (1972)

(1) Restricted stock study
(2) Analyzed data to determine the discounts actually received by professional investors who purchase shares in publicly traded companies with restrictions as to their marketability
(3) Analyzed data from four large, closed-end investment companies that were formed in 1968 – the companies specialized in restricted securities investments
(4) Reviewed 89 transactions between 1968 and 1970
(5) Both the average and median discounts were 33 percent
(6) Almost 60 percent of the purchases were at discounts of 30 percent or higher

c) Moroney Study (1973)

(1) Restricted stock study
(2) Analyzed the prices paid for restricted securities by 10 registered investment companies—the study reflected 146 purchases
(3) Average discount was 35.6 percent; median discount was 33 percent
(4) Contrasted the evidence of the actual cash deals with the lower average discounts for lack of marketability adjudicated in most prior court decisions on gift and estate tax cases
(5) Found that the courts allowed discounts for lack of marketability ranging between 10-30 percent
(6) Concluded that the courts were overvaluing interests in closely held companies

d) Maher Study (1976)

(1) Restricted stock study
(2) Compared prices paid for restricted stocks with the market prices of their unrestricted counterparts
(3) Discounts were derived by comparing the cost of the restricted securities to the market value of unrestricted securities of the same class in the same companies on the acquisition date
(4) Mean discount of all transactions amounted to 35.43 percent
(5) Maher then eliminated the top 10 percent and bottom 10 percent to remove especially high-risk or low-risk purchase—result was remarkably similar, yielding a mean discount of 34.73 percent
(6) Concluded that most valuators underestimate the discount for lack of marketability
(7) Also concluded that the mean discount would not contain elements of a discount for a minority interest because it is being measured against other minority interests

e) Trout Study (1977)

(1) Restricted stock study
(2) Constructed a financial model to estimate the discount that should be accorded investment letter stock
(3) Analyzed data on purchases of investment letter stock by six mutual funds during the period from 1968 to 1972
(4) Final database consisted of 60 purchases in the five-year period
(5) Model included five variables that Trout felt may influence the size of the discount:

  (a) Exchange listing
  (b) Number of shares outstanding
  (c) The number of shares purchased as a percent of the shares outstanding
  (d) Purchases of less than one percent
  (e) Value of purchase

(6) Trout then applied multiple regression analysis to the data and determined a discount of 33.5 percent
(7) However, Trout states that the statistical correlations indicate "a moderate ability of this model to account for variations in the observed discounts"
(8) Trout concludes that this is not surprising, given the unique characteristics of various letter stock transactions and the lack of an auction market for restricted securities

f) Willamette Management Assoc. Study (1981-1984)

(1) Restricted stock study
(2) Analyzed 33 restricted stock transactions between January 1981 and May 1984
(3) Median discount was 31.2 percent
(4) Study reported in Pratt's Valuing a Business

g) Stryker/Pittock Study (1983)

(1) Restricted stock study
(2) Analyzed private placements of common stock to test the current applicability of the SEC study
(3) Studied 28 private placements of restricted common stock from October 1978 to June 1982
(4) Discounts ranged from 7-91 percent with a median of 45 percent

h) Silber Study (1991)

(1) Restricted stock study
(2) Analyzed purchases of restricted securities by institutional investors as reported by Securities Data Corporation for the period of 1981 through 1988
(3) During this period, there were 310 private placements of publicly traded common stock, many of which had warrants or other special provisions
(4) Elimination of special situation private placements left 69 transactions for analysis in this study
(5) By applying least-squares estimation to the data, the study found characteristics of companies (34) with discounts greater than 35 percent and characteristics of companies (35) with discounts less than 35 percent
(6) Median discount was 35 percent
(7) Found that firms with higher revenues, earnings and market capitalizations were associated with lower discounts; the reverse is also true
(8) Additionally, discounts are larger when a block of restricted stock is large relative to total shares outstanding
(9) Likewise, volume (in dollars) is inversely related to size of discount

i) Hall & Polacek Study (1994)

(1) Restricted stock study
(2) Analyzed Tax Court decisions from 1981-1993 in an attempt to read the changing pulse of the Tax Court with respect to discounts for minority interest and lack of marketability
(3) Analyzed the results of a study performed by FMV Opinions, Inc.

(a) Examined over 100 restricted stock transactions from 1979 through April 1982
(b) Regarded as an update to the Institutional Investor Study Report of the SEC
(c) Corroborated the conclusions of the SEC Study–the size of the discount is often a function of the size of the subject company's revenues, earnings and the exchange on which the restricted stock was traded
(d) Mean discount of 23 percent was very similar to overall mean discounts of 25.8 percent from the SEC Study
(e) Highlighted three additional variables as influencing the size of discount for lack of marketability:

i) Market value or capitalization of the issuing company
ii) Dollar value of the block of stock
iii) Percentage size of the block of stock being sold

(f) Also analyzed the temperament of the Tax Court with respect to the use of empirical studies:

i) Referenced the Moore Study ("Valuation Revisited," 126 Trusts & Estates 40, Feb, 1987) which observed that between 1985 and 1992, the discounts for lack of marketability ranged between 10-36 percent, with a mean discount of 21 percent—a decline from the levels of prior years

ii) A review of these cases by the authors suggests that:

> *"Taxpayers who failed to present any empirical data or reasoning as to why a certain discount should be granted were generally awarded low discounts. Similarly, where the Service's expert presented convincing reasons why a low discount was appropriate, the lack of rebuttal evidence by the taxpayer caused the court to accept the Service's argument in its entirety."… High discounts will be allowed in appropriate cases but will be disallowed absent convincing proof by the taxpayer."*

j) Johnson Study (1999)

The Bruce Johnson study included 72 restricted stock studies from 1991 to 1995 with an average discount of 20.2%. Johnson's study concluded that companies with the highest level of earnings had an average discount of 6.3%. Additionally, those with a transaction size of $25 million or greater had an average discount of 10.8%. The range of discount in this study was -10% to 60% with a standard deviation of 16%. The average discount for lack of marketability was less than the earlier studies due primarily to the increase in the number of investors in restricted stocks in the past five years. This study provided the valuation industry with an insight to the correlation of the investment characteristics of the companies studied to the level of discount. The key factors identified were size, profitability and transaction amount. The study indicted that the discount for lack of marketability increased as the size of the company decreased.

Total Sales	Avg. Disc.
$0 to $10M	23.5%
$10M to $50M	19.4%
$50M to $200M	17.7%
Over $200M	13.0%

The study analyzed the relationship of profitability of the companies studied to the level of discount. The study found that the average discount increases as the level of profit decreases.

Total Net Income	Avg. Disc.
Negative	22.5%
$0M to $1M	26.0%
$1M to $10M	18.1%
Over $10M	6.3%

The size of the transaction was analyzed to determine the correlation between the size of the transaction and the discount. The study concluded that larger transactions had lower discounts than smaller transactions.

Transaction Size	Avg. Disc.
$0 to $5M	26.7%
$5M to $10M	20.9%
$10M to $25M	17.0%
Over $25M	10.8%

The last analysis in this study compared the profitability of the companies in the study to the discount. Companies with higher net income margins had lower discounts.

Net Income Margin	Avg. Disc.
Negative	22.5%
0% to 5%	23.7%
5% to 10%	15.2%
Over 10%	11.6%

Consistent with other findings of the study, the risk of the investment has a relationship with the level of discount. The riskier the investment, the greater discount for lack of marketability.

k) Columbia Financial Advisors, Inc. Studies (2000)

(1) Addressed change in restricted stock discounts resulting from two key events that increased the liquidity of these securities over time:

  (a) In 1990, the SEC adopted Rule 144A, which relaxed the SEC filing restrictions on private transactions
  (b) Then in 1997, the holding period requirements under Rule 144 were amended to permit the resale of limited amounts of restricted stock after one year (additionally, the amendment permits unlimited re-sales of restricted stock held by non-affiliates of the issuer after a holding period of two years, rather than three years)

(2) Encompassed the period: January 1, 1996 to April 30, 1997
(3) Search of a private placement database provided 123 private placements of common stock during the period covered by the study
(4) Transactions with no offer price or public market price available and transactions with non-U.S. issuers that were not traded in the U.S. were eliminated; as a result, 23 transactions remained
(5) The average discount was approximately 21 percent—discounts ranged from 0.8 to 67.5 percent with a median of 14 percent
(6) Using the same methodology, another study was conducted:

  (a) Examined the period: January 1, 1997 to December 31, 1998
  (b) Identified impact of the increased liquidity of restricted securities as a result of the reduction of holding period requirements

(c) Out of 270 private placements of common stock, 226 were eliminated, as they did not involve public companies
(d) An additional 29 companies were eliminated because no offer processes were reported and/or the placements were not restricted or unregistered
(e) Of the remaining 15 transactions the average discount was 13 percent—discounts ranged from 0 to 30 percent with a median of 9 percent

l) Management Planning Study (2000)

(1) Performed by Robert Oliver and Roy Meyers
(2) Covers the 17-year period: January 1, 1980 to December 31, 1996
(3) Used 53 transactions without registration rights and 27 transactions with registration rights
(4) The following were the observations regarding the 53 transactions in stocks without registration rights:

(a) The average discount was approximately 27 percent
(b) The median discount was approximately 25 percent
(c) Only one of the transactions occurred at a price equal to the market price, while the remaining transactions reflected discounts ranging from 3 to 58 percent

(5) The following were the observations regarding the 27 stocks with registration rights:

(a) The average discount was 12.8 percent
(b) The median discount was 9.1 percent

(6) The results indicate the difference between risk (which is reflected in the resulting discount) and the anticipated holding period
(7) Discounts vary based on the liquidity in the near future as opposed to an uncertain holding period when liquidity may be available
(8) Analyzes the relationships of other specific factors and the size of the discount

m) FMV Opinions (2001)

(1) Provides a method for determining the appropriate discount for restricted liquid securities and a method for distinguishing among the discounts appropriate for privately held companies as opposed to restricted stock of public entities
(2) Includes 243 transactions of restricted stock:

(a) 110 transactions in manufacturing
(b) 55 transactions in business services
(c) 25 transactions in finance, insurance and real estate
(d) 22 transactions in transportation, communications, electric, gas and sanitary services

(3) Overall average discount is 22.1 percent
(4) Median discount is 20.1 percent
(5) Standard deviation of the sample is 16 percent

(6) Median discount for securities traded on an exchange is 15.3 percent, while the median discount for over-the-counter securities is 22.4 percent
(7) Concluded that since privately held companies have less of a market for their stock, and many smaller, less attractive public companies have little prospect of establishing a market for their stock, the discounts for restricted stock with longer-than-average holding periods are particularly applicable to privately held stock
(8) This study is available on Shannon Pratt's BV Market Data site at www.bvmarketdata.com

n) The Hertzel/Smith Study (1993)

(1) "Market Discounts and Shareholder Gains for Placing Private Equity" by Michael Hertzel and Richard Smith was published in June 1993 in The Journal of Finance
(2) Covered 106 private placement announcements in the period: January 1, 1980 to May 31, 1987
(3) Mean and median discounts of 20.14 and 13.25 percent, respectively
(4) Additional discount of 13.5 percent on placement of restricted shares (18 of the 106 announcements)
(5) Suggests lower discounts for companies with larger market values and vice versa
(6) Suggest portions of the discount represent issues other than illiquidity that include:

(a) Costs incurred by private investors to gain sufficient amounts of information to determine a company's value
(b) Costs of monitoring services and other professionals
(c) Changes in the ownership structure
(d) Study noted reasons for increased discount:

i) The lower the opportunity for resale
ii) As the size of the placement decreased
iii) As the market value of a company's equity decreased
iv) Uncertainty/difficulty in determining value of a company
v) Where intangible assets are a significant portion of a company's value

Summary Results of Restricted Stock Studies

Study	Transactions Observed	Median	Mean	Std. Dev.	Range Low	Range High
SEC Inst. Investors	398	24%	26%	N/A	(15%)	80%
Gelman	89	33%	33%	N/A	<15%	>40%
Moroney	146	34%	35%	18%	(30%)	90%
Maher	34	33%	35%	18%	3%	76%
Trout	60	N/A	34%	N/A	N/A	N/A
Williamette Mgt.	33	31%	N/A	N/A	N/A	N/A
Stryker/Pittock	28	45%	N/A	N/A	7%	91%
Silber	69	N/A	34%	24%	(13%)	84%
Hall & Polacek	100+	N/A	23%	N/A	N/A	N/A
Johnson	72	N/A	20%	15%	(10%)	60%
CFIA (1)	23	14%	21%	N/A	0.8%	68%
CFIA (2)	15	9%	13%	N/A	0%	30%
Mgt. Planning (1)	53	25%	27%	N/A	3%	58%
Mgt. Planning (2)	27	9%	12%	N/A	N/A	N/A
FMV Opinions	243	20%	22%	16%	N/A	N/A

2. Pre-IPO Studies

Pre-Initial Public Offering (or Pre-IPO or simply IPO) studies analyze the stock prices of companies before and after they become public companies. The difference between these prices has been attributed to the stock's marketability.

a) Robert W. Baird & Co. Studies (The Emory Studies)

(1) Pre-IPO studies
(2) Conducted eight studies covering various time periods from 1980 through 1997
(3) Analyzed 2,241 offerings to determine the relationship between the price at which the stock was initially offered to the public and the price at which the latest private transaction occurred up to five months before the IPO
(4) 310 qualifying transactions were ultimately identified and analyzed
(5) 67 sale transactions
(6) 239 option transactions
(7) Mean discount was 44 percent; median was 43 percent

Results of the study are as follows:

Time Period	No. of IPOs	Discount to IPO Mean	Median	Observations High	Low	StdDev
1980-1981	13	60%	66%	N/A	N/A	N/A
1985-1986	21	43%	43%	83%	3%	21%
1987-1989	27	45%	45%	82%	4%	21%
1989-1990	23	45%	40%	94%	6%	22%
1990-1992	35	42%	40%	94%	(6%)	22%
1992-1993	54	45%	44%	90%	(4%)	21%
1994-1995	46	45%	45%	76%	6%	18%
1995-1997	91	43%	42%	N/A	N/A	N/A
All Years	310	44%	43%			

Time Period	No. of Comp.	No. of Trans.	Standard Mean	Trimmed Mean	Median	Std.Dev.
1975-1978	17	31	34.0%	43.4%	52.5%	58.6%
1979	9	17	55.6%	56.8%	62.7%	30.2%
1980-1982	58	113	48.0%	51.9%	56.5%	29.8%
1983	85	214	50.1%	55.2%	60.7%	34.7%
1984	20	33	43.2%	52.9%	73.1%	63.9%
1985	18	25	41.3%	47.3%	42.6%	43.5%
1986	47	74	38.5%	44.7%	47.4%	44.2%
1987	25	40	36.9%	44.9%	43.8%	49.9%
1988	13	19	41.5%	42.5%	51.8%	29.5%
1989	9	19	47.3%	46.9%	50.3%	18.6%
1990	17	23	30.5%	33.0%	48.5%	42.7%
1991	27	34	24.2%	28.9%	31.8%	37.7%
1992	36	75	41.9%	47.0%	51.7%	42.6%
1993	51	110	46.9%	49.9%	53.3%	33.9%
1994	31	48	31.9%	38.4%	42.0%	49.6%
1995	42	66	32.2%	47.4%	58.7%	76.4%
1996	17	22	31.5%	34.5%	44.3%	45.4%
1997	34	44	28.4%	30.5%	35.2%	46.7%
Overall Averages			**39.1%**	**44.2%**	**50.4%**	**43.2%**

b) Willamette Management Associates Studies

(1) Pre-IPO studies
(2) Conducted 12 studies examining the prices of private stock transactions relative to those of subsequent price offerings of stock of the same companies
(3) Years covered were 1975 to 1993
(4) Average discounts varied from period to period, but in all cases were higher than the average discounts shown in the studies for restricted stocks of companies that already had an established public trading market

c) **Emory (Dot-Com) Studies**

(1) Outgrowth of the eight pre-IPO discount studies covering the time period 1980 through 1987 published by John D. Emory, Sr.
(2) Analyzed discounts arising from sale transactions in the 92 IPOs of companies that had ".com" in their names
(3) Covered the time period: May 1997 through March 2000
(4) Prices of stock transactions were compared five months before IPO and five months after IPO
(5) Included 53 transactions:

(a) 42 convertible preferred stock transactions
(b) 11 common stock transactions

(6) Mean discount prior to IPO was 54 percent; median discount also 54 percent:

(a) 42 convertible preferred stock transactions: mean = 54 percent; median = 59 percent
(b) 11 common stock transactions: mean = 54 percent; median = 53 percent

d) **Emory Business Valuation, LLC**

(1) Tenth study prepared by Emory in an ongoing analysis of pre-IPO discounts
(2) Covered 44-month period from May 1997 through December 2000
(3) Reviewed 1,847 prospectuses to find 222 sale transactions
(4) This population was narrowed to 36 qualifying transactions that met the established criteria
(5) Resulted in a mean discount of 48 percent and a median discount of 44 percent
(6) Study expanded using less restrictive filters to qualify transactions:

(a) Included 283 transactions
(b) Resulted in mean discount of 50 percent and median discount of 52 percent

e) **Hitchner Study No. 1**

James R. Hitchner's studies took the Emory study data a step further. The Hitchner study analyzes the discounts at which stock and options traded by months remaining to the date of the IPO.

Results of the study are listed below:

Transactions from January 1980 through June 1995						
		Stock			Options	
	Transactions	Mean	Median	Transactions	Mean	Median
Fifth month	47	54%	50%	32	55%	51%
Five months prior	219	45%	43%	166	44%	43%
Fourth month	43	51%	51%	31	52%	51%
Four months prior	172	43%	42%	134	42%	41%
Third month	56	43%	42%	45	41%	40%
Three months prior	129	40%	38%	103	39%	37%

Transactions from January 1994 through June 1995						
		Stock			Options	
	Transactions	Mean	Median	Transactions	Mean	Median
Fifth month	10	50%	46%	8	53%	49%
Five months prior	46	45%	45%	33	44%	43%
Fourth month	17	48%	50%	12	47%	48%
Four months prior	36	43%	45%	25	42%	38%
Third month	11	44%	43%	9	43%	43%
Three months prior	19	39%	38%	13	37%	33%

f) Hitchner Study No. 2

In Hitchner's second study, the breakdown of information is the same as the first study; but, the subject of the analysis changed.

The study was based on 23 transactions of 14 consulting industry companies that filed prospectuses between February 1995 and June 1996 and became public companies.

Results of the study are listed below:

Stock Prices for Companies Analyzed		
	Mean	Median
Fifth month	49%	53%
Five months prior	44%	36%
Fourth month	56%	57%
Four months prior	41%	36%
Third month	31%	31%
Three months prior	31%	35%

g) Hitchner Studies Conclusions

(1) The results of the analyses suggest that the longer the period until a company's IPO, the greater the discount applicable to its stock price.
(2) The theory behind the higher discount is that the longer period remaining until the company's IPO creates more uncertainty that the IPO will actually occur; thus, the stock and/or options trade at a larger discount. The discount is related to the expectation of liquidity of the investment.
(3) In the application of discounts to small closely-held businesses, the argument is made that since there is little or no chance that the company will ever go public, the discounts are at least as high as those calculated in some of these studies.

3. Summary of Private Transaction Studies

a) Baird and Willamette studies covered hundreds of transactions over 21 years
b) Average differentials between private and public market prices varied under different market conditions, ranging from 40-63 percent
c) Pre-IPO and restricted stock discount studies have been the subject of attacks regarding their validity and applicability
d) The most recent of such attacks can be found in the March 2002 issue of Shannon Pratt's Business Valuation Update
e) The May 2002 issue of BVU features a guest article by John Emory, Sr. and John Emory, Jr., responding to certain points of attack

4. Observations & Conclusions Upon Examination of Empirical Studies

a) The smaller the company (revenues, earnings, market capitalization), the larger the discount for lack of marketability
b) Issuers of restricted stock are generally considered good credit risks—not necessarily true of the closely held business (CHB)
c) Issuers of restricted stock are publicly traded companies for whom an active market exists for their stock

d) Owners of stock in a CHB have no access to an active market for their stock; most CHB's will never be publicly traded
e) Publicly traded companies offer annual dividends and/or an established record of capital appreciation in share price; CHB's seldom (if ever) can offer either
f) Purchasers of restricted stock are institutional investors with investment goals and criteria far different from the individual purchaser of a CHB
g) Institutional investors have different levels of risk perception and risk tolerance than purchasers of CHB stock
h) Purchasers of restricted securities usually intend to market these securities in the future and a ready market will exist at that time
i) Purchasers of CHB stock have little or no expectation to market the CHB stock in the future and if so, a limited market exists
j) Investments of venture capital companies in OTC non-reporting companies most closely resemble purchases by CHB owners
k) Venture capital investments are generally of relatively short duration, suggesting even higher discounts by CHB owners
l) Use of median discounts from restricted stock studies by valuators of CHB's infer that publicly traded issuers of restricted stock are "comparable" to CHB's—this may not be the case
m) The courts are allowing discounts that are less than those determined by the restricted stock studies; blind reliance on empirical studies or discounts allowed by the courts in other cases is dangerous as each valuation has its own unique facts
n) Valuation analysts often fail to adequately support discounts with sound reasoning to support a specific discount
o) In the valuation of stock in most closely held businesses, mean discounts observed in the results of the restricted stock studies should be used as a starting point for calculating a company specific discount.

Observation

Valuation analysts who rely solely upon empirical studies often understate discounts and overstate value.

V. THE *MANDELBAUM* DECISION AND ITS EFFECTS ON MARKETABILITY

Mandelbaum v. Commissioner, T.C. Memo 1995-255, aff'd. 91F3d 124 (3rd Cir. 1996) is an important case in business valuation in that it isolates size of a discount for lack of marketability as its only substantial issue. Rarely have the courts been so specific in their analysis of an issue nor has a court's decision been open to so much commentary and review by practitioners.

Setting up a list of factors to consider in developing a discount for a lack of marketability could have and should have provided the business valuation community with a useful tool. However, given the listing provided by Judge Laro in the decision, practitioners, once again, find themselves addressing tough issues with added cloudiness and complexity.

Mandelbaum v. Commissioner, is an important decision for two reasons:

- Issue of a lack of marketability discount was the only issue before the court
- The court's ultimate and unusual resolution of the case sheds light on possible matters to consider in assessing the size of discounts for lack of marketability in the future

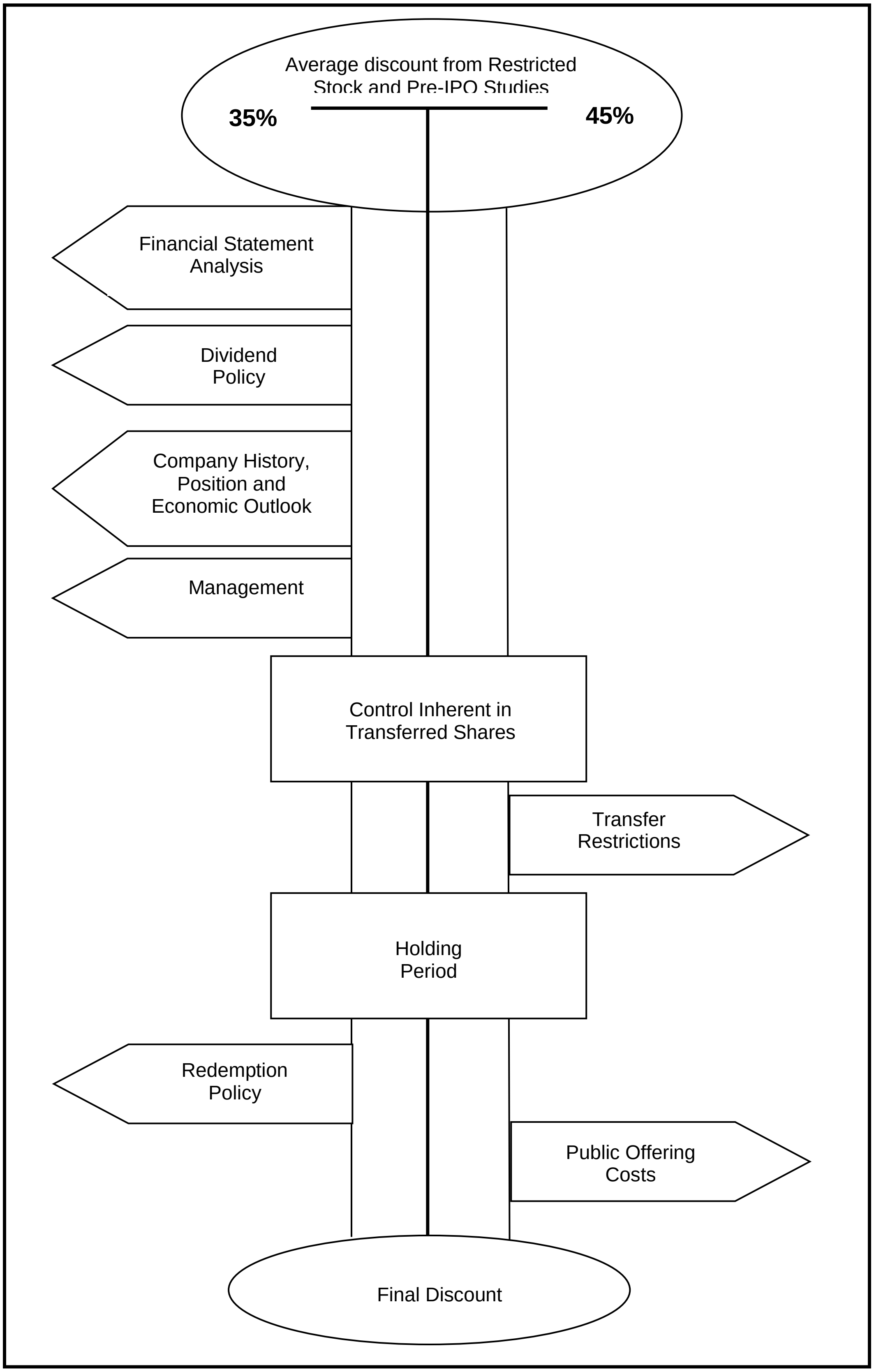
There are several important points to remember regarding the Mandelbaum case. Scorecard of deviations related to nine factors in reference to an average discount is not typical of prior cases.

- Some factors may have been duplicated given that the stipulated values were "freely traded" values
- The Court's determination of discount, if taken to its farthest degree, could negate the entire valuation process
- The Court's 30 percent discount, in addition to any applicable minority discount, is not substantially lower than what other recent court cases have allowed (generally, around 35 percent)
- The case clearly reflects a need to produce credible evidence to support the discount for lack of marketability and a critical need to tie the final reasoning for the size of the discount to the specific attributes of the ownership interest being valued

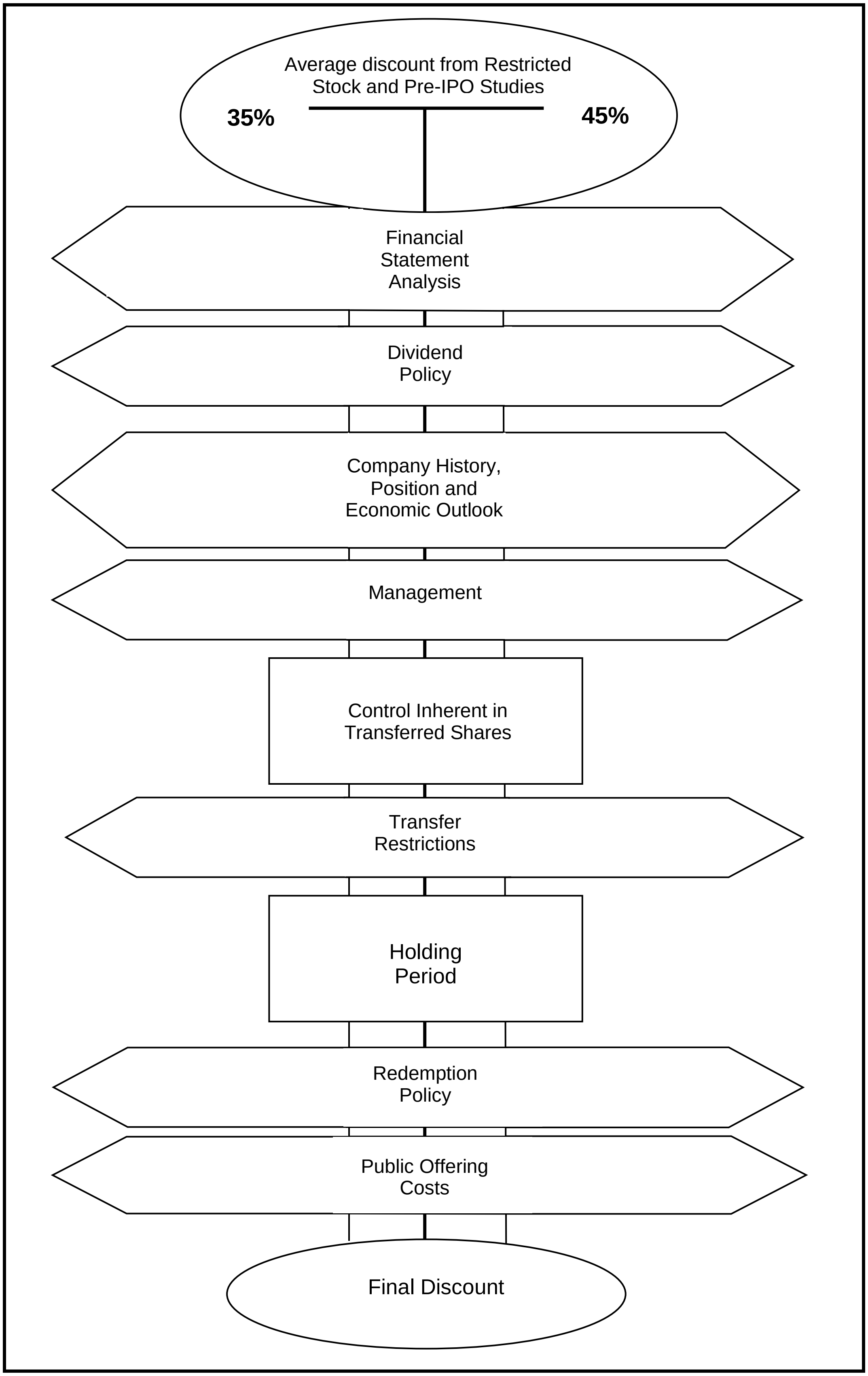
Judge Laro made an important distinction in *Mandelbaum*. He emphasized that in determining the marketability discount, one must consider the discounts willing sellers would accept in addition to the discounts hypothetical buyers would demand.

The *Mandelbaum* case was affirmed in the Third Circuit in 1996. A case that followed, *Estate of Kaufman v. Commissioner*, embraced the nine factors under *Mandelbaum*. Judge Laro also decided this case.

FOR EXAMPLE, HERE ARE THE NINE FACTORS CONSIDERED BY THE *MANDELBAUM* COURT TO INCREASE OR DECREASE BENCHMARK DISCOUNT AND THE DIRECTION (INCREASE / DECREASE) APPLIED IN *MANDELBAUM*



NINE FACTORS CONSIDERED BY THE COURT TO INCREASE OR DECREASE BENCHMARK DISCOUNT



VI. JUDICIAL DEVELOPMENTS AND DISCOUNTS FOR LACK OF MARKETABILITY

When appraising a privately held business interest, the discount for lack of marketability is often the largest adjustment in determining a conclusion of value. Even though it is clear that discounts for lack of marketability should be applicable in most valuations of privately held interests, the amount of these discounts is constantly the subject of controversy. Therefore, it is critical for the valuation analyst to be knowledgeable of the court cases addressing the subject.

A. PARTIAL LIST OF SELECTED COURT CASES REGARDING DISCOUNTS FOR LACK OF MARKETABILITY

1. *Estate of Davis v. Commissioner*, 110 T.C. 530 (1998)
2. *Estate of Jameson v. Commissioner*, 267 F.3d 366 (5th Cir. 2001)
3. *Estate of William J. Desmond v. Commissioner*, Docket No. 26237-96, T.C. Memo 1999-76 (Mar 1999)
4. *Walter L. Gross, Jr. v. Commissioner*, T.C. Memo 1999-254, 272 F.3d 333 (6th Cir. 2001), cert. den. U.S. (2002)
5. *Adams v. United States*, 218 F.3d 383 (5th Cir, July 2000)
6. *Janda v. Commissioner*, T.C. Memo 2001-24 (Feb 2001)
7. *Swope v. Siegel-Robert, Inc*., 2001 U.S. App. LEXIS 2760 (8th Cir. Feb 2001)
8. *Wall v. Commissioner*, T.C. Memo 2001-75 (Mar 2001)
9. *Offenbecher v. Baron Services, Inc*., 2001 Ala. Civ. App. LEXIS 219 (May 2001)
10. *Pueblo Bancorporation v. Lindoe, Inc*., 37 P.3d 492 (Colo. 2003)
11. *Estate of Hoffman v. Commissioner*, T.C. Memo 2001-109
12. *Norton Co v. Smyth*
13. *Okerlund v. United States*, 2002 U.S. Claims LEXIS 221(Fed. Cl. August 2002)
14. *Baltrusis v. Baltrusis*, 2002 Wash. App. LEXIS (September 2002)
15. *Gottsacker v. Gottsacker*
16. *Estate of Kelley v. Commissioner*, T.C. Memo 2005-235
17. *Estate of Jelke v. Commissioner*, T.C. Memo 2005-131
18. *McCord v. Commissioner*, 120 T.C. No. 13 (March 2003)
19. *Peter S. Peracchio v. Commissioner*, T. C. Memo 2003-280
20. *Clarissa W. Lappo v. Commissioner*, T.C. Memo 2003-258

VII. QUANTITATIVE MARKETABILITY DISCOUNT MODEL[8]

As previously mentioned throughout this material, the discount for lack of marketability is often the largest adjustment made in appraisals of privately held businesses. Business valuators are constantly searching for more objective ways to quantify this discount. This section presents an overview of one model, the Quantitative Marketability Discount Model (QMDM), which develops DLOM at the non-marketable minority interest level.

[8] The Quantitative Marketability Discount Model (QMDM) will help you develop, quantify, and defend your discount. It will allow you to calculate a marketability discount for closely held companies based on specific situations rather than just the "average" results from marketability studies. The QMDM is available from NACVA (800-677-2009) and ValuSource (800-825-8763).

The model focuses on a rate of return analysis in determining a discount for lack of marketability. It is based on the time value of money that an illiquid investment sacrifices. The model attempts to recognize the impact on value of minority shares of not benefiting from all the cash flow of a closely held business.

A. DEVELOPMENT OF THE QMDM

The treatise, *Quantifying Marketability Discounts*, by Z. Christopher Mercer was presented in 1997 to assist valuators in developing, quantifying and defending marketability discounts based on the facts and circumstances of each case. The valuation model to estimate marketability discounts presented in the book reflects the fair market value of a subject business interest at the non-marketable minority interest level. Mercer attempts to address two major issues regarding quantifying discounts for lack of marketability as he stated in his book.

1. The fact is that the two largest adjustments in most business valuation reports often receive only limited support and documentation.
2. The real issue is the absence of tools.

The Quantitative Marketability Discount Model (QMDM) addresses the incremental return represented by a marketability discount that is above the enterprise-level discount rate. This incremental return applicable to a non-marketable security is necessary to induce investors to make the purchase rather than making an investment in a similar freely traded security. The quantitative methodologies developed in Mercer's book focus on the factors that influence the concept of the incremental return.

B. BASIC FRAMEWORK FOR THE QMDM

Mercer focuses on five categories of "the fundamental elements of value" used by investors in making their investment decisions.

1. Capital Appreciation

Quantifying a discount for lack of marketability requires consideration of the anticipated growth in the value of the investment.

2. Dividend Yield

The valuator must consider the expected dividend yield based on the marketable minority interest value (the dividends are the expected interim cash flows to the holder of the investment).

3. Holding Period of Investment

The QMDM provides a means for the valuator to make an assessment of the expected holding period of the investment.

4. Prospects for Liquidity

Since there is no ready market for investments in privately held securities, investors are concerned with the prospects for liquidity while holding the investment.

5. Investor's Required Holding Period Return

The QMDM develops a means of assessing the required holding period rate of return for a hypothetical investor. The basis for estimating this discount is the equity discount rate used in the appraisal at the marketable minority discount level. Additional specific risks, which relate to investors in illiquid interests of the enterprise, are added. The required holding period return utilized in the QMDM is usually expressed in terms of an approximate range.

Mercer explains:

> *"Since the expected cash flows generated by the business are the source of the non-marketable minority investor's cash flows, the risks faced by the non-marketable minority investor encompass the risk of the business generating those cash flows, as well as incremental risks arising from the illiquidity of the investment. Therefore, the embodiment of risk for valuation purposes, the relevant discount rate, must for non-marketable minority investors be greater than or equal to, but cannot be less than, the discount rate applicable to the valuation of the business."*

C. UTILIZING THE QMDM

In developing a valuation utilizing the QMDM, the model assumes that any necessary normalization adjustments, including those related to nonrecurring items and discretionary owner compensation and/or benefits, have been made when arriving at the capitalizable benefit stream. There have been some challenges to this assumption under the model, as owner compensation adjustments are generally an element of control and not considered in a valuation of a minority interest.

Using the five elements discussed previously, the discount can be calculated using the following equation:

$$\text{Marketing Discount (MD)} = 1 - \left[\frac{\text{Shareholder's Value}}{\text{Enterprise Value}}\right] \%$$

$$1 - \left[\frac{\text{Value of Expected Cash Flows to Minority Shareholder}}{\text{Value of Expected Cash Flows in Context of Ongoing Business}}\right] \%$$

Source: *Quantifying Marketability Discounts, Developing and Supporting, Marketability Discounts in the Appraisal of Closely Held Business Interests*, Z. Christopher Mercer, ASA, CFA

D. USING MERCER'S EQUATION

Assumptions:

Discount rate	25% Enterprise Level
Anticipated growth	5%
Capitalization rate	20% Enterprise Level
Net earnings multiple (1/cr)	5 P/E Multiple
After-tax earnings power	$0.40 per Share
Freely tradable value	$2.0 per Share
Growth rate of value	5%
Interim cash flows (earnings retained to grow business)	0%
Probable holding period	10 Years
Required holding period rate of return	20% per Year

Based on the above assumptions, the subject interest would be valued at $0.53 per share. This value is calculated by growing the freely tradable value ($2) at five percent for 10 years, and discounting this terminal value back to the present by the 20 percent required holding period rate of return.

As a result, the implied marketability discount based upon the assumptions contained herein is calculated using the equation as follows:

$$MD = 1 - \left[\frac{\$0.53}{\$2.00} \right] \% \quad = \quad (1 - 0.265)\% = 73.5\%$$

Utilizing the above assumptions, the marketability discount calculated under this example is 73.5 percent. According to Mercer, the discount calculated is the "net impact of the factors that differentiate the postulated non-marketable minority interest from a freely tradable interest."

E. COURT CHALLENGES OF THE QMDM

As previously stated in this chapter, the QMDM is another means of quantifying the marketability discount. Since the model's introduction in 1997, there has been criticism by valuators and in the courts. Two recent court cases specifically cited the QMDM.

1. *Estate of Weinberg v. Commissioner*, T.C. Memo 2000-51
2. *Janda v. Commissioner*, T.C. Memo 2001-24

In *Estate of Weinberg*, the IRS expert adopted the QMDM and argued a 15 percent discount for lack of marketability. The Court criticized the expert's use of the model, "…slight variations in the assumptions used in the model produce dramatic differences in the results."

The Court ultimately determined that a 20 percent discount for lack of marketability was appropriate in the case.

In *Janda v. Commissioner*, the Petitioner's expert used the QMDM and determined a 65.77 percent marketability discount. The Court rejected the application of the QMDM and further stated, "We have grave doubts about the reliability of the QMDM model to produce reasonable discounts, given the generated discount of over 65 percent."

VIII. BUILT-IN CAPITAL GAINS TAX ADJUSTMENT

Deferred income taxes resulting from "built-in" or deferred gains on a company's balance sheet have long been recognized under Accounting Principles Board Opinion No. 11 and later in Financial Accounting Standard No. 109 as a necessary adjustment to the balance sheet. Clearly, when writing up fixed assets to fair market value for valuation purposes, it is likewise relevant to consider the application of a deferred tax liability to reflect the economic reality of the company's balance sheet.

In an open market transaction, there is little argument that a willing buyer would alter his or her offer price for the stock in a C corporation due to the tax liability associated with appreciated assets inside the corporation since the liability still remains even when ownership changes. The Internal Revenue Service has historically argued that provisions within the Internal Revenue Code could shelter such built-in gains.

According to these provisions, the tax payable on the built-in gains was too speculative and should not be included in the valuation. However, since the General Utilities doctrine was revoked under the Tax Reform Act of 1986, a tax liability upon liquidation is not necessarily speculative.

The IRS continued to argue that when corporate liquidation itself is not contemplated, a reduction for built-in gains taxes should not be taken. Moreover, in Technical Advice Memorandum 9150001, the IRS noted that unless liquidation is imminent, there is no accurate way to estimate the liability due to potential future tax law changes.

The last few years (beginning in 1998) have seen the first truly salient decisions on this matter coming from the Tax Court. A review of these cases, including the watershed *Estate of Davis* decision, will be undertaken in this chapter. After understanding the current position of the Courts in this matter, discussion will focus on alternatives to properly compute the adjustment.

The treatment of trapped-in capital gains tax with regard to S corporations is not very clear. At the time this chapter was prepared, there was not any definitive case law providing clear direction on this subject.

Prior to *Davis* and *Eisenberg*, no element of business valuation was more intensely debated than that related to the federal and state income tax liabilities associated with corporations holding appreciated assets or assets that have been substantially depreciated below their fair market value at the date of valuation.

The long-standing applicability of Revenue Ruling 59-60 and its mandate that fair market value is based upon a hypothetical willing buyer and willing seller, each acting prudently and in their own best interest, absolutely requires that the valuator consider the corporate level trapped-in gains in completing business valuations.

Technical Advice Memorandum 9150001 documents the position of the IRS with regard to the issue. In this TAM, the National Office concluded that no discount was appropriate for two reasons:

- A number of courts had previously disallowed such a discount, arguing that any sales of appreciated assets giving rise to a corporate level tax liability were just too speculative for consideration.
- There is no definitive proof that a buyer would buy the stock being valued with intent to sell or liquidate the underlying assets.

In a footnote, the National Office noted that a buyer may, in some circumstances, elect S status. If the S corporation held the assets for more than 10 years prior to sale, the tax under Internal Revenue Code §1374 (Built-in Gains) would not apply.

Until recently, the Internal Revenue Service, U.S. Tax Court and many family courts did not recognize the impairment of value offered by these tax liabilities unless a sale was imminent. (*Ronald Hay v. Marilyn Hay*, Court of Appeals of Washington, Division 3, December 16, 1995)

Most practitioners feel the impact of capital gains taxes must be considered when estimating value. However, whether that impact is incorporated via a discount or in some other element of the value estimate, is best left to the judgment of each valuation professional in light of the specific facts and circumstances of the project.

- *Eisenberg v. Commissioner*, T.C. Memo. 1997-483
- *Welch v. Commissioner*, No. 27513-96 1998 WL 221313 (U.S. Tax Court, May 6, 1998)
- *Estate of Davis v. Commissioner*, Docket No. 9337-96 (U.S. Tax Court, June 30, 1998)
- *Estate of Helen Bolton Jameson v. Commissioner*, 267 F.3d 366 (5th Cir. 2001)
- *Estate of Richard R. Simplot v. Commissioner*, 112 T.C. 130 (1999) rev'g, 249 F.3d 1191 (9th Cir. 2001)
- *Estate of Dunn v. Commissioner*, T.C. Memo. 2000-12
- *Estate of Dunn*, 301 F.3d 339 (5th Cir. 2002)
- *Estate of Borgatello v. Commissioner*, T.C. Memo. 2000-264
- *Estate of H.A. True*, T.C. Memo 2001-16, aff'd., F.3d (10th Cir. 12/02/2004)

IX. A BRIEF LOOK AT DISCOUNTS IN FAMILY LIMITED PARTNERSHIPS

No planning strategy for minimization of federal estate and gift taxes has generated more opportunity over the last several years than those connected with the structuring of Family Limited Partnerships (FLPs). FLPs have been present in estate planning for many years. However, with the release of Revenue Ruling 93-12 and the Internal Revenue Service changing its position on family attribution related to minority privately held business interest transfers, the vehicle has taken on new viability.

The key element underlying the successful utilization of an FLP is the ability to leverage the property transfer via the appropriate use of minority and/or lack of marketability discounts. For example, using a 35 percent combined discount, an individual can transfer almost $17,000 annually without the imposition of the gift tax ($16,923 X (1-.35) = $11,000 gift value, all excluded by the annual gift tax exclusion)[9].

[9] Note that the annual gift tax exclusion for 2005 was $11,000, but is indexed for inflation.

Currently, the IRS is challenging various aspects of FLPs[10] in addition to discounts (e.g., business purpose—*Estate of Strangi*, 115 TC No. 35) through rulings and litigation. With the increased popularity of Family Limited Partnerships we will see more challenges by the IRS in the future. The current climate surrounding FLPs is forcing practitioners to strictly adhere to state laws concerning their formation and operation.

The cases contained in this section are selected cases focusing on FLPs. As previously mentioned throughout this material, the compilation of cases is not intended to be all inclusive of relevant cases concerning the subject.

A. HISTORICAL CASE LAW

1. *Estate of Watts*, T.C. Memo 1985-595
2. *Estate of Harwood*, 82 T.C. 239 (1984)

B. CHAPTER 14 OF THE INTERNAL REVENUE CODE

1. Rules related to rights attributable to the partners may apply when dealing with restrictive FLPs and gifts to family members
2. Depending on valuator's level of expertise in this area, he/she may be comfortable in determining if such a situation applies
3. However, it may be prudent to request that the attorney or estate planner make the determination as to whether Chapter 14 rules apply, and if so, in what ways

C. TECHNICAL ADVICE MEMORANDUM 9719006

Issued on January 14, 1997 to the District Director of the Internal Revenue Service's Southern California District.

1. TAM 9719006—Internal Revenue Service Response
2. *Kerr v. Commissioner*, 113 T.C. No. 30—Docket 14449-98
3. *Church v. United States*, No. SA-97-CA-07740OG, 2000 U.S. Dist. LEXIS 714
4. *Estate of Reichardt v. Commissioner*, 114 TC No.9 (2000)
5. *Shepherd v. Commissioner*, 115 TC No. 30 (Oct 2000)
6. *Estate of Strangi et.al v Commissioner*, No. 03-60992 U. S. Court of Appeals for the Fifth Circuit, July 15, 2005
7. *Estate of Dailey v. Commissioner*, T.C. Memo 2001-263
8. *Estate of Baird v. Commissioner*, T.C. Memo 2001-258
9. *Estate of Cook v. Commissioner*, 2001 T.C. Memo 2001-170
10. *Estate of Jones v. Commissioner*, 116 T.C. No. 11 (2001)
11. *Estate of Thompson*—Facts
12. *Estate of Hackl v. Comm.*, 118 T.C. No. 14 (2002), aff'd, F.3d (7th Cir. July 11, 2003)
13. *Estate of Harper v. Comm.*, T.C. Memo. 2002-121 (May 2002)
14. *David A. Kimbell Sr., et al. v. United States*, F.3d (5th Cir. 05/20/2004) (Docket No. 03-10529)
15. *McCord v. Commissioner*, 120 T.C. No. 13 (March 2003)

[10] Currently, the two primary arguments revolve around IRC Section 20-36 (a non-valuation issue), and the quality of the valuation evidence to support the discounts.

16. *Peter S. Peracchio v. Commissioner*, T.C. Memo 2003-280
17. *Clarissa W. Lappo v. Commissioner*, T.C. Memo 2003-258
18. *Huber v. Commissioner*, T.C. Memo, 2006-96, May 9, 2006
19. *Estate of Kelley v. Commissioner*, T.C. Memo. 2005-235, October 11, 2005

Observation[11]

Empirical data that is used to develop discounts for FLPs can be found in Partnership Profiles and Morningstar databases as discussed earlier in this chapter.

X. A BRIEF LOOK AT ESOP VALUATIONS

An Employee Stock Ownership Plan can present special issues related to discounts and premiums. Specific questions on the applicability and size of minority discounts and control premiums continue to generate commentary and analysis by business valuation practitioners, the Department of Labor and the courts.

Additional issues arise in conjunction with a discount for lack of marketability. Given the ERISA mandated requirement of a "put" option, the business valuator must include, in addition to the general factors under consideration, an analysis of the Company's ability to meet this future obligation.

A. FACTORS TO CONSIDER IN ESOP VALUATIONS

1. Minority/Control

a) Pursuant to Department of Labor (DOL) proposed regulations 29 CFR Part 2510, control premiums are unwarranted unless the plan obtains BOTH voting control and control in fact.
b) If ESOP purchases shares in small amounts, and the company ultimately intends to sell a controlling interest to the plan, a control premium is warranted only to the extent that there is a binding contract to pass control within a reasonable time.

2. Standard of Value

a) DOL prop. reg. 3(18)(b)—"Adequate consideration"
b) Revenue Ruling 59-60 fair market value
c) Issues:

(1) Given fair market value definition, does "hypothetical" buyer/seller hold when purchase is identified (the plan)?
(2) Should a participant's account reflect a substantial increase in the year the plan obtains control (via a control premium)?

[11] For a more in-depth study on discounts in FLPs, the Consultants' Training Institute (CTI) offers additional training on this topic.

3. **Lack of Marketability**

   a) Consider all normal factors
   b) Consider "put" option

4. **"Put" Option**[11]

   a) Required by ERISA
   b) Generally serves to reduce discount for lack of marketability

5. **Repurchase Obligation Liability**

   a) Requires a careful analysis; often an actuarial study for plans with a significant number of participants
   b) Requires analysis of company's ability to meet this obligation
   c) Factors increasing the repurchase obligation:

      (1) Additional shares allocated to ESOP
      (2) ESOP share value grows
      (3) Additional vested shares

B. FACTORS TO CONSIDER FOR MARKETABILITY DISCOUNT

1. Company liquidity position
2. Plan document provisions
3. Company repurchase experience
4. Nature of company growth
5. Financial solvency and position of the company
6. Company borrowing capacity
7. Repurchase obligation liability and related funding mechanism
8. Contingent claims against future company income

Observation

As the repurchase obligation increases, the certainty to fund the repurchase decreases, thus the discount for lack of marketability may also increase.

XI. A LOOK AT OTHER DISCOUNTS

While discounts for a lack of marketability and lack of control are the most commonly used discounts in business valuations, there are a host of additional gross value adjustments practitioners might encounter in conducting business valuation engagements.

[11] Participants of an ESOP have the right under IRC section 409(h) to require that the employer repurchase employer securities.

A. CRITICAL PITFALLS IN CONSIDERING THE APPLICATION OF THESE "OTHER" DISCOUNTS ARE THREEFOLD

1. First, it is important that the valuation practitioner not duplicate value influences in other facets of the valuation and, again, in the discount. When using these discounts, consideration should be given to whether they are already reflected in the development of capitalization or discount rates, future benefit stream scenarios, market multiples or even other discounts.
2. Second, careful consideration should be given to the base to which the discount is applied, and how theoretical and empirical support for the practitioner's opinion can best be developed and articulated in the valuation result.
3. A final important consideration in applying such discounts is recent judicial developments. For those valuation engagements that ultimately will be settled in a court venue, a thorough understanding of the appropriate court's opinion on the additional discount is critical. Obviously, such decisions can provide important guidance and support for certain discounts in other venues, as well.

While there may be an endless number of potential discounts deemed appropriate by valuators in different engagements, those most commonly used by the business valuation community and encountered in judicial decisions include:

- Blockage discount/market absorption
- Key person discount
- Restrictive agreement discount
- Investment company discount
- Lack of voting rights discount

B. BLOCKAGE DISCOUNT/MARKET ABSORPTION

The need for a blockage discount usually arises in consideration of supply and demand influences in the publicly traded securities markets. In other words, a transaction offering a substantial block of a single entity's issued and outstanding shares may create a supply that exceeds current demand. Such an occurrence will generally impair the subject company's value because of the reduced liquidity associated with the oversupply.

The business valuator, under these circumstances, must consider a discount to adjust the value of subject shares for this reduced liquidity characteristic. The discount applied in this circumstance is generally referred to as a blockage discount.

Treasury Regulation §20.2031-2 states the following:

> *"The size of the block of stock to be valued in relation to the number of shares changing hands in sales may be relevant in determining whether selling prices reflect the fair market value of the block of stock to be valued. If...the block of stock is so large in relation to the actual sales on the existing market that it could not be liquidated in a reasonable time without depressing the market, the price at which the block could be sold as such outside the usual market, as through an underwriter, may be a more accurate indication of value than market quotations..."*

The concept of blockage is not usually applied directly in the case of closely held stocks, since there is no record of average trading volume with which to compare the size of the block. The data...on discounts for lack of marketability do, however, suggest that larger blocks tend to sell at a greater discount than smaller blocks, so the large size of a block could be a factor that influences the magnitude of the discount for lack of marketability.[12]

There are several factors to consider when using a blockage discount:

1. Size of block to total shares outstanding
2. Size of block to daily trading volume
3. Volatility of stock
4. General economic and industry trends
5. Alternative stock disposition mechanisms
6. Time requirements for full market absorption of the subject block without affecting current market price
7. Special stock offerings
8. Sales of the block in smaller units over a reasonable disposition period
9. Exchange and reorganization mechanisms
10. Private placements
11. Use of an underwriting syndicate

Note: Not all larger blocks of stock require a blockage discount. The valuator must weigh all facets of the blockage effect, if any, in determining the appropriateness and size of the discount.

One recent court case that allowed one of the largest blockage discounts was the *Estate of Mellinger* (112 T.C. 26). In this case, the Tax Court deemed it appropriate to apply a 25 percent blockage discount (as applied by the taxpayer) to large blocks of Frederick's of Hollywood stock, which was thinly traded.

C. KEY PERSON DISCOUNT

Business valuators would generally consider an additional discount for a company where thin management and a strong company dependency on the efforts of a single individual for future operational and financial success would threaten the company's long-term viability. Such a discount is generally referred to as a key person discount.

A few factors should be considered when using a key person discount:

1. Key executive's duties from both a day-to-day standpoint, as well as his or her involvement in guiding the long-term strategic course of the business
2. Key executive's reputation within the industry and the effect of that reputation on overall operational and financial results both historically and prospectively
3. Depth of overall management, experience of lower management, if any, and presence of a succession plan
4. Cost and time requirements to hire necessary replacement personnel for the key executive

[12] Shannon Pratt, Robert Reilly and Robert Schweihs, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 5th edition, (McGraw-Hill, 2000).

5. Availability and adequacy of key person life insurance to fund such a transition, if necessary—key person life insurance is sometimes earmarked for specific purposes beyond management transition

    a) Funding repurchase of company stock
    b) Funding purchase of company utilized real property or other assets held by key person

The impact of the key person on the overall value of equity securities is often incorporated into the future benefit stream computations or the company-specific discount and/or capitalization rate development.

The courts have often recognized the impact of key persons on value via a discount. In *Estate of Paul Mitchell*, T.C. Memo 1997-461, vacated and remanded 250 F.3d 696 (9th Cir. 2001), on remand T.C. Memo. 2002-98. In the earlier U.S. Tax Court case, the Tax Court recognized a 10 percent discount, which equated to a $15 million reduction in value. Also in *Furman v. Commissioner* (1998 WL 209265) the Court accepted a 10 percent key person discount. In *Estate of Stirton Oman*, (T.C. Memo 1987-71), a key person discount was rejected since the decedent's sons were managing the Company both before and after the father's death. In this case, it also appeared that the decedent's son had been groomed for the position and that succession planning had taken place.

D. RESTRICTIVE AGREEMENT DISCOUNT

Observation

In family controlled entities, the impact of restrictive agreements in valuation are governed by IRC Section 27-03. The provisions of Section 27-03 can eliminate the impact of any restrictions within the agreements if they do not satisfy the exceptions in IRC Section 27-03.

Restrictions under various shareholder documents including buy-sell agreements, restricted stock agreements, etc., can severely limit the shareholder's ability to sell or transfer his or her stock; the impairment increases with the severity of the restriction. Value impairment due to the presence of restrictive agreements is generally incorporated into the overall discount for lack of marketability. The Courts have historically looked at these agreements as minor evidence influencing estimates of value, but seldom have they let such agreements necessarily set value.

A number of factors should be considered when reviewing stockholder's rights:

1. Income and dividend preferences
2. Liquidation preferences
3. Voting rights
4. Stock sale limitations
5. Stock value formulas
6. Preset stock price

Do not confuse a right of first refusal with a more severe restrictive agreement discount. If history shows that fair market value has been paid, pursuant to a right of first refusal, and the company's financial ability to pay in the future appears sound, such a right does not really impair value.

E. INVESTMENT COMPANY DISCOUNT

Investment companies are generally sold on the basis of underlying assets rather than future benefit streams. Such an asset approach is rooted in Revenue Ruling 59-60, which states:

> *"The value of the stock in a closely held investment in a real estate holding company...is closely related to the value of the assets underlying the stock."*

An analysis of publicly traded investment real estate companies (Partnership Profiles) and publicly traded closed end funds reveals that minority interests in investment companies typically sell at a discount from their respective pro rata share of the firm's net assets restated at fair market value. The application of an investment company discount would account for the shareholders' indirect ownership of these assets, and their inability to force the sale, liquidation or merger of these assets.

Investment company discounts typically range anywhere from 10 percent to 60 percent or higher, depending on the facts and circumstances of each case. In a purely theoretical sense, this is a minority interest discount, but may include an influence from marketability.

Several Court decisions address this discount. In *Estate of T. John Folks, Jr*. (T.C. Memo 1982-43), the Court agreed to a 50 percent discount for a minority interest, plus a discount for lack of marketability. In *Estate of Albert L. Dougherty* (T.C. Memo 1990-274), the Court allowed a 35 percent discount for non-marketability and operating and liquidation costs. The entity was a second tier trust holding a corporation that held real property.

F. LACK OF VOTING RIGHTS DISCOUNT

In valuing minority interests, the issue of voting versus nonvoting shares must be considered. Assuming that voting shares can guide corporate policy and strategy, some difference in value must connect to a share of stock with voting rights versus one without.

That difference in value depends, to a great degree, on the size of the block being valued and the overall distribution of the ownership. If a very small percentage of outstanding shares control the overall company, the discount for lack of control would be substantial on the balance of the minority interests. Where control is not in play, empirical studies have held the difference in value for non-controlling minority voting shares and minority nonvoting shares to be under five.

Several factors should be considered when using the lack of voting rights discount:

1. Size of block being valued
2. Distribution of stock
3. Restrictive agreements
4. Convertibility provisions of the non-voting shares

In addition to the foregoing chapter of Fundamentals, Techniques and Theory, there are other sources of information that many professionals in the valuation business have read and/or added to their library. The valuation analyst, progressing through the steps in a valuation, should be generally familiar with the body of knowledge represented by this text and other publications. These can include books, papers, articles, seminars, classes and the experience of a valuation mentor or other business mentor the valuation analyst may know. Those at the top of the field continue to grow.

Recommended reading includes, but is not limited to:

- Abraham, Mel H., *Valuation Issues and Case Law Update*, all cases.
- Abrams, Jay B., "Discount Rates as a Function of Log Size and Valuation Error Measurement" (3 parts), *The Valuation Examiner*, F/M 1997.
- Bogdanski, John A., *Federal Tax Valuation*, Warren, Gorman & Lamont
- Blackman, Irving L., *Valuing Your Privately Held Business, The Art & Science of Establishing Your Company's Worth*, Chapter 9 (Valuation Discounts).
- Campbell, Ian R., and Howard E. Johnson, *The Valuation of Business Interests,* Chapter 12 (Controlling and Minority Interests) and Chapter 13 (Discounts for Non-Control and Illiquidity).
- Cornell, Bradford, Corporate Valuation, *Tools for Effective Appraisal and Decision Making*, Chapter.
- Dorrell, Darrell, "Marketability Discounts – A Comprehensive Analysis" *The Valuation Examiner*, M/A 2002.
- Grossman, Robert J., "Considering Voting Rights Premiums After Simplot", *The Valuation Examiner*, M/A 2000.
- Hitchner, James R., "Financial Valuation Applications and Models," Chapter 8 *Valuation Discounts and Premiums.*
- Hofman, Cornelius A., "Volume Discounted Yield Curve: Computing a Realistic Discount Rate," *The Valuation Examiner*, J/J 1997.
- Jones, Gary E., "The Case of Contingent Liability: To Discount or Not?," *The Valuation Examiner*, 1qtr, 1994.
- Kelting, Herman, "Deriving Discount Rates from Geometric Mean Internal Rates of Return," *The Valuation Examiner*, M/J 2003.
- Kelting, Herman, "Stock Prices Reflect the Value of the Underlying Assets," *The Valuation Examiner*, J/A 2000.
- McChesney, Robert C., "Minority and Marketability discount: A Present Value Approach to Determination," *The Valuation Examiner*, S/O 2000.
- Mercer, Z. Christopher, *Quantifying Marketability Discounts*, all chapters.
- Nalley, David W. Jr.., "Swing Vote Effect on Valuation Discounts," *The Valuation Examiner*, 2qtr, 1995.
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Part IV (Discounts, Premiums, and the Value Conclusion).
- Pratt, Shannon P., R. F. Reilly and R. P. Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies*, Part IV (Discounts, Premiums and the Value Conclusion).
- Pratt, Shannon, *Business Valuation Discounts and Premiums*, all chapters.
- Radom, Carl C., "Disputes Over Minority Discounts Continue" (2 parts), *The Valuation Examiner*, MA 1996.
- Rosen, Corey, "Valuation Discounts in ESOPs", *The Valuation Examiner*, D/J 1997.
- Sheeler, Carl L., "Two Halves Don't Equal a Whole: Theory and Practice of the Minority Interest," *The Valuation Examiner*, M/A 2003.

- Skvoretz, Mark A., "The Weighted Average Cost of Capital Approach in Developing a Discount Rate," *The Valuation Examiner*, J/J 1996.
- Taylor, Timothy, "Marketability Discount Issues of the Relief Act of 1997", *The Valuation Examiner*, D/J 1999.
- Van Acker, Marty, "Tax Court Allows Valuation Discount for Built-in Gains Tax," *The Valuation Examiner*, A/S 1998.
- Laro, David and Pratt, Shannon P., *Business Valuation and Taxes—Procedure Law and Prospective*, Wiley, 2005.

BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 7

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 7: Valuation Discounts and Premiums

1. Select the reason(s) why a discount for lack of marketability (DLOM) for a controlling interest, even one that is 100%, may be applicable.

   a. Uncertain time horizon to complete the offering or sale
   b. Cost to prepare for and execute the offering or sale
   c. The eventual sale price is finalized
   d. Market conditions may require a quick sale

2. What circumstances permit the additive application of the DLOC and DLOM?

   a. There are no circumstances permitting additive application of discounts
   b. When the DLOM is applied prior to the DLOC
   c. When the DLOC is applied prior to the DLOM
   d. All circumstances require the addition of all applicable discounts

3. Which of the following best describes the concept of marketability?

   a. How much one will be paid for a bundle of rights
   b. The best listing price to get the greatest number of buyers
   c. How quickly an interest can be sold in terms of cash
   d. Having control of the assets of a business

4. The DLOM and DLOC show a relationship in valuations that:

   a. Indicate it is more difficult to sell a non-controlling (i.e., minority) interest in any privately-held business than to sell a controlling interest in that same business
   b. The greater the DLOC, the greater the DLOM
   c. A DLOM is only available for a non-controlling interest, which is also subject to a DLOC
   d. Indicate it is harder to sell a controlling interest in any business than to sell a non-controlling (i.e., minority) interest in that same business

5. It would be appropriate for the valuation analyst to use the restricted stock studies DLOM average of 35% in the valuation of a non-controlling (i.e., minority) interest.

   a. Yes. The studies were done by well-known entities, including the SEC, and, as such, can be trusted by the valuation analyst and report receiver to be accurate.
   b. No. Not all the studies are published, and, therefore, those numbers must be deleted from what the valuation analyst uses.
   c. Yes. The studies are updated periodically, so the average is current and applicable to today's valuations.
   d. No. The average rate of 35% may be used as a starting point for the valuation analyst.

6. The formula used to generate an implied minority interest discount from control premium data (such as found in the *Mergerstat Review*) is:

   a. 1 minus ((1) divided by (1 minus Control Premium))
   b. 1 plus ((1) divided by (1 plus the control premium))
   c. 1 minus ((1) multiplied by (1 plus the control premium))
   d. 1 minus ((1) divided by (1 plus the control premium))

7. In a valuation in which the valuation analyst applies both a marketability discount and a discount for lack of control, the application of the discounts is additive not multiplicative.

   a. True
   b. False

8. Which level of value would be considered equivalent to owning stock in a publicly traded company?

   a. Control marketable
   b. Minority marketable
   c. Synergistic value
   d. Minority non-marketable

9. The ability of an individual to set company policy, appoint management, and ability to determine dividend policy and payments are examples of:

   a. A minority interest
   b. A control interest
   c. An equal shareholder with 50% operating control
   d. A shareholder of a publicly traded company

10. The following are sources of empirical data on control/minority interests EXCEPT for:

    a. *Mergerstat Review*
    b. Morningstar Principia
    c. SEC Studies
    d. Emory Studies

11. It would not be surprising for a valuation analyst to have the same marketability discount for a controlling interest as they would when valuing a minority interest.

    a. True
    b. False

12. Which of the following factors may increase a marketability discount?

    a. Restrictions on transfer, limited access to financial information, and an imminent public offering
    b. Little or no dividends, little prospect of going public, and high dividend payouts
    c. Low dividend payouts, limited access to financial information, and an imminent public offering
    d. Restrictions on transfers, little or no dividends, and limited access to financial information

13. What are the two primary cases listed in the Internal Revenue Service Valuation Training for Appeals Officers as the basis for discounts for lack of marketability?

    a. *Simplot* and *Central Trust Co.*
    b. *Central Trust Co.* and *Estate of Andrews*
    c. *Estate of Andrews* and *Estate of Gross*
    d. *Estate of Gross* and *Estate of Adams*

14. Which court case specifically isolates the issue of marketability discounts?

    a. *Simplot* and *Central Trust Co.*
    b. *Estate of Kelly*
    c. *Mandelbaum*
    d. *Gross*

15. It would be appropriate for a valuator, when adjusting assets to their fair market value, to also make an adjustment for the liability resulting from a built-in capital gains tax.

    a. True
    b. False

16. Transactions offering a substantial amount of a single entity's stock, which visibly creates a supply that exceeds current demand may result in a:

    a. Blockage discount
    b. Key person discount
    c. Restrictive agreement discount
    d. Investment company discount

Chapter 7 Bonus Questions Responses

1. Your state ___________________ What does your state consider a majority interest?

2. Synergy—what is this and how does it affect value?

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CHAPTER EIGHT

PROFESSIONAL STANDARDS

These Professional Standards are effective for engagements accepted on or after August 1, 2015

NACVA PROFESSIONAL STANDARDS

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Continued

NACVA PROFESSIONAL STANDARDS

I. INTRODUCTION

These principles-based Standards have been developed to provide guidance to members and other valuation professionals performing valuation services. The use of professional judgment is an essential component of estimating value.

A. PREAMBLE

Members of the National Association of Certified Valuators and Analysts (NACVA) shall comply with the standards and definitions herein. NACVA will adopt changes to and interpretations of the Standards when necessary.

II. GENERAL AND ETHICAL STANDARDS

A member shall perform professional services in compliance with the following principles:

A. INTEGRITY AND OBJECTIVITY

A member shall remain objective, maintain professional integrity, shall not knowingly misrepresent facts, or subrogate judgment to others. The member must not act in a manner that is misleading or fraudulent.

B. PROFESSIONAL COMPETENCE

A member shall only accept engagements the member can reasonably expect to complete with a high degree of professional competence. If a member lacks the knowledge and/or experience to complete such engagements with a high degree of professional competence, the member is not precluded from performing such engagements. In such instance, the member must take steps necessary to gain such expertise through additional research and/or consultation with other professionals believed to have such knowledge and/or experience prior to completion of such engagements.

C. DUE PROFESSIONAL CARE

A member must exercise due professional care in the performance of services, including completing sufficient research and obtaining adequate documentation.

D. UNDERSTANDINGS AND COMMUNICATIONS WITH CLIENTS

A member shall establish with the client a written or oral understanding of the nature, scope, and limitations of services to be performed and the responsibilities of the parties. If circumstances encountered during the engagement require a significant change in these understandings, the member shall notify the client. A member shall inform the client of conflicts of interest, significant reservations concerning the scope or benefits of the engagement, and significant engagement findings or events.

E. PLANNING AND SUPERVISION

A member shall adequately plan and supervise the performance of services.

F. SUFFICIENT RELEVANT DATA

A member shall obtain sufficient relevant data to afford a reasonable basis for conclusions, recommendations, or positions.

G. CONFIDENTIALITY

Unless required to do so by competent legal authority, a member shall not disclose any confidential client information to a third party without first obtaining the express consent of the client.

H. ACTS DISCREDITABLE

A member shall not commit any act discreditable to the profession.

I. CLIENT INTEREST

A member shall serve the client interest by seeking to accomplish the objectives established with the client, while maintaining integrity and objectivity.

J. DOCUMENTATION

Quantity, type, and content of documentation are matters of the member's professional judgment. Members should retain documentation for a sufficient time period to comply with legal, regulatory, and professional requirements. NACVA recommends a minimum of five years.

K. FINANCIAL INTEREST

A member shall not express a Conclusion of Value or a Calculated Value unless the member and the member's firm state either of the following:

1. "I (We) have no financial interest or contemplated financial interest in the subject of this report."; or
2. "I (We) have a (specify) financial interest or contemplated financial interest in the subject of this report."

III. SCOPE OF SERVICES

A. APPLICABILITY

These Standards are applicable when valuing a ***business, business ownership interest, security, or intangible asset.*** The General and Ethical standards apply to all professional services performed by members.

B. VALUATION SERVICES

A member may express either a Conclusion of Value or a Calculated Value. When performing such Valuation Services, members shall comply with these Development and Reporting Standards. Valuation Services are:

1. **Valuation Engagement**

   A Valuation Engagement requires that a member apply valuation approaches or methods deemed in the member's professional judgment to be appropriate under the circumstances and results in a Conclusion of Value; or

2. **Calculation Engagement**

   A Calculation Engagement occurs when the client and member agree to specific valuation approaches, methods, and the extent of selected procedures and results in a Calculated Value.

C. OTHER SERVICES

Any service provided by a member of the NACVA should be done so in an ethical and competent manner that does not negatively impact the valuation profession in general or the NACVA in particular.

D. JURISDICTIONAL EXCEPTION

These Standards may differ from published governmental, judicial, accounting, or other authority that specifies valuation development or reporting procedures. In that event, the member should follow the applicable published authority or stated procedures. The other parts of these Standards shall continue in full force and effect.

IV. DEVELOPMENT STANDARDS

A. GENERAL

A member shall comply with these Development Standards when expressing a Conclusion of Value or a Calculated Value.

B. EXPRESSION OF VALUE

Value can be expressed as a single number or a range. A valuation analyst must avoid bias in the development of a Conclusion of Value or a Calculated Value.

C. RELIABILITY OF DATA

A member may rely upon information provided by any source without corroboration if disclosed in the report.

D. SCOPE LIMITATIONS

A member must consider scope limitations which affect the level of reliance on the information.

E. USE OF SPECIALIST

If the work of a third party specialist, such as a real estate or equipment appraiser, was relied upon in the engagement, a description of the reliance (if any) and any level of member's responsibility should be documented.

F. APPROACHES AND METHODS

Valuation methods are commonly categorized into the asset-based, market, income, or a combination of these approaches. Professional judgment is used to select the approaches and the methods that best indicate the value. Rules of thumb are acceptable as reasonableness checks, but should not be used as stand-alone method.

G. IDENTIFICATION

A member must define the assignment and determine the scope of work necessary by identifying the following:

1. Subject to be valued;
2. Interest to be valued;
3. Valuation date;
4. Purpose and use of the valuation;
5. Standard of value;
6. Premise of value;
7. Intended users;
8. Valuation approaches or methods;
9. Assumptions, limiting conditions and scope limitations;
10. Ownership size, nature, restrictions and agreements;
11. Sources of information; and
12. Other factors that may influence value when appropriate in the opinion of the member.

H. FUNDAMENTAL ANALYSIS

For a Conclusion of Value the member must obtain and analyze applicable information, as available, to accomplish the assignment, including:

1. The nature of the business and the history of the enterprise;
2. The economic outlook in general and the condition and outlook of the specific industry in particular;
3. The adjusted book value of the interest to be valued and the financial condition of the enterprise;
4. The earning capacity of the enterprise;
5. The dividend paying capacity of the enterprise;
6. Whether or not the enterprise has goodwill or other intangible value;
7. Prior sale of interests in the enterprise being valued;
8. Size of interest to be valued and its control, liquidity and marketability characteristics;

9. The market price of interests or enterprises engaged in the same or a similar line of business having interests actively traded in a free and open market;
10. Hypothetical conditions appropriate for the circumstances; and
11. All other information deemed by the member to be relevant.

V. REPORTING STANDARDS

A. GENERAL

A member shall comply with these Reporting Standards when expressing a Conclusion of Value or a Calculated Value. The objective of these Reporting Standards is to ensure consistency and quality of valuation reports issued by members of NACVA. The purpose of these Reporting Standards is to establish minimum reporting criteria.

B. FORM OF REPORT

The form of any particular report should be appropriate for the engagement, its purpose, its findings, and the needs of the decision-makers who receive and rely upon it. The purpose of these Reporting Standards is to establish minimum reporting criteria. The report may be written or oral.

C. CONTENTS OF REPORT

A report expressing a Conclusion of Value may be presented in either a Summary or Detailed Report. A Calculated Value must be presented in a Calculation Report. The member should disclose the report type (Detailed, Summary, or Calculation).

1. Detailed Reports

Detailed Reports must be coherent, supportable, and understandable. A detailed report should include, as applicable, the following sections titled using wording similar in content to that shown:

a) Letter of Transmittal
b) Table of Contents
c) Introduction, may include:

(1) Identification of the subject being valued
(2) Purpose and use of the valuation
(3) Description of the interest being valued
(4) Ownership size, nature, restrictions and agreements
(5) Valuation date
(6) Report date
(7) Standard of Value and its definition
(8) Identification of the premise of value
(9) Scope limitations
(10) Material matters considered
(11) Hypothetical conditions/assumptions and the reason for their inclusion
(12) Disclosure of subsequent events considered
(13) Reliance on a specialist
(14) Denial of access to essential data
(15) Jurisdictional exceptions and requirements

d) Sources of information
e) A description of the fundamental analysis (refer to IV(H)), may include:

(1) Historical financial statement summaries
(2) Adjustments to historical financial statements
(3) Adjusted financial statement summaries
(4) Projected/forecasted financial statements including the underlying assumptions
(5) Non-operating assets and liabilities
(6) Valuation approaches and method(s) considered by the member
(7) Valuation approaches and method(s) utilized by the member
(8) Other items that influence the valuation
(9) Site visit disclosure
(10) Reconciliation of estimates and conclusion of value

f) Identification of the assumptions and limiting conditions
g) Representation of the member, may include:

(1) Client identification and limitations on use of report
(2) Disclosure of any contingency fee
(3) A statement of financial interest
(4) Whether or not member is obligated to update the report
(5) Responsible member signature—the member who has primary responsibility for the determination of value must sign or be identified in the report

h) Qualifications of member
i) Appendices and exhibits

2. **Summary Reports**

Summary Reports should set forth the Conclusion of Value through an abridged version of the information that would be provided in a detailed report as outlined in (C.1.a) through (C.1.i) as applicable, and therefore, need not contain the same level of detail.

3. **Calculation Reports**

A Calculation Report should set forth the Calculated Value and should include the following information.

a) Introduction, may include:

   (1) Identification of the subject interest
   (2) Purpose and use of the calculation
   (3) Description of the interest being valued
   (4) Ownership size, nature, restrictions and agreements
   (5) Calculation date
   (6) Report date
   (7) Scope of work
   (8) Calculation Procedures
   (9) Hypothetical conditions/assumptions and the reason for their inclusion
   (10) Disclosure of subsequent events considered
   (11) Reliance on a specialist

b) Identification of the assumptions and limiting conditions
c) Representation of the member, adapted to a calculation report

   (1) Client identification and limitations on use of report
   (2) Disclosure of any contingency fee
   (3) A statement of financial interest
   (4) Whether or not member is obligated to update the report
   (5) Responsible member signature—the member who has primary responsibility for the determination of the calculated value must sign or be identified in the report

d) Appendices and exhibits
e) Purpose of the calculation procedures;
f) Statement that the expression of value is a Calculated Value; and
g) A general description of the calculation, including a statement similar to the following:

> "This Calculation Engagement did not include all the procedures required for a Conclusion of Value. Had a Conclusion of Value been determined, the results may have been different."

4. Statement that the Report is in Accordance with NACVA Standards

A statement similar to the following should be included in the member's report:

> "This analysis and report were completed in accordance with 'The National Association of Certified Valuators and Analysts' Professional Standards."

D. LITIGATION ENGAGEMENTS REPORTING STANDARDS

A valuation performed for a matter before a court, an arbitrator, a mediator, or other facilitator, or a matter in a governmental or administrative proceeding, is exempt from the reporting provisions of these standards. The reporting exemption applies whether the matter proceeds to trial or settles. This litigation waiver does not, however, relieve the member from complying with the Development Standards and all other standards promulgated by NACVA.

VI. BUSINESS VALUATION REVIEW

A. APPLICABILITY

These standards are applicable in an engagement to review a report that valued a ***business, business ownership interest, security, or intangible asset***. The General and Ethical standards apply to all professional services performed by members.

1. Under these Review Standards, if the member provides a Conclusion of Value or Calculated Value as a part of the Review of another valuation analyst's work, the member must follow NACVA's General Business Valuation Standards as outlined in paragraphs III. through V. above. In the context of preparing the Conclusion of Value or Calculated Value, the Litigation Engagement Reporting Standards as outlined in (paragraph V. D.) applies.

2. If the member does not provide a Conclusion of Value or Calculated Value as part of the Business Valuation Review, the member need only provide an opinion, including the basis and reason for the opinion, as to whether the report under review is appropriate and not misleading within the context of the requirements applicable to that work, stating the reasons for any disagreement, following the Review Standards below. The member can provide such opinion in a written or an oral Review Report.

B. GENERAL

Business Valuation Review is the act or process of developing and communicating a member's opinion regarding the credibility of the work product of another valuation analyst. It is a type of service, whether in written or oral form, intended to provide to identified users that the report is credible.

A Business Valuation Review opinion is not a Conclusion of Value or Calculated Value.

A member should not issue a Conclusion of Value or a Calculated Value, orally or in writing, solely as a result of performing a Business Valuation Review.

A member must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased nor advocate for a client's objectives.

The scope of a Business Valuation Review should be sufficient to provide a member a basis for rendering a credible Business Valuation Review opinion regarding the relevance, reliability, completeness, and reliable application of the business valuation methodology under review, and its consistency with generally accepted valuation practices.

Consistent with the member's scope of work, the member is required to develop an opinion as to the completeness, accuracy, adequacy, relevance, and reasonableness of the report, given law, regulations, or intended user requirements applicable to that work.

When the scope of work includes the member developing his or her own Conclusion of Value or Calculated Value, the member must comply with the Professional Standards applicable to the development of that opinion.

A member's findings and conclusions should be stated in the form of an opinion as of the completion date of the Business Valuation Review engagement.

1. **Types of Opinions**

   When necessary for credible assignment results in the review of a report, the member must:

   a) Develop an opinion as to whether the report is appropriate and not misleading within the context of the requirements applicable to that work; and
   b) Develop the reasons for any disagreement.

VII. REVIEW ENGAGEMENT DEVELOPMENT STANDARDS

A. IDENTIFICATION

A member must define the assignment and scope of the work necessary by identifying the following:

1. The client and other intended users;
2. The purpose and intended use of the member's opinions and conclusions;
3. Whether the assignment includes the development of the member's own opinion of value or review opinion related to the work under review;
4. The ownership interest that is the subject of the work under review;
5. The date of the work under review and the effective date of the opinions or conclusions of the work under review;
6. The valuation analyst(s) who completed the work under review, unless the identity is withheld by the client;
7. The physical, legal, and economic characteristics of the business, business ownership interest, security, or intangible asset and market area of the work under review;
8. The effective date of the member's opinions and conclusions; and
9. Any hypothetical conditions/assumptions necessary in the review.

B. FUNDAMENTAL ANALYSIS

A member should make an analysis as defined by the scope of the work of the business valuation approaches, methods, and procedures used in the report under review. This may include whether the analytical procedures and supporting documentation incorporated in the analysis to arrive at the Conclusion of Value or Calculated Value is complete, accurate, adequate, relevant, reliable, appropriate, and reasonable as reported, as well as:

1. Complete research and analyses necessary to produce a credible Business Valuation Review;
2. Apply the Business Valuation Review methods and techniques that are necessary for credible engagement results;
3. Develop an opinion as to whether the analyses are appropriate and credible within the context of the requirements of the review engagement;
4. Develop an opinion as to whether the opinions and conclusions are credible within the context of the requirements applicable to that work; and
5. Develop the reasons for any disagreement.

VIII. REVIEW ENGAGEMENT REPORTING STANDARDS

A. GENERAL

Reporting the results of a Business Valuation Review must be separate from the work under review and must clearly and accurately contain sufficient information to enable the intended users of the Business Valuation Review to understand the report properly.

A Business Valuation Review Report should contain the following:

1. **An Introduction**

   a) State the identity of the client and any intended users, by name or type;
   b) State the purpose and intended use of the Business Valuation Review;
   c) State the date of the work under review, the effective date of the Business Valuation Review, and the date of the valuation review report;
   d) Identify valuation analyst(s) who completed the work under review, unless the identity is withheld by the client; and
   e) Identify the report under review, including the ownership interest.

2. **An Opinion**

   When necessary for credible assignment results in the review of a report, the member must:

   a) State an opinion, including the basis and reason for the opinion offered, as to whether the report is appropriate and not misleading within the context of the requirements applicable to that work; and
   b) State the reasons for any disagreement.

3. **If outside the Business Valuation Review, the member develops his or her own Conclusion of Value or Calculated Value**

   The Business Valuation Review Report should contain the following:

   a) State which information, analyses, opinions, and conclusions in the work under review that the member accepted as credible and used in developing the member's Conclusion of Value or Calculated Value;
   b) Summarize any additional information relied on and the reasoning for the member's Conclusion of Value, Calculated Value, or review opinion related to the work under review; and
   c) Clearly and conspicuously state all hypothetical conditions/assumptions connected with the member's Conclusion of Valuation, Calculated Value, or review opinion related to the work under review and state whether their use might have affected the assignment results.

4. **Business Valuation Review Assumptions and Limiting Conditions**

   a) Clearly and accurately disclose all assumptions and hypothetical conditions used in the assignment.

5. **Sources of Information Relied Upon by the Member**

6. **Representation of the Member**

7. **Appendix and/or Exhibits**

8. **Qualifications of Member**

To the extent that it is both possible and appropriate, an oral Business Valuation Review Report must address the substantive matters set forth in NACVA's Professional Business Valuation Review Standards.

IX. INTERNATIONAL GLOSSARY

The International Glossary of Business Valuation Terms was developed by the valuation organizations identified in the Glossary. These definitions should be used by members (see Appendix) unless preempted by Regulatory authority.

X. EFFECTIVE DATE

These Professional Standards are effective for engagements accepted on or after August 1, 2015. Earlier adoption by members is encouraged. Revised to include Review Standards.

APPENDIX

APPENDIX

International Glossary of Business Valuation Terms

(1) To enhance and sustain the quality of business valuations for the benefit of the profession and its clientele, the below identified societies and organizations have adopted the definitions for the terms included in this glossary.

The performance of business valuation services requires a high degree of skill and imposes upon the valuation professional a duty to communicate the valuation process and conclusion in a manner that is clear and not misleading. This duty is advanced through the use of terms whose meanings are clearly established and consistently applied throughout the profession.

If, in the opinion of the business valuation professional, one or more of these terms needs to be used in a manner that materially departs from the enclosed definitions, it is recommended that the term be defined as used within that valuation engagement.

(2) This glossary has been developed to provide guidance to business valuation practitioners by further memorializing the body of knowledge that constitutes the competent and careful determination of value and, more particularly, the communication of how that value was determined.

(3) Departure from this glossary is not intended to provide a basis for civil liability and should not be presumed to create evidence that any duty has been breached.

American Institute of Certified Public Accountants
American Society of Appraisers
Canadian Institute of Chartered Business Valuators
National Association of Certified Valuators and Analysts
The Institute of Business Appraisers

Adjusted Book Value Method:
A method within the asset approach whereby all assets and liabilities (including off-balance sheet, intangible, and contingent) are adjusted to their fair market values. (NOTE: In Canada on a going concern basis.)

Adjusted Net Asset Method:
See **Adjusted Book Value Method**.

Appraisal:
See **Valuation**.

Appraisal Approach:
See **Valuation Approach**.

Appraisal Date:
See **Valuation Date**.

Appraisal Method:
See **Valuation Method**.

Appraisal Procedure:
See **Valuation Procedure**.

Arbitrage Pricing Theory:
A multivariate model for estimating the cost of equity capital, which incorporates several systematic risk factors.

Asset (Asset-Based) Approach:
A general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.

Beta:
A measure of systematic risk of a stock; the tendency of a stock's price to correlate with changes in a specific index.

Blockage Discount:
An amount or percentage deducted from the current market price of a publicly traded stock to reflect the decrease in the per share value of a block of stock that is of a size that could not be sold in a reasonable period of time given normal trading volume.

Book Value:
See **Net Book Value**.

Business:
See **Business Enterprise**.

Business Enterprise:
A commercial, industrial, service, or investment entity (or a combination thereof) pursuing an economic activity.

Business Risk:
The degree of uncertainty of realizing expected future returns of the business resulting from factors other than financial leverage. See **Financial Risk**.

Business Valuation:
The act or process of determining the value of a business enterprise or ownership interest therein.

Capital Asset Pricing Model (CAPM):
A model in which the cost of capital for any stock or portfolio of stocks equals a risk-free rate plus a risk premium that is proportionate to the systematic risk of the stock or portfolio.

Capitalization:
A conversion of a single period of economic benefits into value.

Capitalization Factor:
Any multiple or divisor used to convert anticipated economic benefits of a single period into value.

Capitalization of Earnings Method:
A method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate.

Capitalization Rate:
Any divisor (usually expressed as a percentage) used to convert anticipated economic benefits of a single period into value.

Capital Structure:
The composition of the invested capital of a business enterprise, the mix of debt and equity financing.

Cash Flow:
Cash that is generated over a period of time by an asset, group of assets, or business enterprise. It may be used in a general sense to encompass various levels of specifically defined cash flows. When the term is used, it should be supplemented by a qualifier (for example, "discretionary" or "operating") and a specific definition in the given valuation context.

Common Size Statements:
Financial statements in which each line is expressed as a percentage of the total. On the balance sheet, each line item is shown as a percentage of total assets, and on the income statement, each item is expressed as a percentage of sales.

Control:
The power to direct the management and policies of a business enterprise.

Control Premium:
An amount or a percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise to reflect the power of control.

Cost Approach:
A general way of determining a value indication of an individual asset by quantifying the amount of money required to replace the future service capability of that asset.

Cost of Capital:
The expected rate of return that the market requires in order to attract funds to a particular investment.

Debt-Free:
***We discourage the use of this term*.** See **Invested Capital**.

Discount for Lack of Control:
An amount or percentage deducted from the pro rata share of value of 100% of an equity interest in a business to reflect the absence of some or all of the powers of control.

Discount for Lack of Marketability:
An amount or percentage deducted from the value of an ownership interest to reflect the relative absence of marketability.

Discount for Lack of Voting Rights:
An amount or percentage deducted from the per share value of a minority interest voting share to reflect the absence of voting rights.

Discount Rate:
A rate of return used to convert a future monetary sum into present value.

Discounted Cash Flow Method:
A method within the income approach whereby the present value of future expected net cash flows is calculated using a discount rate.

Discounted Future Earnings Method:
A method within the income approach whereby the present value of future expected economic benefits is calculated using a discount rate.

Economic Benefits:
Inflows such as revenues, net income, net cash flows, etc.

Economic Life:
The period of time over which property may generate economic benefits.

Effective Date:
See **Valuation Date**.

Enterprise:
See **Business Enterprise**.

Equity:
The owner's interest in property after deduction of all liabilities.

Equity Net Cash Flows:
Those cash flows available to pay out to equity holders (in the form of dividends) after funding operations of the business enterprise, making necessary capital investments, and increasing or decreasing debt financing.

Equity Risk Premium:
A rate of return added to a risk-free rate to reflect the additional risk of equity instruments over risk free instruments (a component of the cost of equity capital or equity discount rate).

Excess Earnings:
That amount of anticipated economic benefits that exceeds an appropriate rate of return on the value of a selected asset base (often net tangible assets) used to generate those anticipated economic benefits.

Excess Earnings Method:
A specific way of determining a value indication of a business, business ownership interest, or security determined as the sum of a) the value of the assets derived by capitalizing excess earnings, and b) the value of the selected asset base. Also frequently used to value intangible assets. See also **Excess Earnings**.

Fair Market Value:
The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts. (NOTE: in Canada, the term "price" should be replaced with the term "highest price.")

Fairness Opinion:
An opinion as to whether or not the consideration in a transaction is fair from a financial point of view.

Financial Risk:
The degree of uncertainty of realizing expected future returns of the business resulting from financial leverage. See **Business Risk**.

Forced Liquidation Value:
Liquidation value, at which the asset or assets are sold as quickly as possible, such as at an auction.

Free Cash Flow:
***We discourage the use of this term*.** See **Net Cash Flow**.

Going Concern:
An ongoing operating business enterprise.

Going Concern Value:
The value of a business enterprise that is expected to continue to operate into the future. The intangible elements of Going Concern Value result from factors such as having a trained work force, an operational plant, and the necessary licenses, systems and procedures in place.

Goodwill:
That intangible asset arising as a result of name, reputation, customer loyalty, location, products and similar factors not separately identified.

Goodwill Value:
The value attributable to goodwill.

Guideline Public Company Method:
A method within the market approach whereby market multiples are derived from market prices of stocks of companies that are engaged in the same or similar lines of business and that are actively traded on a free and open market.

Income (Income-Based) Approach:
A general way of determining a value indication of a business, business ownership interest, security or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount.

Intangible Assets:
Non-physical assets such as franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities and contracts (as distinguished from physical assets) that grant rights and privileges and have value for the owner.

Internal Rate of Return:
A discount rate at which the present value of the future cash flows of the investment equals the cost of the investment.

Intrinsic Value:
The value that an investor considers, on the basis of an evaluation or available facts, to be the "true" or "real" value that will become the market value when other investors reach the same conclusion. When the term applies to options, it is the difference between the exercise price or strike price of an option and the market value of the underlying security.

Invested Capital:
The sum of equity and debt in a business enterprise. Debt is typically a) all interest-bearing debt, or b) long-term interest-bearing debt. When the term is used, it should be supplemented by a specific definition in the given valuation context.

Invested Capital Net Cash Flows:
Those cash flows available to pay out to equity holders (in the form of dividends) and debt investors (in the form of principal and interest) after funding operations of the business enterprise and making necessary capital investments.

Investment Risk:
The degree of uncertainty as to the realization of expected returns.

Investment Value:
The value to a particular investor based on individual investment requirements and expectations. (NOTE: in Canada, the term used is "Value to the Owner.")

Key Person Discount:
An amount or percentage deducted from the value of an ownership interest to reflect the reduction in value resulting from the actual or potential loss of a key person in a business enterprise.

Levered Beta:
The beta reflecting a capital structure that includes debt.

Limited Appraisal:
The act or process of determining the value of a business, business ownership interest, security or intangible asset with limitations in analyses, procedures or scope.

Liquidity:
The ability to quickly convert property to cash or pay a liability.

Liquidation Value:
The net amount that would be realized if the business is terminated and the assets are sold piecemeal. Liquidation can be either "orderly" or "forced."

Majority Control:
The degree of control provided by a majority position.

Majority Interest:
An ownership interest greater than 50% of the voting interest in a business enterprise.

Market (Market-Based) Approach:
A general way of determining a value indication of a business, business ownership interest, security or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities or intangible assets that have been sold.

Market Capitalization of Equity:
The share price of a publicly traded stock multiplied by the number of shares outstanding.

Market Capitalization of Invested Capital:
The market capitalization of equity plus the market value of the debt component of invested capital.

Market Multiple:
The market value of a company's stock or invested capital divided by a company measure (such as economic benefits, number of customers).

Marketability:
The ability to quickly convert property to cash at minimal cost.

Marketability Discount:
See **Discount for Lack of Marketability**.

Merger and Acquisition Method:
A method within the market approach whereby pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business.

Mid-Year Discounting:
A convention used in the Discounted Future Earnings Method that reflects economic benefits being generated at midyear, approximating the effect of economic benefits being generated evenly throughout the year.

Minority Discount:
A discount for lack of control applicable to a minority interest.

Minority Interest:
An ownership interest less than 50 percent of the voting interest in a business enterprise.

Multiple:
The inverse of the capitalization rate.

Net Book Value:
With respect to a business enterprise, the difference between total assets (net of accumulated depreciation, depletion, and amortization) and total liabilities as they appear on the balance sheet (synonymous with Shareholder's Equity). With respect to a specific asset, the capitalized cost less accumulated amortization or depreciation as it appears on the books of account of the business enterprise.

Net Cash Flows:
When the term is used, it should be supplemented by a qualifier. See **Equity Net Cash Flows** and **Invested Capital Net Cash Flows**.

Net Present Value:
The value, as of a specified date, of future cash inflows less all cash outflows (including the cost of investment) calculated using an appropriate discount rate.

Net Tangible Asset Value:
The value of the business enterprise's tangible assets (excluding excess assets and non-operating assets) minus the value of its liabilities.

Non-Operating Assets:
Assets not necessary to ongoing operations of the business enterprise. (NOTE: in Canada, the term used is "Redundant Assets.")

Normalized Earnings:
Economic benefits adjusted for nonrecurring, non-economic or other unusual items to eliminate anomalies and/or facilitate comparisons.

Normalized Financial Statements:
Financial statements adjusted for non-operating assets and liabilities and/or for non-recurring, non-economic or other unusual items to eliminate anomalies and/or facilitate comparisons.

Orderly Liquidation Value:
Liquidation value at which the asset or assets are sold over a reasonable period of time to maximize proceeds received.

Premise of Value:
An assumption regarding the most likely set of transactional circumstances that may be applicable to the subject valuation (e.g., going concern, liquidation).

Present Value:
The value, as of a specified date, of future economic benefits and/or proceeds from sale, calculated using an appropriate discount rate.

Portfolio Discount:
An amount or percentage deducted from the value of a business enterprise to reflect the fact that it owns dissimilar operations or assets that do not fit well together.

Price/Earnings Multiple:
The price of a share of stock divided by its earnings per share.

Rate of Return:
An amount of income (loss) and/or change in value realized or anticipated on an investment, expressed as a percentage of that investment.

Redundant Assets:
See **Non-Operating Assets**.

Report Date:
The date conclusions are transmitted to the client.

Replacement Cost New:
The current cost of a similar new property having the nearest equivalent utility to the property being valued.

Reproduction Cost New:
The current cost of an identical new property.

Required Rate of Return:
The minimum rate of return acceptable by investors before they will commit money to an investment at a given level of risk.

Residual Value:
The value as of the end of the discrete projection period in a discounted future earnings model.

Return on Equity:
The amount, expressed as a percentage, earned on a company's common equity for a given period.

Return on Investment:
See **Return on Invested Capital** and **Return on Equity**.

Return on Invested Capital:
The amount, expressed as a percentage, earned on a company's total capital for a given period.

Risk-Free Rate:
The rate of return available in the market on an investment free of default risk.

Risk Premium:
A rate of return added to a risk-free rate to reflect risk.

Rule of Thumb:
A mathematical formula developed from the relationship between price and certain variables based on experience, observation, hearsay or a combination of these; usually industry specific.

Special Interest Purchasers:
Acquirers who believe they can enjoy post-acquisition economies of scale, synergies or strategic advantages by combining the acquired business interest with their own.

Standard of Value:
The identification of the type of value being used in a specific engagement (e.g., fair market value, fair value, investment value).

Sustaining Capital Reinvestment:
The periodic capital outlay required to maintain operations at existing levels, net of the tax shield available from such outlays.

Systematic Risk:
The risk that is common to all risky securities and cannot be eliminated through diversification. The measure of systematic risk in stocks is the beta coefficient.

Tangible Assets:
Physical assets (such as cash, accounts receivable, inventory, property, plant and equipment, etc.).

Terminal Value:
See **Residual Value**.

Transaction Method:
See **Merger and Acquisition Method.**

Unlevered Beta:
The beta reflecting a capital structure without debt.

Unsystematic Risk:
The risk specific to an individual security that can be avoided through diversification.

Valuation:
The act or process of determining the value of a business, business ownership interest, security or intangible asset.

Valuation Approach:
A general way of determining a value indication of a business, business ownership interest, security or intangible asset using one or more valuation methods.

Valuation Date:
The specific point in time as of which the valuator's conclusion of value applies (also referred to as "Effective Date" or "Appraisal Date").

Valuation Method:
Within approaches, a specific way to determine value.

Valuation Procedure:
The act, manner, and technique of performing the steps of an appraisal method.

Valuation Ratio:
A fraction in which a value or price serves as the numerator and financial, operating, or physical data serves as the denominator.

Value to the Owner:
See **Investment Value**.

Voting Control:
De jure control of a business enterprise.

Weighted Average Cost of Capital (WACC):
The cost of capital (discount rate) determined by the weighted average, at market value, of the cost of all financing sources in the business enterprise's capital structure.

PRACTICE POINTER

When will a Valuation Analyst use a Conclusion of Value? When will a Valuation Analyst use a Calculated Value?

A Conceptual Framework to Start With

Engagement Type	Conclusion of Value	Calculated Value
Tax	Y	N
Tax Planning	N	Y
Litigation Expert	Y	Y
Litigation Consultant	N	Y
Transactional	Y	Y
Transactional (3rd Party)	Y	N
DOL	Y	N
Fairness Opinion	Y	N

BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 8

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 8: Professional Standards

1. What are the types of Valuation Services recognized by the Professional Standards?

   a. The Professional Standards recognize two types of services, Conclusion of Value and Calculated Value.
   b. The Professional Standards recognize two types of services, Valuation Engagements and Calculation Engagements.
   c. The Professional Standards recognize three types of services, Conclusion of Value Services, Opinion of Value Services, and Estimate of Value Services.
   d. The Professional Standards recognize two types of services, Conclusion of Value Services and Opinion of Value Services.

2. The Professional Standards are applicable when valuing the following:

   a. Real estate
   b. Intangible asset
   c. Business ownership interest
   d. Both b and c

3. The Professional Standards are:

   a. Rules-based
   b. Applicable to economic damages reports
   c. Not applicable to valuations performed for transactions (M&A engagements)
   d. Principles-based

4. If I am also a member of ASA must I still also follow the Professional Standards in a Valuation Engagement?

   a. No. As a member, you may select which organization's standards are most appropriate to the valuation you are performing and write your report in the manner prescribed by that organization.
   b. No. This would confuse the requestor of the report.
   c. Yes. If you are a member of more than one certifying organization with standards, you must adhere to all of them as required by that organization.
   d. Yes. When the analyst is expressing a range of values, it is necessary to document the Professional Standards definition of a range of values.

5. Under the Professional Standards, when expressing a Conclusion of Value, the value amount may be communicated :

   a. As a range of values
   b. As a single number
   c. Orally
   d. All of the above

6. When performing Other Services as defined by the Professional Standards, all of the Professional Standards shall apply EXCEPT for:

   a. General and Ethical Standards
   b. Development Standards
   c. Reporting Standards
   d. Both a and b
   e. None of the above, all standards apply
   f. Both b and c

7. A member may perform a Valuation Engagement for a contingent fee when expressing a Conclusion of Value.

   a. True
   b. False

8. According to the Development Standards, a member must identify all of the following EXCEPT for:

   a. Subject to be valued
   b. Purpose and use of the valuation
   c. Premise of value
   d. Member's industry experience

9. A member shall NOT express either a Conclusion of Value or a Calculated Value unless the member and the member's firm state whether or not the member or the member's firm has a financial interest in the subject of the engagement.

   a. True
   b. False

10. The Reporting Standards would NOT be exempt for a Valuation Engagement for what purpose?

    a. Gift tax
    b. Family law
    c. Shareholder oppression action
    d. Breach of contract litigation

11. A report expressing a Conclusion of Value may be presented in a:

    a. Summary Report
    b. Detailed Report
    c. Restricted Report
    d. Letter Report
    e. Both a and b

12. The primary difference between a Valuation Engagement and a Calculation Engagement is that:

   a. A Calculation Engagement is a shorter form of a Valuation Engagement
   b. A Calculation Engagement can result in a range of values whereas a Valuation Engagement can only result in a single value
   c. The results of a Valuation Engagement can only be presented in a Detailed Report while the results of a Calculation Engagement can only be presented in a Summary Report
   d. A Valuation Engagement requires that a member applies valuation approaches and methods deemed in their professional judgment to be appropriate, whereas a Calculation Engagement occurs when the client and member agree to specific valuation approaches, methods, and the extent of selected procedures

Chapter 8 Bonus Questions

1. Why isn't Fair Value defined in the glossary?

2. Why doesn't the Professional Standards endorse USPAP?

CHAPTER NINE

DEFINING THE VALUATION ENGAGEMENT AND OBTAINING THE NECESSARY INFORMATION

I. DEFINING THE VALUATION ENGAGEMENT

Defining the valuation engagement is the initial step in laying the foundation for the engagement. By considering the following items, the analyst can establish the necessary parameters for defining the engagement.

A. ENGAGEMENT ACCEPTANCE

The first and probably most critical issue a Valuation Analyst must address is whether or not to accept the valuation engagement. In evaluating whether or not to accept a valuation engagement, the analyst must consider any real or presumed conflicts of interest that would preclude the analyst from accepting the engagement. This is especially important for CPA members of the AICPA, considering the aspects of changes to the Professional Ethics Division Interpretations and Rulings.[1]

> *"Independence would be impaired if a member performs an appraisal, valuation, or actuarial service where the results of the service, individually or in the aggregate, would be material to the financial statements and the appraisal, valuation, or actuarial service involves a significant degree of subjectivity."*

Preparing an actuarial valuation of a client's pension or post-employment benefit plan liabilities generally does not require a significant degree of subjectivity because this service is based on a single prescribed methodology that produces reasonably consistent results. Therefore, such services would not impair independence provided all significant assumptions and matters of judgment are determined or approved by the client and the client is in a position to have an informed judgment on, and accepts responsibility for, the results of the service.

> "*Valuations performed in connection with, for example, business combinations or appraisals of assets generally are not based on a single methodology and, therefore, the results can vary widely. Accordingly, if these services produce results that are material to the financial statements, independence would be impaired. Appraisal,*

[1] New interpretations No. 101-03 to Rule 101 effective for new services after October 1, 2003 and services in existence at December 31, 2003 do not impair independence if completed by December 31, 2004, www.aicpa.org,

> *valuation, and actuarial services performed for non-financial statement purposes would not impair independence*."

In deciding whether or not to accept a valuation engagement for a client with whom you are already involved, ask yourself some questions. Your answers will tell you if you can accept the engagement or whether you must recommend another certified member for the task.

1. Will this valuation be material—individually or in the aggregate—to the financial statements of my client? If the answer is yes, a conflict exists. Valuation requires some degree of subjectivity, and the engagement should be declined. Independence and objectivity would be deemed impaired if the results of this engagement would be material to the financial statements and the valuation would involve a significant degree of subjectivity. A valuation performed for the combining of two companies would significantly affect their financial statements, and would be considered an ethical impairment for the CPA and not an objective engagement for most other valuation analysts.

2. Is there more than one method of valuation which I could or would use? A valuation performed which uses more than one method, or a combination of methods, or a weighting of methods, or an averaging of methods or for which there is not one universally accepted method to use is subjective by nature. The analyst could argue the meaning of 'significant degree' in the definition above. An actuarial valuation, wherein a single prescribed methodology produces reasonably consistent results no matter who does the work, could be argued to be an insignificant issue, and therefore allowed. Business valuation by its nature requires some subjectivity, and if the valuation impacts the financial statement of the client, it involves an ethical dilemma, and must be declined.

3. What is the purpose of this engagement? Valuations performed for tax planning, tax compliance, estate planning and/or gifting, or for a divorce are not usually considered material to the financial statements of the client and should not cause a valuation bias. Generally, accepting this kind of engagement—all other issues being equal—is ethically acceptable.

4. In a litigation situation, will I be viewed as biased because I have done work for this client? In litigation, objectivity is very important. Remember, lawyers are advocates for their client, and often expect the valuation analyst to be on 'their' side. This creates a conflict and an ethical dilemma. A valuer's conclusion of value is to be independent and objective. If your valuation opinion must be tailored to fit into a specific set of parameters for the case, you should probably decline the engagement and refer. Do not be a hired gun.

5. I am a CPA and I audit this client's business. In a large firm, it is possible the auditing is done by another division or another partner. Although that fact would probably mean your conclusion of value could be independent, chances are your objectivity would be deemed impaired. Decline the engagement except if performed for one of the non-financial reasons: tax, gifting, or divorce. Or, if feasible, withdraw yourself and your company completely from the audit, and document your reasons for withdrawing.

6. Is there some monetary gain beyond the valuation fee I stand to gain if I come out with the "right" value? Or - not gain if I come up with the "wrong" value? A monetary gain, other than the fee charged, creates an ethics issue and would be an impairment.

7. Could I lose this client if he/she did not 'like' my conclusion of value? If yes, what affect does the loss have on my practice? In a marital dissolution, both the moneyed and un-moneyed spouse can be unhappy with the outcome. Will you be blamed and lose the client? This is not an ethical issue but a practical issue. Its answer is important to your business.

8. I am a CPA and valuation is a non-attest service I would do for my client. Does my client have the competence and technical skills to meet the prerequisites required to perform any of these services themselves and therefore manage my service in this area? Generally speaking, the answer is going to be no, or they likely would not ask you to do the valuation. If the valuation will require assumptions (especially financial ones) to be made by the client which they do not have the skill to do, your should refer the valuation work, so that you may provide your client with the management advice so they can make reasoned decisions in support of the valuation.

9. Can I do the valuation and withdraw myself (and my company) from the audit? If you cannot or do not wish to withdraw from an audit, then refer the valuation.

The accounting and financial profession's foundation is objectivity and independence. Whether or not one is a CPA, if the answers to the questions posed above, or others germane to your practice that you think of yourself, are such that you believe your objectivity and independence may be compromised, do not accept the engagement. If there is any doubt, a nagging question remains, refer the engagement to another certified analyst.

The SEC prohibits auditors of SEC registered companies from providing: appraisal or valuation services, fairness opinions, or contributions-in-kind reports.

B. DEFINE THE PURPOSE OF THE VALUATION ENGAGEMENT

This procedure is necessary to properly assess the relative importance of each of several factors to be considered in the valuation process.

Defining the purpose of the valuation helps to develop the analyst's general valuation approach by establishing the standard of value. The purpose of the valuation engagement will also have a material affect on the type of valuation report that should be issued.

C. DEFINE THE OWNERSHIP INTEREST TO BE VALUED

This is a required step in order to determine the extent of the analyst's valuation procedures that may be necessary to adequately complete the assigned task. For example, the type of ownership interest may have a material impact on the scope of the engagement. This can be demonstrated by the fact that historical balance sheet information (Statements of Assets, Liabilities, and Equity) is rarely available for sole proprietorships, whereas this information is usually available for corporations. One of the biggest issues, when valuing sole proprietorships, is whether or not sufficient data is available. If the information is unavailable, the analyst has to decide if the information is necessary. If it is necessary, alternative methods of performing certain analyses should be considered.

Defining the ownership interest is also necessary in order to determine if discounts or premiums are applicable and for the communication of specific value estimates in preparing the valuation report.

D. ASCERTAIN WHETHER OR NOT NECESSARY INFORMATION IS AVAILABLE

Before a valuation engagement is begun, the analyst should determine if sufficient relevant data is readily available and if not, determine what will be required to obtain this information.

Any additional time that is required to obtain necessary relevant data should be anticipated and any incremental costs associated with obtaining such data should be provided for in the engagement letter.

The lack of preferred data concerning the subject company and the industry in which it operates will not necessarily preclude the analyst from accepting the engagement. However, it will affect the cost of the engagement and the type of valuation opinion that will be issued.

E. ESTABLISH THE VALUATION DATE

The effective date of the valuation will almost always be different from the date that the report is issued. The effective date of the report is determined by the purpose of the valuation. For example, the effective date for an estate tax valuation will be either the date of death or the sixth month alternative date. The effective date for a divorce valuation may be the date of the divorce, the separation date or another date that is agreed to by the parties.

It should be noted that when the effective date of the valuation is inconsistent with the fiscal year end of the subject company, additional procedures might be necessary. Any costs associated with additional procedures should be anticipated and provided for in the engagement letter.

F. OBTAIN AN ENGAGEMENT LETTER

The need for issuing a properly written engagement letter cannot be over emphasized. After a sufficient understanding of the details for the valuation engagement has been developed, the analyst contracts with the client by using an engagement letter. The engagement letter documents and communicates the particulars of the engagement as understood by the client and the valuation analyst. The engagement letter does so by clearly delineating the scope of the services the analyst will provide, the effective valuation date, the purpose of the valuation, the type of ownership interest to be valued, the type of report to be issued, the standard and premise of value on which the valuation is to be based, and the terms of payment for the services to be rendered.

NOTE:
Adler-Cottino Wood Furniture, Inc., is set forth in this manual as a guide to performing a full valuation and issuing a full written report. There are many steps involved with doing such a valuation, and the analyst must take all due caution to ensure a logical outcome and a sound conclusion of value.

II. EFFECTIVE RESEARCH

We all know that we live in the information age; that we are bombarded with data from all directions. However, one of the keys to a successful valuation/litigation career is the ability to quickly zero in on quality, *relevant* information. Should you research online or in your library? How do you evaluate the quality of the information you retrieve—is it current or outdated—is it accepted methodology correct or an unproven theory?

A. RESEARCH—THE BASICS

If the main thrust of your preferred mode of research is through searching on the **Internet**, you must assess the quality of the information you are accessing. Before relying on and citing an Internet source in your report, you should (at a minimum) **perform the following due diligence steps:**

1. Determine the name of the author and publisher using free online utilities (access at DomainTools.com):E

   a) Email Dossier—investigates email addresses
   b) Domain Dossier—investigates IP addresses
   c) Ping—see if a host is accessible

2. Ascertain the credentials of the persons/entities in Step 1

   Google the person/entity and verify the credentials from various sources

   a) Find other publications by author or third party articles citing the author
   b) Verify credentials with professional organizations, universities, etc.

3. Try to determine the date of the posting—Google advanced search can be of assistance with choices of 3 months, 6 months, 1 year and anytime updated web referencing
4. Try to verify the information with a secondary source

B. RESEARCH

A thorough understanding of the court systems, type of law, types of legal documents issued by the courts and citations is required for effective research in the litigation support and business valuation arena. Although valuators are not normally attorneys and do not practice law, it is imperative that one understands these factors that might be influencing the valuator’s opinion.

1. Court Systems

a) State Systems—Usually all states have three levels:

   (1) Trial Court
   (2) Appellate Court
   (3) High (Supreme) Court

Most state Appellate and state Supreme Court cases are now found on the Internet.

b) Federal Systems—Again there are three general levels:

(1) Trial Court (known as U.S. District Courts)
(2) Appellate Courts (known as U.S. Court of Appeals)
(3) The U.S. Supreme Court

Each state has a minimum of one U.S. District Court. The more populous states have several U.S. District Courts.

There are 11 Circuit Courts, a DC Appeals Court, and a Federal Circuit Court.

Different interpretations of the law between the Circuit Courts are common; therefore, knowing which Appellate Court has authority over the case at hand and its previous decisions regarding your similar facts and circumstances is imperative.

There are also special courts such as the U.S. Tax Court.

2. Types of Law

a) Common Law—Laws that carried over from England (established by Henry II) enacted by England's Circuit Judges and modified over the years by the judiciary. An example is the Law of Trusts, developed by common law.
b) Statutory Law—Laws passed by a legislative body and signed by an executive (governor or president).
c) Administrative Law—State or Federal Agency rules and regulations (prime examples is a Revenue Ruling issued by the IRS).

3. Types of Court Issued Legal Documents

a) Opinions—Opinions may be oral or written. Full written opinions are usually reserved for cases where the judge(s) decide the issue(s) are important and deserve an explanation. Memorandum Opinions are usually relatively short and cover narrower issues. Normally only one judge is considered an opinion's author, but in the case of the higher level courts, there will be "majority" and "dissenting" opinions where more than one judge weighs in on either side.

In the U.S. Tax Court, there are "regular" decisions and "memorandum" decisions. The regular decisions are those that are considered precedents and are usually given more weight than memorandum decisions. Memorandum decisions are usually issued when the judge believes that issues of interpretation of facts or application of existing law are in question. When the IRS issues an acquiescence or a non-acquiescence, it is only in response to a regular decision, not a memorandum decision.

b) Orders—While most non-lawyers only look at the various opinions, the Order is actually more important. An Order directs the parties to specified actions. If an Order is ignored or violated, it can result in Contempt of Court charges.

c) Citations—A similar format followed for all cases

(1) Case name
(2) Volume number of the publishing reporter
(3) Name of the reporter
(4) Page of the reporter

In some cases the year of the decision is added at the end in parentheses.

All regular U.S. Tax Court decisions are printed by the government printing office (GPO). The GPO does not publish memorandum decisions; however, those are published by private publishers. The regular decisions are cited as T.C. while the memorandum decisions are cited as T.C. Memo or TCM.

An example of a regular Tax Court citation would be as follows:

a) *A.A. Emmerson,* 44 T.C. 86 (1965)

(1) *Emmerson* is the name of the case
(2) 44 is the volume in the *Reports of the United States Tax Court* as printed by the GPO
(3) 86 is the decision number
(4) 1965 is the year of the opinion

An example of a memorandum Tax Court citation would be as follows:

b) *Estate of Davis*, 110 T.C. Memo 530

(1) *Davis* is the name of the case
(2) 110 is the volume of the CCH reporter (GPO will not publish memo decisions)
(3) 530 is the page number in the reporter

It is important when doing any kind of legal research that you "Shepardize" the case by utilizing Shepard's Citations. This resource will provide an analysis of the treatment of the case by subsequent cases. It can be utilized not only for cases, but also for statutes and other legal authorities (law reviews).

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SAMPLE 1

January 15, 2006

Mr. David Boria, President & CEO
Adler-Cottino Wood Furniture Inc.
1111 S. Birch Highway
Atlanta, GA 30309

RE: Engagement for Business Valuation Services

Dear Mr. Harrison:

This letter will confirm our understanding of the arrangements for our valuation of the following company: Adler-Cottino Wood Furniture, Inc. currently located at 1111 South Birch Highway in Atlanta, Georgia, or hereinafter referred to as the Company.

We will estimate the Fair Market Value, of a 100% controlling interest, of the Company as of December 31, 2000, in order for the Estate to complete tax form 706. We will perform various analytical review procedures of the Company's five years financial statements covering the period of 1996-2000, and perform other procedures we consider necessary to accomplish this purpose.

The valuation, to be completed and reported upon on or before August 31, 2006, will be based on what we consider the most appropriate method of valuation in the circumstances. We are not required to give expert testimony in Court, or to be in attendance during any hearing or deposition, with reference to our valuation unless separate arrangements are made in connection therewith. We are not required to update this report for events and circumstances occurring after the date of valuation.

Our valuation report will be intended for the specific purpose of completing tax form 706. Our report is intended for this specific purpose and is not to be used for any other purpose.

Users of business valuations should be aware that business valuations are based on future earnings potential that may or may not materialize. Therefore, the actual future period earnings will vary from the projections used in this valuation, and the variations may be material.

Our fees will be based on the following per hour rate schedule:

Partner time	$ 275 per hour
Staff time	$ 160 per hour
Para-professional time	$ 95 per hour

(All out-of-pocket costs will be billed separately.)

and will include, as a separately billable cost, those out-of-pocket costs relating to research, travel, phone calls, document requests, and copy costs. As previously communicated, we estimate that our total fees, based on our discussions and the above per hour rate schedule, will range between $10,000 and $12,000.

We will begin fieldwork upon receipt of this letter signed by you and a retainer fee of $5,000. The above fees and out-of-pocket costs will be billed periodically and will be due upon statement presentation and before the final report is issued. Any fees paid after thirty (30) days will be charged interest at 10% per annum. In case of default in payments you will be required to pay all costs and expenses, including reasonable attorney's fees, preceding and subsequent to judgment which may arise or accrue from enforcing this agreement whether such remedy is pursued by filing a suit or otherwise. This agreement shall be governed by and construed in accordance with the laws of the State of Georgia, as though it were fully made and performed there.

We are pleased to have this opportunity to serve you. If this letter correctly expresses your understanding, please sign this original where indicated and immediately return it to us in the enclosed envelope. A copy is enclosed for your records.

Very truly yours,

James Lewis

James Lewis, CPA, CVA
Lewis, Jones & Company, LLC

Accepted by:

Name: _________________________________ Title: _____________________Date:_______________

SAMPLE 1A

January 15, 2006

Mr. David Boria, President & CEO
Adler-Cottino Wood Furniture Inc.
1111 S. Birch Highway
Atlanta, GA 30309

Re: Engagement for Business Valuation Services

Dear Mr. Boria:

This letter constitutes the agreement between Adler-Cottino Wood Furniture, Inc. and James Lewis CPA, CVA and outlines our understanding of the terms and objectives of this business valuation engagement.

We will perform a valuation of a 100% interest in Adler-Cottino Wood Furniture, Inc. as of December 31, 2000. We plan to start the engagement upon the return of this signed engagement letter. Unless unforeseen problems are encountered, we plan to complete this engagement by May 15, 2006. Our anticipated start and completion dates are subject to the timely receipt and availability of those items detailed within our document request list (enclosed).

The object of our valuation will be to determine and estimate the fair market value of a 100% interest in Adler-Cottino Wood Furniture, Inc. The term "fair market value" is often defined as follows:

> *"The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms' length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."*

However, it must be realized that as this is the accepted definition of "fair market value" the true value of a business or entity is determined by actual negotiations between a buyer and seller culminating in the transfer of the subject property. Although our valuation is intended to estimate fair market value, we assume no responsibility for a seller's or buyer's inability to obtain a purchase contract at that price.

In performing our valuation, we will be relying on the accuracy and reliability of third party prepared historic financial statements, forecasts of future operations, or other financial data of the business. We will not audit, compile, or review those financial statements, forecasts, or other financial data. We will not express an opinion or any other form of assurance on them. Our engagement cannot be relied on to disclose errors, irregularities, or illegal acts, including fraud or defalcations that may exist.

During the course of our engagement, we shall request information and explanations from the management of Adler-Cottino Wood Furniture, Inc. regarding the company's operations, future plans, financial statements, and specific transactions. At the conclusion of our engagement, we will require, as a precondition to the issuance of any valuation report or other communication of a value estimate, that management reconfirm this information in a written representation letter. The procedures we perform in our engagement will be heavily influenced by the representations that we receive from the company's management; accordingly, any false representations could cause material errors in our valuation. You, therefore, agree to indemnify and hold us harmless for any liability and all reasonable costs (including legal fees) which may be incurred in connection with claims based upon any material valuation error resulting from known false representations made to us by any representative or agent of management.

The results of our engagement will be documented in a formal report. We understand that the purpose of our valuation will be to report the fair market value of a 100% interest in the referenced company for estate tax purposes. Accordingly, our report can not be distributed to outside parties to obtain credit, published, or used in any other manner with out the express written consent of this firm. If, for any reason, we are unable to complete the valuation engagement, we will not issue a report as a result of this engagement. We have no responsibility to update our report for events and circumstances that occur after the date of its issuance.

Our fees are based on our customary hourly rates. We estimate our fee for this engagement to be $27,500 and we shall require a retainer of $10,000. It should be anticipated that should the services of other valuation or appraisal experts be required, the cost of these services are excluded from this estimate. Should we encounter unusual circumstances requiring us to expand the scope of the engagement; we will discuss them with you prior to commencing additional or further services. Any revisions, additions, or addendum to this agreement shall require a signed and acknowledged written attachment thereto. Our fee is not contingent or otherwise dependant on any opinion, statement, or findings, which will be presented in this engagement.

Fees for any services that may be required to defend our report or opinion in litigation, including conferences, depositions, court appearances, and testimony will be considered a separate engagement and billed at our customary rate of $275.00 per hour. These professional services are **specifically excluded** from this agreement. A retainer equivalent to the total estimated fee will be required in advance, prior to commencing any additional services.

Our estimated fee is not contingent or otherwise dependant on any opinion, statement or findings, which will be presented in this engagement. To safeguard against any assertion or allegation that our work may in some way be influenced by or contingent upon the outcome of this litigation, all outstanding invoices for professional services relating to this engagement must be paid in full prior to our furnishing testimony in deposition or at trial.

If any dispute, controversy or claim arises in connection with the performance or breach of this agreement (including the scope, nature, quality of services to be performed by us, our fees, and other terms), either party may, upon written notice to the other party, request that the matter be mediated. Such mediation will be conducted by a mediator appointed by and pursuant to the Rules of the American Arbitration Association or such other neutral facilitator acceptable to both parties. Both parties will exert their best efforts to discuss with each other in good faith their respective positions in an attempt to finally resolve such dispute or controversy.

The mediation proceedings will conclude within sixty days from receipt of the written notice unless extended or terminated sooner by mutual consent. Each party will be responsible for their own respective expenses. The fees and expenses of the mediator, if any, will be borne equally by the parties.

If any dispute, controversy, or claim arising out of or in connection with the performance or breach of this agreement cannot be resolved by mediation, then the dispute, controversy or claim will be settled by arbitration in accordance with the Rules of the American Arbitration Association (AAA) for the Resolution of Accounting Firm Disputes. No pre-hearing discovery will be permitted unless specifically authorized by the arbitration panel. The arbitration hearing will take place in the city closest to the place where this agreement was performed in which the AAA maintains an office, unless the parties agree to a different locale. The arbitration proceedings will be conducted before a panel of three persons. One of these persons will be chosen by each party, and the third will be selected by the two party-selected arbitrators. The arbitration panel will have no authority to award non-monetary or equitable relief, and any monetary award will not include punitive damages. The confidentiality provisions applicable to mediation will also apply to arbitration.

If an award is issued by the arbitration panel, it may be confirmed in a judgment by any federal or state court of competent jurisdiction. All reasonable costs of both parties, as determined by the arbitrators, including (1) the fees and expenses of the AAA and the arbitrators, and (2) the costs, including reasonable attorneys' fees, necessary to confirm the award in court, will be borne entirely by the non-prevailing party (to be designated by the arbitration panel in the award) and may not be allocated between the parties by the arbitration panel.

If this agreement meets with your approval, please sign and date both the original and the enclosed copy as indicated. The original should be returned to us in the envelope provided. Retain the copy for your files.

Very truly yours,

James Lewis

James Lewis, CPA, CVA
Lewis, Jones & Company, LLC

Accepted by:

Name: _________________________________ Title: __________________________Date:__________

SAMPLE 2

April 30, 2006

Mr. James Lewis, CPA, CVA
Lewis, Jones & Company, LLC
1111 Maple Road
Atlanta, GA 30309

Dear Mr. Lewis:

In connection with your valuation of Adler-Cottino Wood Furniture, as of December 31, 2000 we represent to you that to the best of our knowledge and belief:

1. We have made available to you all information requested and all information that we believe is relevant to your valuation as indicated by request for documents. All significant matters of judgment have been determined or approved by us.

2. The financial statements furnished to you for the years ended December 31, 1996-2000 present the financial position of Adler-Cottino Wood Furniture in conformity with generally accepted accounting principles consistently applied. In addition to our in-house CPA (Mr. Paul F. Riddelman, CFO and Controller), our financial statements are reviewed by the firm of XYZ CPAs, 9843 Peachtree Avenue, of Atlanta.

3. The income tax returns furnished to you for the years ended December 31, 1996–2000 are exact and complete copies of the returns filed with the Internal Revenue Service.

4. The Company has no commitments or contingent liabilities, including those arising from litigation, claims, and assessments that are not disclosed in the financial statements identified above.

5. The Company does not have any (a) employment contracts with salaried employees; (b) stock option plans, or (c) stock redemption agreements with shareholders except to the extent indicated in written agreements furnished to you.

6. The Company is not currently negotiating the acquisition of any new business interests or the disposition of existing segments or product lines.

7. The valuation report will serve as a basis for filing tax form 706 with regard to the Estate of Raymond Cottino Harrison.

Yours truly,

D. B. Harrison

Mr. David B. Harrison
President/CEO

VALUATION ENGAGEMENT ACCEPTANCE CHECKLIST

Requesting/Referring Party Information

Name:____

Address:____

____

Phone #:____

Fax #:____

COMPANY SUBJECT TO VALUATION INFORMATION

Name:____

Address:____

____

Phone #:____

Fax #:____

Type of Entity:____________________________________

Purpose of Valuation:________________________________

____

____

Description of Company’s Business:

____

____

Description of Ownership Interest Subject to Valuation:

____

____

Proposed Valuation Date: __________________ Completion Date:__________________

ENGAGEMENT ACCEPTANCE CONSIDERATIONS

Describe Potential Conflicts of Interest:

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Analyst Disposition: ____

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Describe Adequacy of Professional Competence: ______________________________

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Analyst Disposition: ____

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Describe Potential Documentation Problems:

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Analyst Disposition: ____

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Describe Relative Risk Exposure:

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Analyst Disposition: ____

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Describe Engagement Responsibilities Beyond Valuation Engagement:

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Analyst Disposition: ____

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CONCLUSION ON ENGAGEMENT

Analyst Comments: ____

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Completed By: ________________________________ Date:____________________

Approved By:_________________________________ Date: ____________________

Recommended Follow Through:

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III. OBTAINING THE NECESSARY INFORMATION

Goal: To understand what information the analyst will need in order to perform the valuation of a business.

A. OVERVIEW

Once the valuation analyst has defined the valuation engagement and has contracted with the client by means of a properly written engagement letter, the analyst can proceed with the engagement. The analyst begins by gathering the necessary information on which to base the valuation. This information can be broken down into two main categories: internal information and external information.

The analyst often asks, "What is an acceptable level of supporting documentation?" This is a very difficult question to answer in that each valuation engagement will vary in required levels of supporting documentation. Each case will vary with respect to the time budget, industry in which the company operates, and purpose of the valuation. In summary, the only effective answer to this question is that "it depends on the facts and circumstances of the particular case." The amount of information and documentation should be sufficient for the analyst to reach an informed conclusion and, therefore, should be based on the professional judgment of the analyst. Understand, however, in the majority of valuations you may be asked to perform, you will not get all the information you would like to have or believe it is necessary to have. There are times, especially in the valuation of a business in divorce proceedings, when the valuator can only note in the schedule of limiting conditions that certain items of documentation, while desirable, were not available.

B. INTERNAL INFORMATION

The valuation analyst's objective in gathering internal information is to gain an adequate understanding of the subject company's operational management and earnings ability. In general, the analyst must develop an understanding of the following:

1. History, nature, and organization of the subject company
2. The financial position, results of operations, and significant accounting policies and procedures utilized by the company
3. The current location(s) and physical condition of the subject company's facilities and operational assets
4. The management and personnel of the subject company
5. The subject company's operations, its products and/or services, markets, and competition

Some of the sources and/or methods of gathering internal information are:

1. Interviews with the company's management and owners
2. Personal tour of the facilities
3. Interviews with the company's professional advisors
4. Historical and projected financial data including financial statements, income tax returns, and budgets

To assist the analyst in organizing information obtained and to help ensure that sufficient and appropriate information is obtained, the analyst should prepare a checklist for data to be collected (both internal and external). A representative checklist for valuation engagements can be found in the Appendices.

C. EXTERNAL INFORMATION

The purpose of obtaining external information is to give the analyst knowledge of any outside factors that may directly or indirectly affect the future operations of the subject company. The information to be obtained should give the analyst an idea as to where the company fits within the industry in which it operates and the general economic environment in which the company operates.

External information can be broken down into the following main categories:

1. General Economic Information
2. General Industry Information
3. Local and Regional Economic Information
4. Local and Regional Industry Information
5. Specific Comparable Company Information

D. REFERENCE

Following are some resources for the valuator. This manual does not contain all sources available. To find more, see the current reference Guide and visit NACVA's homepage on the Internet (http://www.NACVA.com).

1. General Economic Information

The analyst should try to keep abreast of changing general economics by reading publications such as the *Wall Street Journal*, *Fortune*, and *Business Week* magazines. Economic projections can vary dramatically between economists; this occurs even between the most recognized theorists, authors, and educators in the field.

The importance of reviewing general economic information lies in the need for the analyst to ascertain how it may impact the assumptions that are made during the valuation process. General economic information, while important, has less impact on the value of the subject company than local and national industry information.

A sampling of resources for general economic information are:

Beige Book Report
http://www.federalreserve.gov/monetarypolicy/beigebook/

Center for Economic and Industry Research (dba:KeyValueData.com)
4575 Galley Road, Suite 200E
Colorado Springs, CO 80915
(800) 246-8488

Federal Reserve Bulletin
http://www.federalreserve.gov/pubs/bulletin/

Regional and National Financial Institutions and Local Colleges/Universities
Economic Departments
Survey of Current Business
Department of Commerce, Bureau
of Economic Analysis,
U.S. Government Printing Office
PO Box 371954
Pittsburgh, PA 15250
(202) 512-1800
http://www.commerce.gov

Standard & Poor's Statistical Service
http://www.standardpoor.com

Stocks, Bonds, Bills and Inflation Valuation Yearbook and/or
Cost of Capital Quarterly
Morningstar, Inc.
225 West Wacker Drive
Chicago, IL 60606
(available from NACVA, call 800-677-2009)

U.S. Industry & Trade Outlook
McGraw-Hill
PO Box 545
Blacklick, OH 43004
(800) 338-3987
Email: customerservice@mcgrawhill.com

The Outlook is not published for all years. When it is available, it has a great deal of industry information. Check the web site for details

2. General Industry Information

General industry information has more impact on valuation assumptions than general economic information. It is important for the valuation analyst to tell the reader just how the information impacts the subject company.

The importance of reviewing general industry information lies in the need for the analyst to ascertain how it may affect the future operations of the subject company. For example, if the industry profile projects a substantial decrease in earnings for the industry as a whole, it may be difficult for the analyst to defend a continuing increase in the growth rate for the subject company in that industry.

The analyst will often discover that trade association information is more complete and specific than other sources of general industry information. Therefore, a search for trade association information should be a primary source in gathering general industry information. See Sample Industry Economic Study in Appendix V.

A sampling of sources of general industry information are:

Bizminer
Industry reports and outlooks
http://www.bizminer.com

Bizsites
Outlooks for select industries
http://www.bizsites.com/Outlooks/industryoutlook.html

Center for Economic and Industry Research (dba:KeyValueData.com)
4575 Galley Road, Suite 200E
Colorado Springs, CO 80915
(800) 246-8488
http://www.KeyValueData.com
Custom Industry Research:
http://www.KeyValueData.com/Products/EconomicMarketData/IndustryMarketResearch/CustomIndustryReports.aspx

Dunn & Bradstreet
Industry report, company look-up
http://www.zapdata.com

Encyclopedia of Associations
Thompson Gail
PO Box 9187
Farmington Hill, MI 48333
(800) 877-4253

Federal Reserve Banks
12 Districts: Boston, New York,
Philadelphia, Cleveland, Richmond,
Atlanta, Chicago, St. Louis, Minneapolis,
Kansas City, Dallas, San Francisco
Check the government yellow pages for the closest office

Financial Studies of the Small Business
Financial Research Associates
510 Ave J SE
Winterhaven, FL 33880
(863) 299-3969

Freedonia Group
Very comprehensive reports
http://www.freedoniagroup.com

Harris InfoSource
http://www.harrisinfo.com

IBIS World
Fee based industry and market research
http://www.ibisworld.com

Integra Information
1640 Airport Road, Suite 115
Kennesaw, GA 30144
800-780-2660
http://www.integrainfo.com
Email: integra@integrainfo.com

Links to Industry Portals
http://www.virtualpet.com/industry/mfg/mfg.htm

Mercer Capital
5860 Ridgeway Center Parkway
Suite 400
Memphis, TN 38120
(901) 685-2120

Moody's OTC Industrial Manuals
Moody's Investors Services
99 Church Street
New York, NY 10007
(212) 553-1658

NABE Industry Survey
National Association of Business Economists
1233 20th Street NW, Ste. 505
Washington, DC 20036
(202) 463-6223
http://www.nabe.com

OneSource
http://www.onesource.com

Peer Scape – *not available for all years*
Deloitte and Touche
http://www.peerscape.com

RMA Annual Statement Studies[2]
The Risk Management Association
1801 Market Street, Suite 300
Philadelphia, PA 19103-1628
(available from NACVA, call 800-677-2009)

Standard & Poor's Industry Surveys
Standard & Poor's
55 Water Street
New York, NY 10041
(212) 438-1000 or (212) 438-2000
http://www.standardandpoors.com/en_US/web/guest/home

The Cole Library
Construction and building materials industry data finder
http://www.rh.edu/dept/library/industry/build.htm

US Business Reporter
Various industry reports
http://www.activemedia-guide.com

[2] Risk Management Association (RMA) Annual Statement Studies® is available from NACVA (800-677-2009) and ValuSource (800-825-8763). ANNUAL STATEMENT STUDIES®, RMA THE RISK MANAGEMENT ASSOCIATION®, and the RMA Logo are trademarks of the Risk Management Association. RMA owns the copyright in the ANNUAL STATEMENT STUDIES® data. The data is used under license from RMA.

US Industry & Trade Outlook
McGraw-Hill
PO Box 545
Blacklick, OH 43004
(800) 338-3987
Email: customerservice@mcgrawhill.com

The Outlook is not published for all years. When it is available, it has a great deal of industry information. Check the website for details.

Value Line Investment Survey
PO Box 3988
New York, NY 10008
(800) 833-0046

3. Local and Regional Economic Information

The analyst should gain a better understanding of the local and regional economic environment to ascertain the impact it may have on the various assumptions made during the valuation process. Local and regional industry information will have a greater impact on valuation assumptions than local and regional economic information. The valuation analyst should consider and document in the valuation report the impact of both on the subject company's future performance. See Sample MSA Economic Study in Appendix VI.

A sampling of sources of local and regional economic information are:

Federal Reserve Banks
http://www.bog.frb.fed.us/otherfrb.htm

State and/or City Chamber of Commerce

State University Economic Departments

U.S. Bureau of Census
Department of Commerce
U.S. Government Printing Office
Washington, DC 20402
(202) 512-1800

4. Local and Regional Industry Information

The analyst should develop an understanding of the local and regional industry outlook and its potential impact on assumptions made about the future of the subject company.

The comments made concerning general industry information also pertain to local and regional industry information. Trade association data will usually be more comprehensive and complete than will any other source. Therefore, trade association information should always be obtained if possible. It is often necessary to secure trade association information under the auspices of the subject company. Many, but not all, trade associations will not share information with non-members.

The best sources of local and regional trade association information are:

Encyclopedia of Associations
Thompson Gail
PO Box 9187
Farmington Hill, MI 48333
(800) 877-4253

Local Chapters of Trade Associations
(Contact Local Chamber of Commerce)

National Trade and Professional Associations of the United States
Columbia Books, Inc.
1825 Conn Ave NW, Suite 625
Washington, DC 20009-5733
(202) 464-1662
http://www.columbiabooks.com

OneSource
http://www.onesource.com

Economic Development Administration
http://www.eda.com

5. Specific Comparable Company Information

An essential procedure in the valuation process is to ascertain whether publicly traded comparable companies exist and/or if there has been a recent sale or merger of a company that fits the profile of the subject company.

This is critical because recent sales or mergers can remove much of the subjectivity regarding various valuation assumptions. True comparability is the key. It would be ludicrous to place heavy emphasis on data from publicly traded companies, a recent sale or merger if the companies do not closely compare. The analyst should attempt to locate a true comparable(s).

For a company to be truly comparable with a subject company, the following characteristics should be considered:

a) Same or similar line of business
b) Similar competitive positions within the industry
c) Similar historical rates of growth
d) Similar historical and current levels of profitability
e) Similar capital structures
f) Similar product lines
g) Similar size, relative to sales volume and total assets
h) Similar risk

Suggested sources of comparable company information are:

BIZCOMPS® Business Sales (Available free to subscribers to KeyValueData.com)
PO Box 711777
San Diego, CA 92171

Deloitte & Touche Consulting Group
PeerScape Department
Two Tower Center Blvd.
East Brunswick, NJ 08816
(800) 335-6488

DoneDeals (Mid-Market Comps)
(available from NACVA, call 800-677-2009)

Edgarscan
http://edgarscan.pwcglobal.com/servlets/edgarscan

Guideline Companies 10K
Center for Economic and Industry Research (dba: KeyValueData.com)
4575 Galley Road, Suite 200E
Colorado Springs, CO 80915
(800) 246-8488

Goodwill Registry
You can pay for only the reports you need
http://www.healthcaregroup.com/servlet/catalog.ProductList?category=4

Hoover's Online
Industry snapshots. More specific information for a fee
http://www.hoovers.com/industry/snapshot/index/0,3517,277,00.html

Institute of Business Appraisers
Send email to: data@go-iba.org

Merger & Acquisition Sourcebook
Quality Services Company
Available at http://www.nvst.com

Moody's OTC Industrial Manuals
Moody's Investor Services
99 Church Street
New York, NY 10007
(212) 553-1658

Pratt's Stats
Business Valuation Resources, LLC
1000 SW Broadway, Suite 1200
Portland, OR 97205
(888) BUS-VALU or (503) 291-7963
http://www.bvresources.com

Standard & Poor's Stock Reports
Standard and Poor's Corporation
55 Water Street
New York, NY 10041
(212) 438-1000 or (212) 438-2000

Value Line Investment Survey
Value Line Publishing, Inc.
PO Box 3988
New York, NY 10008
(800) 833-0046

Your Local Business Broker
For Example: Merrill Lynch has a "Tuesday Report"
Smith Barney has a "Perspective"
Call your local broker to get reports.

BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 9

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 9: Defining the Valuation Engagement and Obtaining the Necessary Information

1. External information includes all of the following EXCEPT:

    a. General Economic Information
    b. General Industry Information
    c. Local and Regional Economic and Industry Information
    d. History, nature and organization of the subject company

2. What is the main purpose of obtaining external information?

    a. To provide the analyst with the most recent 5 years of financial information
    b. To gain an understanding of the company's operations and its products or services
    c. To give the analyst knowledge of any outside factors that may directly or indirectly affect the future operations of the subject company
    d. To comply with the report writing standards as set forth in the Professional Standards

3. The valuation engagement checklist for Adler-Cottino Wood Furniture, Inc. is found in Chapter 10. What Purpose, Standard, and Premise of Value (in that order) were determined for this case?

    a. FMV, Controlling Interest and Arms-Length Transaction
    b. Related Party, Estate and Going concern
    c. Buy-Sell, Capitalization of Earnings, Net Asset Value
    d. Estate Tax valuation for Form 706, FMV and Going Concern

4. What is the valuation analyst's main objective when gathering internal information?
    a. To examine historical and projected financial data including Financial Statements, Income Tax Returns, and Budgets
    b. To keep abreast of changing general economics to ascertain how it may impact the assumptions that are made during the valuation process
    c. To gain an adequate understanding of the subject company's operational management and earnings ability
    d. To examine the current location(s) and physical condition of the subject company's facilities and operational assets

5. The Market Approach for valuing businesses utilizes information from Specific Comparable Companies. In order for a company to be truly comparable it must share all of the following characteristics with the subject company EXCEPT:

    a. Companies must have similar capital structures
    b. Companies must have the same number of stockholders
    c. Companies must be of similar size, relative to sales volume and total assets
    d. Companies must have similar competitive positions within the industry

6. Independence of the valuator will be impaired if:

   a. The member who performs the appraisal or the member's firm prepares the tax return of the subject entity
   b. The member or the member's firm performs an audit of the subject company's financial statement
   c. Your neighbor's best friend owns 100% of the subject company
   d. The member or member's firm performs a compilation of the subject company's financial statement

7. When defining the engagement the valuation analyst should identify:

   a. Purpose, ownership interest, and profitability of the subject entity
   b. Purpose, valuation date, and valuation approach to be utilized
   c. Purpose, ownership interest, and valuation date
   d. Ownership interest, report date, and valuation approach

8. Before starting an engagement, the valuation analyst must obtain an engagement letter.

   a. True
   b. False

9. In a litigation engagement, a valuation analyst should be independent and objective; if an attorney wants the valuation analyst to give a specific and tailored answer, this will not impair independence or objectivity.

   a. True
   b. False

10. Of the following sources of information, which source provides data which can be specifically compared to the subject company?

   a. U.S. Bureau of Census
   b. Federal Reserve Banks
   c. Ibbotson Valuation Yearbook
   d. BIZCOMPS

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CHAPTER TEN

SEARCH FOR ADJUSTMENTS

I. SEARCH FOR ADJUSTMENTS

Goal: To be able to normalize the subject company's financial for comparison with other companies in the marketplace.

A. OVERVIEW

Once the analyst has obtained and/or generated the referenced information in Chapter Nine, the first step in the adjustments phase is to analyze the historical financial information in order to determine the economic or normalizing adjustments to be made to the historical financial statements.

B. OBJECTIVE FOR ADJUSTING HISTORICAL FINANCIAL INFORMATION

Adjusting a company's historical financial statements is often referred to as recasting. The subject company's historical financial statements should be adjusted to more closely reflect the company's true economic financial position and results of operations on an adjusted historical and current basis, thus enabling the valuation analyst to more accurately estimate the value of the business.

1. Requirements of Adjusted Financial Statements

The requirements for adjusted or recast financial statement information are:

a) Adjusted financial statements should, as nearly as possible, represent market values.
b) Adjusted financial statements should be useful for making meaningful comparisons.
c) Adjusted financial statements should be useful in making meaningful projections and forecasts.

C. TWO DEBATED ISSUES WITHIN THE VALUATION INDUSTRY

1. Officer's Compensation

You will find general agreement from valuators as to the necessity of "normalizing" compensation when valuing a controlling interest. Things get a little more interesting when valuing a minority interest. There are some in the valuation community who firmly believe that since a minority position cannot impact the level of compensation; then there should be no normalizing adjustment for items such as compensation. Then there are others in the community who just as firmly believe that you must make an adjustment to normalize compensation regardless of the size of the interest being valued. Once such advocate (for the position of making normalized compensation adjustments) is Z. Christopher Mercer, ASA, CFA. In *Value Matters*™, Volume 2004–06 issued on September 24, 2004, Mr. Mercer includes an article, which is an excerpt from his book, *Valuing Enterprise and Shareholder Cash Flows: The Integrated Theory of Business Valuation*.

Mr. Mercer identifies owner/officer compensation as a Type 2 normalizing adjustment, which he distinguishes from Type 1 (non-recurring) normalizing adjustments or control adjustments. It is Mr. Mercer's position that not making compensation adjustments when valuing minority interests is wrong, as a valuator should aim for enterprise value and then take into account the inability of a minority position to influence, impact, or otherwise affect compensation levels in the value of the interest in relationship to the enterprise value.

In answer to the advocates for skipping the owner compensation adjustment in favor of a direct minority interest valuation, Mr. Mercer contends that unless the adjustment is made, then the analyst is not determining a public equivalent earning stream, therefore if one is using discount rates based on CAPM or guideline company analysis, the resulting value would *not* be at the marketable minority level.

However, proponents of not making the adjustment believe that economic earnings are only of benefit to a controlling interest in a privately-held enterprise, therefore, in a cash flow based analysis; you would not adjust the compensation because the minority position cannot realize any benefit from that adjustment. Therefore, you concentrate directly on the equity value of the interest being valued.

If, in the course of an engagement, you determine that an officer compensation adjustment is required, keep in mind the basics of what determines "normalized" compensation. The valuation analyst will be adjusting compensation levels to an amount the enterprise would have to pay in order to employ a non-owner to provide *comparable* management services. A major factor to consider in normalizing compensation is what service(s) are performed by the owner/officer. In *John L. Ginger Masonry, Inc. v. Commissioner*, T.C. Memo 1997-251 the Tax Court agreed that compensation in excess of $1 million per year was reasonable. The officer worked 12 or more hours a day and performed the combined duties of CEO, CFO, and CMO. On the other hand in *E. J. Harrison and Sons, Inc. v. Commissioner*, T.C. Memo 2003-239, the Court found the compensation to be unreasonable and excessive as the officer's only role was to attend board meetings and perform certain PR functions and for that, the officer was paid between $541K and $806K per year.

Where can the analyst go to obtain the information to make a reasoned adjustment? Some resources for obtaining compensation are as follows:

- RMA's Annual Statement Studies[1]
- Aspen Publishers' Officer Compensation Report

[1] Risk Management Association (RMA) Annual Statement Studies® is available from NACVA (800-677-2009) and ValuSource (800-825-8763). ANNUAL STATEMENT STUDIES®, RMA THE RISK MANAGEMENT ASSOCIATION®, and the RMA Logo are trademarks of the Risk Management Association. RMA owns the copyright in the ANNUAL STATEMENT STUDIES® data. The data is used under license from RMA.

www.keyvaluedata.com—Members have the ability to use resources at KeyValueData to conduct for a fee, a reasonable compensation report based on parameters provided by the valuator

www.acinet.org—This is the portal to CareerOneStop, which was initiated by the U.S. Department of Labor. It contains free information broken into categories. The category of most use to valuators will be the "wages and trend" category. This section includes information on: metro wages, detailed trends, industry trends, occupation reports, etc.

www.bls.gov—This is also a free site. It provides detailed wage and benefit information from the national to the regional level.

www.erieri.com—This is a commercial site operated by the Economic Research Institute and provides salary survey analysis. They offer a variety of products for purchase.

www.compgeo.net—This is a commercial site offering detailed compensation information over ten regions in the United States and the Caribbean.

www.worlddatwork.org—This site offers free salary and benefits information on a national level and a yearly subscription for metro salary and benefit information,

www.salary.com—On this site, you can obtain free "ball park" salaries broken into 25, 50, and 75 percentiles. Other, more detailed information is available for a fee.

Whatever source you utilized for your adjustments, make certain you understand the underlying data upon which the study is based and make sure it is truly comparable. As stated earlier, the expert failed a *Daubert* challenge because, in the Court's opinion, true comparables were not included in the report.

2. Tax Affecting Pass-Through Entities

One of the often discussed areas is tax affecting the earnings, free cash flow, or other economic stream during the income approach(es) analysis within a valuation when the equity interest being valued is a tax pass-through entity such as a LLC or S Corporation.

Various tax treatment methods are used by different analysts.

- Tax the identified benefit stream at the marginal rate, as if it were a traditional corporation.
- Tax the identified benefit stream at the industry average rate determined from IRS or other sources.
- Adjust the capitalization or discount rate to pretax using industry average actual taxes of entities in discount study behind the capitalization rate determination.

The *PPC Guide to Business Valuations* [Practitioners Publishing Company, 15th Edition (January 2005), Fort Worth, Texas, paragraph 404.46] indicates that some equity interests in S Corporations may be worth a 10% to 15% premium over a traditional corporation (without tax pass-through status).

a) Status and Range of Issues to Consider

"Another year has passed, and the issue of valuation of pass-through entities continues to be a hotbed of controversy. Have we made significant strides? Absolutely. Is there still a ways to go? Yes, but…we're getting there. Great work has been done by many people in this area over the last couple of years, and a healthy debate has ensued. As practitioners, we have an overwhelming amount of information available to us to take advantage of.

The market data studies both revealed information, and opened new questions. If we have learned anything from the studies, data, and debate, it is that every situation is unique, and each requires thought and careful application of whatever model we choose. We must consider a plethora of issues in each valuation: this is not just about 'do I tax affect or not?'"

The range of issues includes:

(1) Is the company a likely candidate for an asset versus a stock sale?
(2) What is included in the market transaction that I am comparing to, and was it an asset or stock sale?
(3) Is the company I am valuing a likely candidate for a 338(h)(10) election, and should that be considered in my valuation?
(4) Has the S election been in effect less than 10 years, and will the seller have built-in gains taxes to contend with?
(5) What is the size of the company being transacted, and how does that impact value?
(6) What is the impact of capital structure on value relative to the studies?
(7) What is the buyer's ability to build up basis in his stock, and will that impact his determination of value?

Typically, these are issues that are adjusted for, from a value determination that has already been made. But…made using what assumptions, and from what base? We must first consider our starting point. Is it:

- A C corporation asset sale?
- A C corporation stock sale?
- A free-standing C corporation?
- A C corporation with high debt in the capital structure?
- A C corporation with an assumption that 100% of cash flow is distributed?
- A C corporation with an assumption that no cash flow is distributed?[2]

[2] Nancy Fannon, et al., "Valuation of Pass-Through Entities," AICPA 2004 National Business Valuation Conference, Orlando, Florida, November 2004.

Four models have emerged to deal with these issues and will be discussed in the sections that follow.

(1) Roger Grabowski
(2) Z. Christopher Mercer
(3) Chris D. Treharne
(4) Daniel R. Van Vleet

b) New Federal Case Law

> *"The issue of valuing minority interests in pass-through entities came up to a head beginning in 1999 with the IRS' 'victory' in Tax Court with the decision handed down in the* Estate of Walter L. Gross. *Unfortunately, this case has come to stand for much more than it actually represented, and the facts and evidence in that case bear very little resemblance to how broadly it is being misused and applied today.*
>
> *Further compounding this is the fact that the valuation community has been very slow to respond to this issue and any serious, consistent, well-developed financial theory that supports the position that has long been taken with respect to valuation of pass-through entities. While the IRS now has four Tax Court cases behind them—the merits of which, or lack thereof, are discussed below—we have had precious little with which to respond.*
>
> *Citing reasons ranging from 'everyone does it' (i.e., deducts taxes), to 'most buyers are C-corps,' or 'the hypothetical buyer of this minority interest might be a prohibited S-shareholder and blow the election' have fallen on deaf ears. The argument that 'the IRS's own manual says to do it' has long since been rejected. 'We have to match the capitalization rate with the income being capitalized' is certainly a consideration, but left undeveloped, it falls flat, and as those of you who are familiar with the* Adams *case already know, the Tax Court has already visited this argument, and determined that the tax rate of an S-corporation is zero."*[3]

- *Walter L. Gross v. Commissioner*, T.C. Memo, 1999-254, affd. 272 F 3d 333 6th Cir. 2001
- *Estate of John E. Wall v. Commissioner,* T.C. Memo 2001-75
- *Estate of William G. Adams, Jr. v. Commissioner*, T.C. Memo 2002-80
- *Estate of Richie C. Heck v. Commissioner*, T.C. Memo 2002-34
- *Delaware Open MRI Radiology Associates, PA v. Howard B. Kessler*, No. 275 (Del. Chan. 2006)
- *Kathleen C. Vicario v. Paul Michael Vicario,* No. 2005-244-Appeal (RI 2006)

[3] Chris D. Treharne and Nancy J. Fannon, "Valuation of Pass-Through Entities, Treharne Model," (2004 Christ D. Treharne, Gibraltar Business Appraisals, Inc. and Nancy J. Fannon), p. 1.

(1) *Vicario v. Vicario*, Rhode Island June 29, 2006

The following case was tried before the Supreme Court of Rhode Island and concerned whether or not the trial court erred in adopting the valuation that did not tax-affect the stock of an S corporation over the report that did tax-affect the S corporation. The Court ruled that the trial court did not err and also accepted the discounts for marketability and minority interest in the valuation of the 50-percent interest.

(2) *Delaware Open MRI Radiology Associates v. Kessler, etal.*

First court case where the Court applied a tax rate to a pass-through entity for valuation purposes.

(3) *Estate of Walter Gross*

The *Gross* case laid the ground work for the S-corporation pass-through controversy. When the arguments in the case are summarized, there are seven for tax affecting and five against tax affecting.

For:[4]

(a) Generally accepted practice in valuation community
(b) S corporations sacrifice capital appreciation for current income
(c) S corporation shareholders are at risk of less distribution than liabilities
(d) Might lose "S" status
(e) Approved in *Maris* and *Hall* cases
(f) Implicitly endorse by IRS in its handbooks
(g) IRS should not have discretion to treat taxpayer in an unfair and inequitable manner

Against:

(a) Company doesn't pay taxes currently
(b) No indication company will not stay in "S" status
(c) Historical distributions have been 100% (or nearly 100%)
(d) Company receives a benefit (no corporate taxes) which must be taken into account
(e) Data used to develop rate of return is based on public company returns after corporate income taxes—wrong basis

The 6th Circuit Court of Appeals found tax affecting was not appropriate in this instance. Each of the arguments was rebuffed in this particular valuation. The authors do not agree with the Court's comments or rationale, and include their opinions as to why/why not. Of importance is the Court found that the Commissioner is not precluded from correcting an error, and the fact that tax affecting may have been approved in other cases should not and does not preclude a different result in another case or in another instance.

[4] Company expert is McCoy; IRS expert is Bajaj

D. PROCEDURES FOR MAKING ADJUSTMENTS

The following reports (except for Exhibit 10-10) may be generated using NACVA's *Business* Valuation Manager™ *Pro* software or other financial analysis software or worksheets can be used. The procedures are:

1. Enter historical financial statement data, and verify that amounts have been entered correctly.

2. Print summary financial statement reports, graphs and a comparative analysis on the historical financial statement data including the following:

Exhibit 10-1:	Historical Balance Sheet Summary
Exhibit 10-2:	Summary of Historical Common Size Balance Sheets
Exhibit 10-3:	Graphs of Selected Historical Balance Sheet Line Items
Exhibit 10-4:	Summary of Historical Income Statements
Exhibit 10-5:	Summary of Historical Common Size Income Statements
Exhibit 10-6:	Graphs of Selected Historical Income Statement Line Items
Exhibit 10-7:	Comparative Analysis of Historical Financial Statements
Exhibit 10-8:	Selected Unadjusted Ratio Summary
Exhibit 10-9:	Selected Ratio Graphs
Exhibit 10-10:	Checklist for Valuation Engagements

3. Review the above information to help identify possible areas that need adjustment.
4. Summarize exceptions noted in step c, discuss with the subject company management to dispose of questionable items and to make provision for adjustment(s).

Exhibits 10-1 through 10-10 for Adler-Cottino Wood Furniture Inc. follow:

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EXHIBIT 10-1

HISTORICAL BALANCE SHEET SUMMARY

Exhibit 10-1
Adler-Cottino Wood Furniture Inc.
Historical Balance Sheet Summary

For Year Ending December	**1996**	**1997**	**1998**	**1999**	**2000**
ASSETS					
Current Assets:					
Cash	$ 618,400	$ 752,979	$ 783,736	$ 789,050	$ 896,406
Accounts Receivable	1,198,600	1,722,800	1,833,973	2,090,600	2,166,908
Inventory	2,200,800	2,565,114	2,713,191	2,869,339	2,994,742
Other Current Assets	42,800	44,400	71,800	69,600	88,600
Total Current Assets	4,060,600	5,085,293	5,402,700	5,818,589	6,146,656
Property & Equipment - Net	1,192,950	1,216,881	1,487,800	2,050,683	2,144,453
Land	-	-	-	-	-
Total Fixed Assets	1,192,950	1,216,881	1,487,800	2,050,683	2,144,453
Other Assets:					
Deposits	102,400	110,000	110,000	110,000	110,000
Other	349,674	329,857	310,040	290,223	270,406
Total Other Assets	452,074	439,857	420,040	400,223	380,406
Total Assets	$ 5,705,624	$ 6,742,031	$ 7,310,540	$ 8,269,495	$ 8,671,515
LIABILITIES & EQUITY					
Current Liabilities:					
Accounts Payable	$ 1,360,400	$ 1,377,800	$ 1,496,966	$ 1,632,000	$ 1,137,600
Other Current Liabilities	564,000	544,200	597,400	690,400	769,200
Current Maturity-Long-Term Debt	85,464	94,413	104,299	167,049	127,285
Notes Payable (Short Term)	718,800	873,000	587,600	306,200	247,800
Total Current Liabilities	2,728,664	2,889,413	2,786,265	2,795,649	2,281,885
Long-Term Liabilities:					
Long-Term Debt	737,173	642,760	538,460	874,906	695,793
Other Long-Term Liabilities	309,740	650,892	975,847	836,680	593,259
Total Long-Term Liabilities	1,046,913	1,293,652	1,514,307	1,711,586	1,289,052
Total Liabilities	3,775,577	4,183,065	4,300,572	4,507,235	3,570,937
Stockholders' Equity:					
Capital Stock	1,000	1,000	1,000	1,000	1,000
Paid-In Capital	300,000	300,000	300,000	300,000	300,000
Retained Earnings	1,629,047	2,257,966	2,708,968	3,461,260	4,799,578
Total Stockholders' Equity	1,930,047	2,558,966	3,009,968	3,762,260	5,100,578
Total Liabilities & Equity	$ 5,705,624	$ 6,742,031	$ 7,310,540	$ 8,269,495	$ 8,671,515

EXHIBIT 10-2

SUMMARY OF HISTORICAL COMMON SIZE BALANCE SHEETS

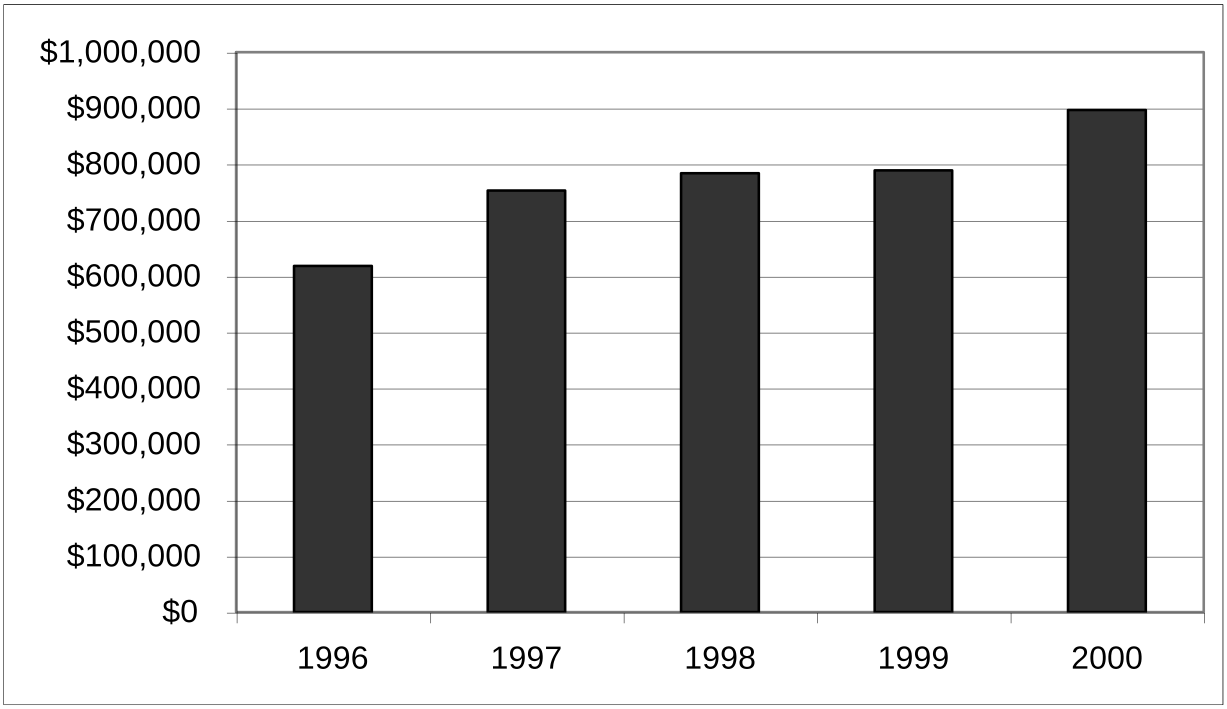
Exhibit 10-2
Adler-Cottino Wood Furniture Inc.
Summary of Historical Common Size Balance Sheets

For Year Ended December	1996	1997	1998	1999	2000
ASSETS					
Current Assets:					
Cash	10.84%	11.17%	10.73%	9.54%	10.33%
Accounts Receivable	21.01%	25.55%	25.09%	25.28%	24.99%
Inventory	38.57%	38.05%	37.11%	34.70%	34.54%
Other Current Assets	0.75%	0.66%	0.98%	0.84%	1.02%
Total Current Assets	71.17%	75.43%	73.91%	70.36%	70.88%
Property & Equipment - Net	20.91%	18.05%	20.35%	24.80%	24.73%
Land	0.00%	0.00%	0.00%	0.00%	0.00%
Total Fixed Assets	20.91%	18.05%	20.35%	24.80%	24.73%
Other Assets:					
Deposits	1.79%	1.63%	1.50%	1.33%	1.27%
Other	6.13%	4.89%	4.24%	3.51%	3.12%
Total Other Assets	7.92%	6.52%	5.74%	4.84%	4.39%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%
LIABILITIES & EQUITY					
Current Liabilities:					
Accounts Payable	23.84%	20.45%	20.47%	19.73%	13.12%
Other Current Liabilities	9.88%	8.07%	8.17%	8.35%	8.87%
Current Maturity – Long-Term Debt	1.50%	1.40%	1.43%	2.02%	1.47%
Notes Payable (Short Term)	12.60%	12.95%	8.04%	3.70%	2.86%
Total Current Liabilities	47.82%	42.87%	38.11%	33.80%	26.32%
Long-Term Liabilities:					
Long-Term Debt	12.92%	9.53%	7.37%	10.58%	8.02%
Other Long-Term Liabilities	5.43%	9.65%	13.35%	10.12%	6.84%
Total Long-Term Liabilities	18.35%	19.18%	20.72%	20.70%	14.86%
Total Liabilities	66.17%	62.05%	58.83%	54.50%	41.18%
Stockholders' Equity:					
Capital Stock	0.02%	0.01%	0.01%	0.01%	0.01%
Paid-In Capital	5.26%	4.45%	4.10%	3.63%	3.46%
Retained Earnings	28.55%	33.49%	37.06%	41.86%	55.35%
Total Stockholders' Equity	33.83%	37.95%	41.17%	45.50%	58.82%
Total Liabilities & Equity	100.00%	100.00%	100.00%	100.00%	100.00%

EXHIBIT 10-3

GRAPHS OF SELECTED HISTORICAL BALANCE SHEET LINE ITEMS

Exhibit 10-3
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Cash

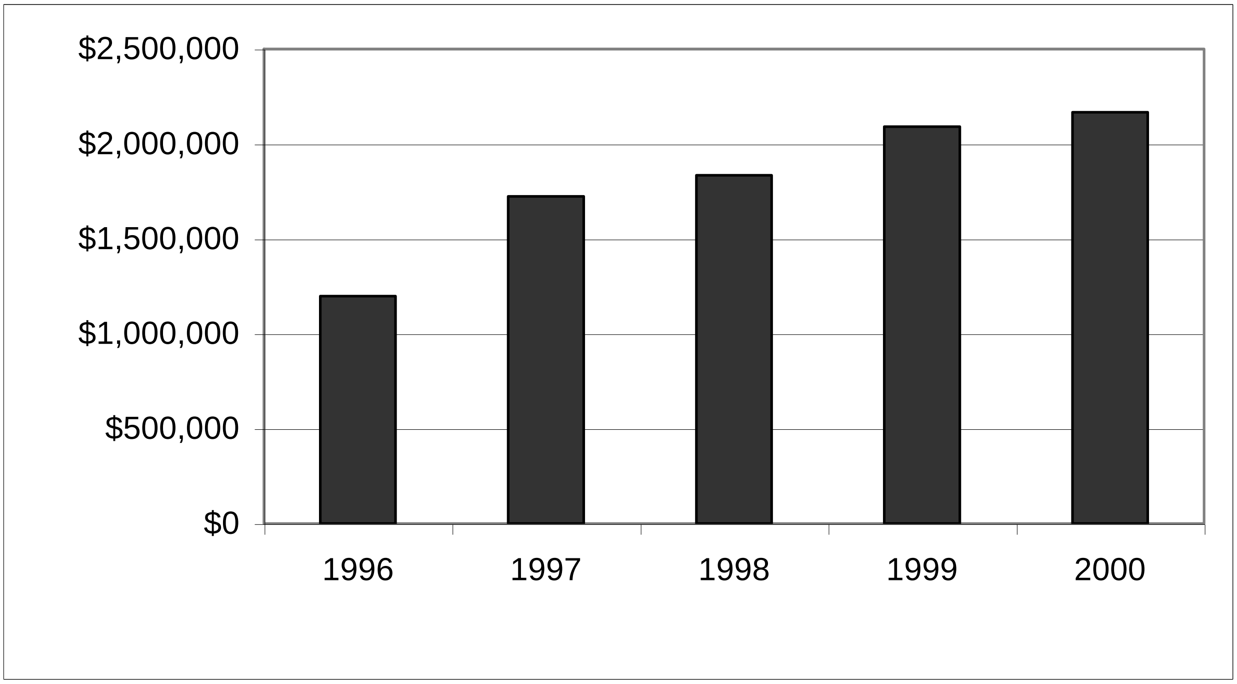


Management Query: Cash levels are growing. What future plans exist which appear to require high levels of cash?

Management Response: There are a couple of reasons for these cash levels. Our near-term goal is to modernize; we are in the early planning stages to add automation to our non-RTA assembly lines, so we are preparing.

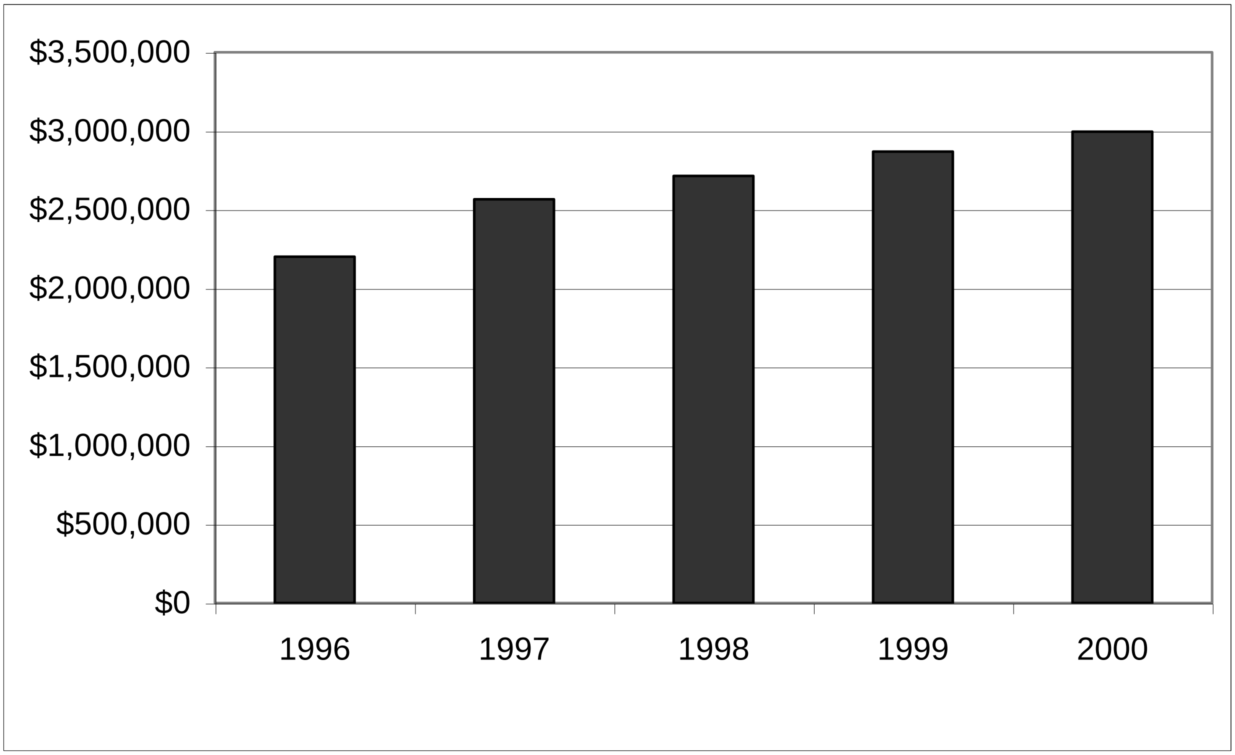
Analyst Disposition: Compare to industry levels. Consider whether a portion of the cash represents a non-operating asset.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Accounts Receivable



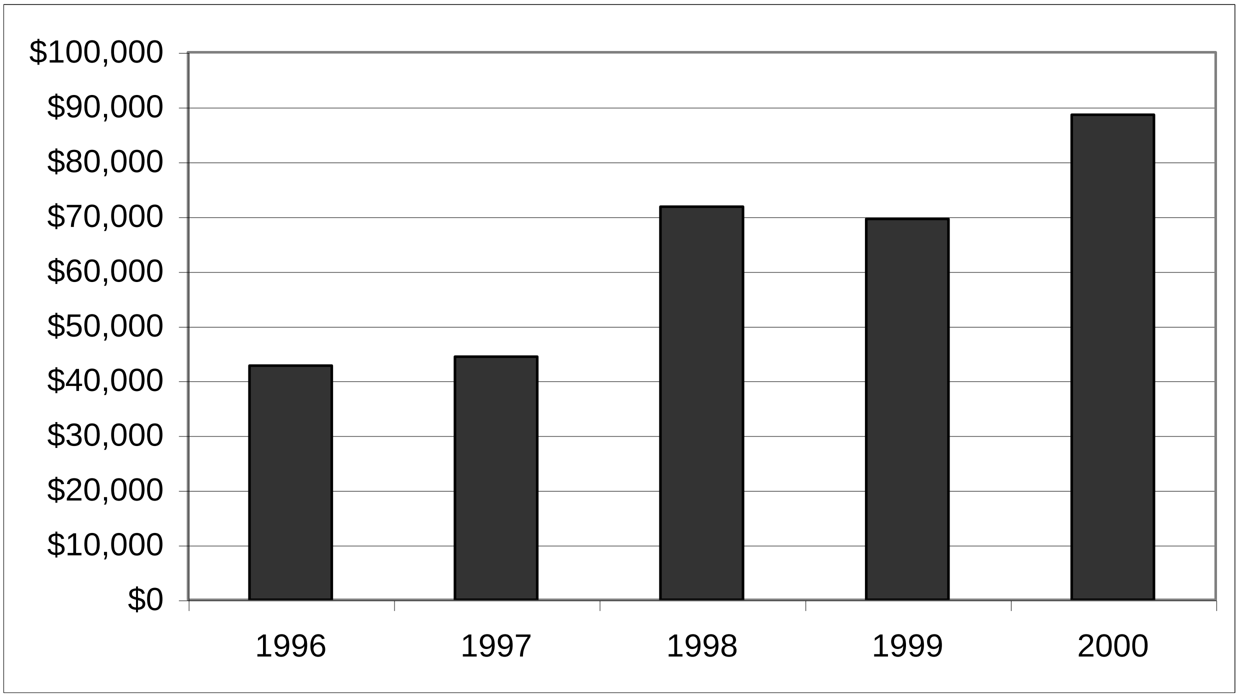
Management Query:	Accounts receivable is growing. Has Adler begun to offer more credit purchasing?
Management Response:	No.
Analyst Disposition:	Review aging; there may be non-collectible receivables, which will need adjustment.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Inventory



Management Query:	Inventory includes work in process and raw materials?
Management Response:	Yes.
Management Query:	Do you manage inventory by billing last in-first out or first in-first out?
Management Response:	We have contracts with negotiated prices. In bidding these we use our highest cost for wood and current costs for labor. Inventory management and control lags a bit. We use LIFO method of valuing inventory.
Analyst Disposition:	Adjust for LIFO reserve. Mark this area for on-site inspection.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Other Current Assets

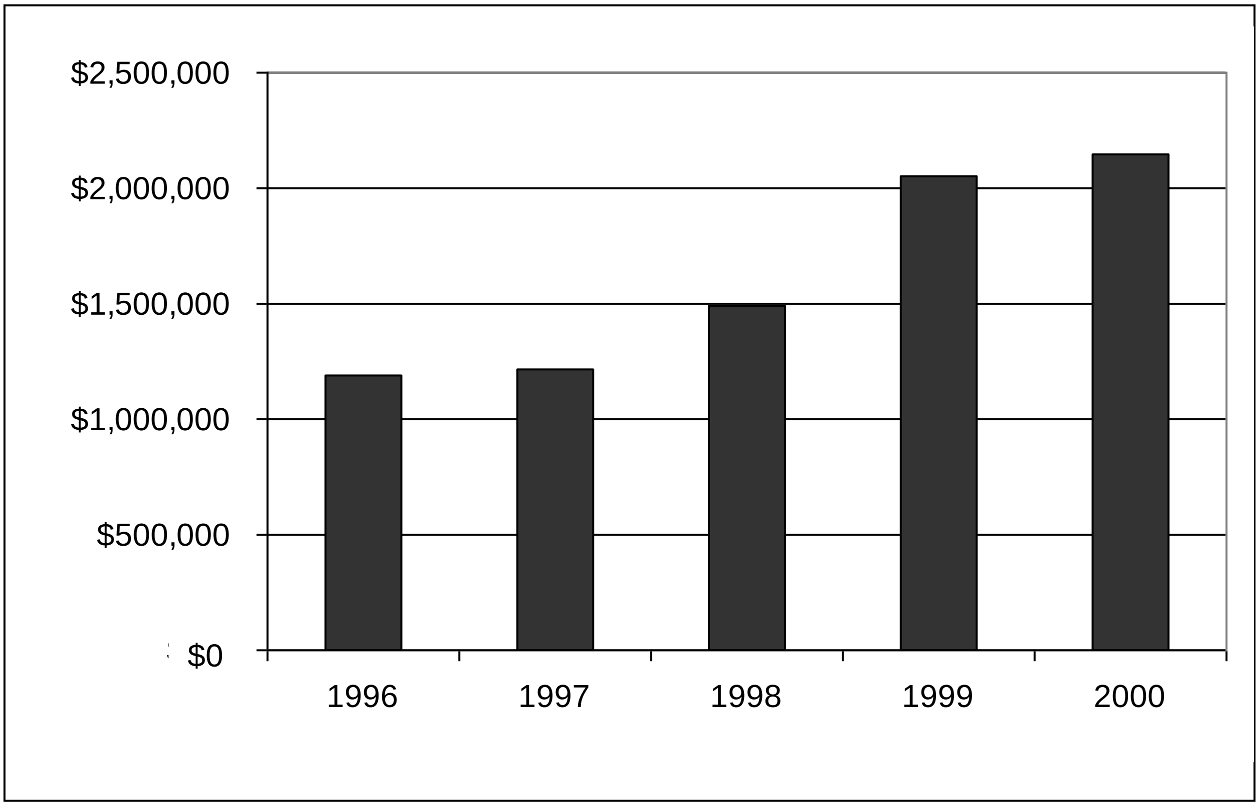


Management Query: 1998 assets jumped. Assets for 2000 also jumped. To what do you attribute the jump?

Management Response: Normal proposed expenses and increase in prepared taxes and insurance.

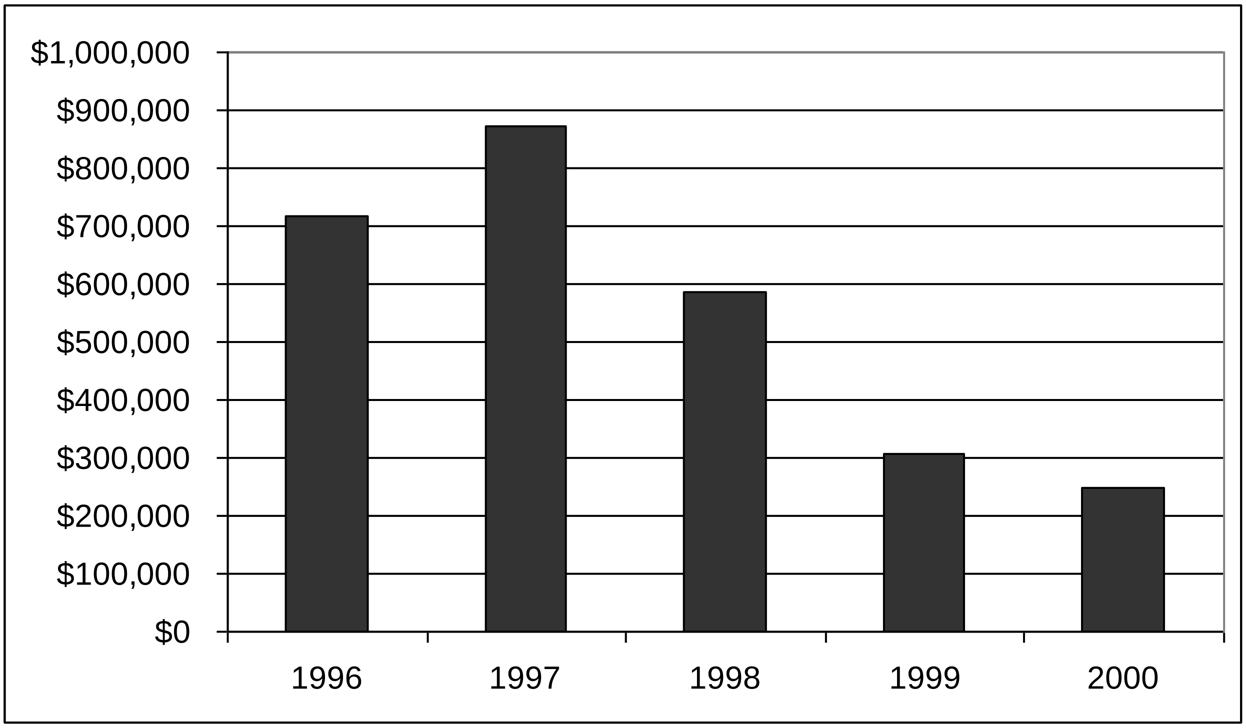
Analyst Disposition: No adjustment.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Property, Plant & Equipment



Management Query:	A marked increase appears in 1999. What is the reason for the upswing?
Management Response:	In the latter part of 1998, we began expanding the manufacturing facility. This project was completed in early 1999. We substantially increased our capacity, which accounts for the changes.
Management Query:	Do you have appraisals of the property, plant and equipment?
Management Response:	Yes, I will provide a copy to you.
Analyst Disposition:	Site inspection needed to confirm. Also, adjust asset values to appraised value.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Short Term Notes Payable



Management Query: Shows Adler had some short-term notes payable. What were these?

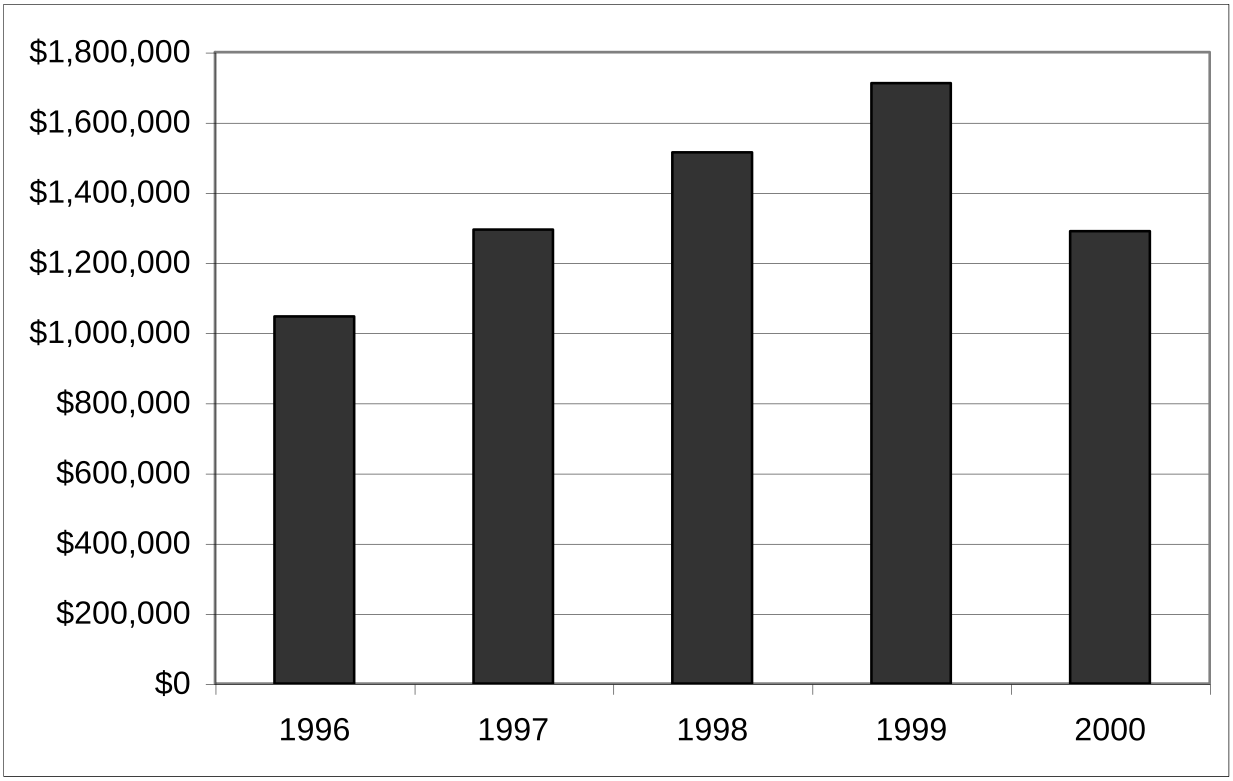
Management Response: We have a line of credit. We did some short term financing during a down-turn cycle – and we made a decision to pay these down in 1998. The pay-down coincided with our expansion.

Management Query: Does Adler ever let the family borrow from the company?

Management Response: Yes it has in the past. We need a good reason and board approval before we do that. We do not have an outstanding family loan now.

Analyst Disposition: Check this against detail ledgers.

Exhibit 10-3 Continued
Adler-Cottino Wood Furniture Inc.
Balance Sheet—Historical Summary
Total Long-Term Liabilities



Management Query: Adler's liabilities increase in 1998, and begin to decrease in 2000. Why?

Management Response: Adler plant expansion project, to increase facility size from 75,000 to 110,000 square feet, began in 1998 and was completed in 1999.

Analyst Disposition: Fits with equipment/plant fiscal data. Note correlation. If all matches, no adjustments would be necessary to this account.

EXHIBIT 10-4

SUMMARY OF HISTORICAL INCOME STATEMENTS

Exhibit 10-4
Adler-Cottino Wood Furniture Inc.
Summary of Historical Income Statements

Year End December	**1996**	**1997**	**1998**	**1999**	**2000**
Sales	$ 14,770,000	$ 18,998,000	$ 18,784,400	$ 21,988,800	$ 24,127,600
Cost of Sales	10,952,500	14,572,480	14,282,612	16,413,380	17,535,276
Gross Profit	3,817,500	4,425,520	4,501,788	5,575,420	6,592,324
Operating Expenses:					
Officers' Compensation	370,400	422,000	469,200	556,600	617,800
Other Salaries & Wages	1,097,460	1,471,136	1,551,200	1,611,800	1,657,500
Rent	300,000	300,000	300,000	440,000	440,000
Payroll Taxes	133,428	191,060	188,632	191,840	192,724
Auto & Truck Expenses	25,200	25,800	26,960	25,600	28,960
Insurance	58,360	63,000	112,500	175,100	207,520
Selling Expenses	84,420	102,564	139,570	170,490	187,150
Professional Expense	32,000	30,000	52,840	62,800	80,200
Travel & Entertainment	79,600	69,600	71,800	64,800	70,600
Other Operating Expenses	53,260	372,960	467,524	557,920	585,556
Total Operating Exp	2,434,128	3,048,120	3,380,226	3,856,950	4,068,010
Operating EBITDA (1)	1,383,372	1,377,400	1,121,562	1,718,470	2,524,314
Depreciation & Amortization	211,400	234,312	253,100	352,500	396,900
Operating Inc (Loss) - EBIT (2)	1,171,972	1,143,088	868,462	1,365,970	2,127,414
Miscellaneous (Inc) Exp	5,126	2,617	39,417	40,817	(5,983)
Interest Expense	149,413	150,048	135,195	131,038	105,643
Income (Loss) Before Taxes	1,017,433	990,423	693,850	1,194,115	2,027,754
Income Taxes	386,625	361,504	242,848	441,823	689,436
Net Income (Loss)	630,808	628,919	451,002	752,292	1,338,318
Retained Earnings - Beg. of Yr	998,239	1,629,047	2,257,966	2,708,968	3,461,260
Dividends	-	-	-	-	-
Retained Earnings - End of Yr	$ 1,629,047	$ 2,257,966	$ 2,708,968	$ 3,461,260	$ 4,799,578

Notes:

(1) Operating EBITDA = Operating Earnings Before Interest, Taxes, Depreciation & Amortization

(2) Operating EBIT = Operating Earnings before Interest and Taxes

EXHIBIT 10-5

SUMMARY OF HISTORICAL COMMON SIZE INCOME STATEMENTS

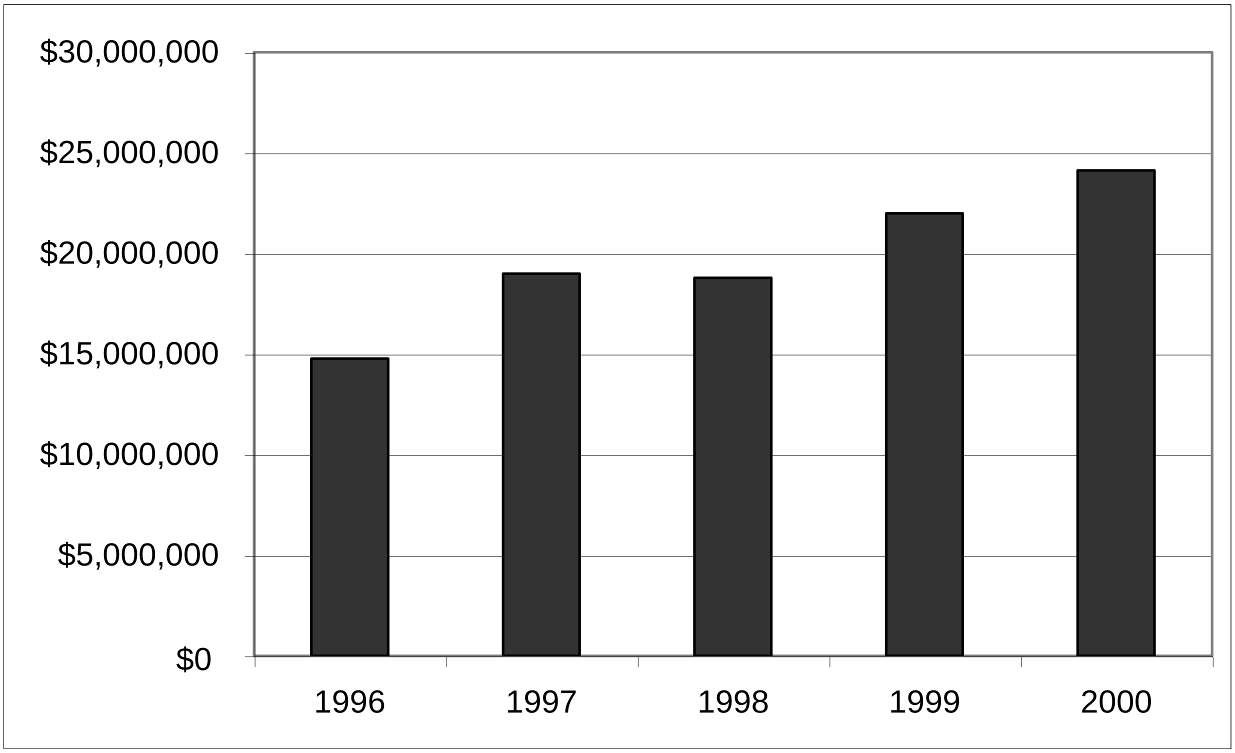
Exhibit 10-5
Adler-Cottino Wood Furniture Inc.
Summary of Historical Common Size Income Statements

Year End December	**1996**	**1997**	**1998**	**1999**	**2000**
Sales	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Sales	74.15%	76.71%	76.03%	74.64%	72.68%
Gross Profit	25.85%	23.29%	23.97%	25.36%	27.32%
Operating Expenses:					
Officers' Compensation	2.51%	2.22%	2.50%	2.53%	2.56%
Other Salaries & Wages	7.43%	7.74%	8.26%	7.33%	6.87%
Rent	2.03%	1.58%	1.60%	2.00%	1.82%
Payroll Taxes	0.90%	1.01%	1.00%	0.87%	0.80%
Auto & Truck Expenses	0.17%	0.14%	0.14%	0.12%	0.12%
Insurance	0.40%	0.33%	0.60%	0.80%	0.86%
Selling Expenses	0.57%	0.54%	0.74%	0.78%	0.78%
Professional Expense	0.22%	0.16%	0.28%	0.29%	0.33%
Travel & Entertainment	0.54%	0.37%	0.38%	0.29%	0.29%
Other Operating Expenses	1.71%	1.96%	2.49%	2.54%	2.43%
Total Operating Exp	16.48%	16.05%	17.99%	17.55%	16.86%
Operating EBITDA	9.37%	7.24%	5.98%	7.81%	10.46%
Depreciation & Amortization	1.43%	1.23%	1.35%	1.60%	1.65%
Operating Inc (Loss) - EBIT	7.94%	6.01%	4.63%	6.21%	8.81%
Miscellaneous (Inc) Exp	0.03%	0.01%	0.21%	0.19%	-0.02%
Interest Expense	1.01%	0.79%	0.72%	0.60%	0.44%
Income (Loss) Before Taxes	6.90%	5.21%	3.70%	5.42%	8.39%
Income Taxes	2.62%	1.90%	1.29%	2.01%	2.86%
Net Income (Loss)	4.28%	3.31%	2.41%	3.41%	5.53%

EXHIBIT 10-6

GRAPHS OF SELECTED HISTORICAL INCOME STATEMENT LINE ITEMS

Exhibit 10-6
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Net Sales

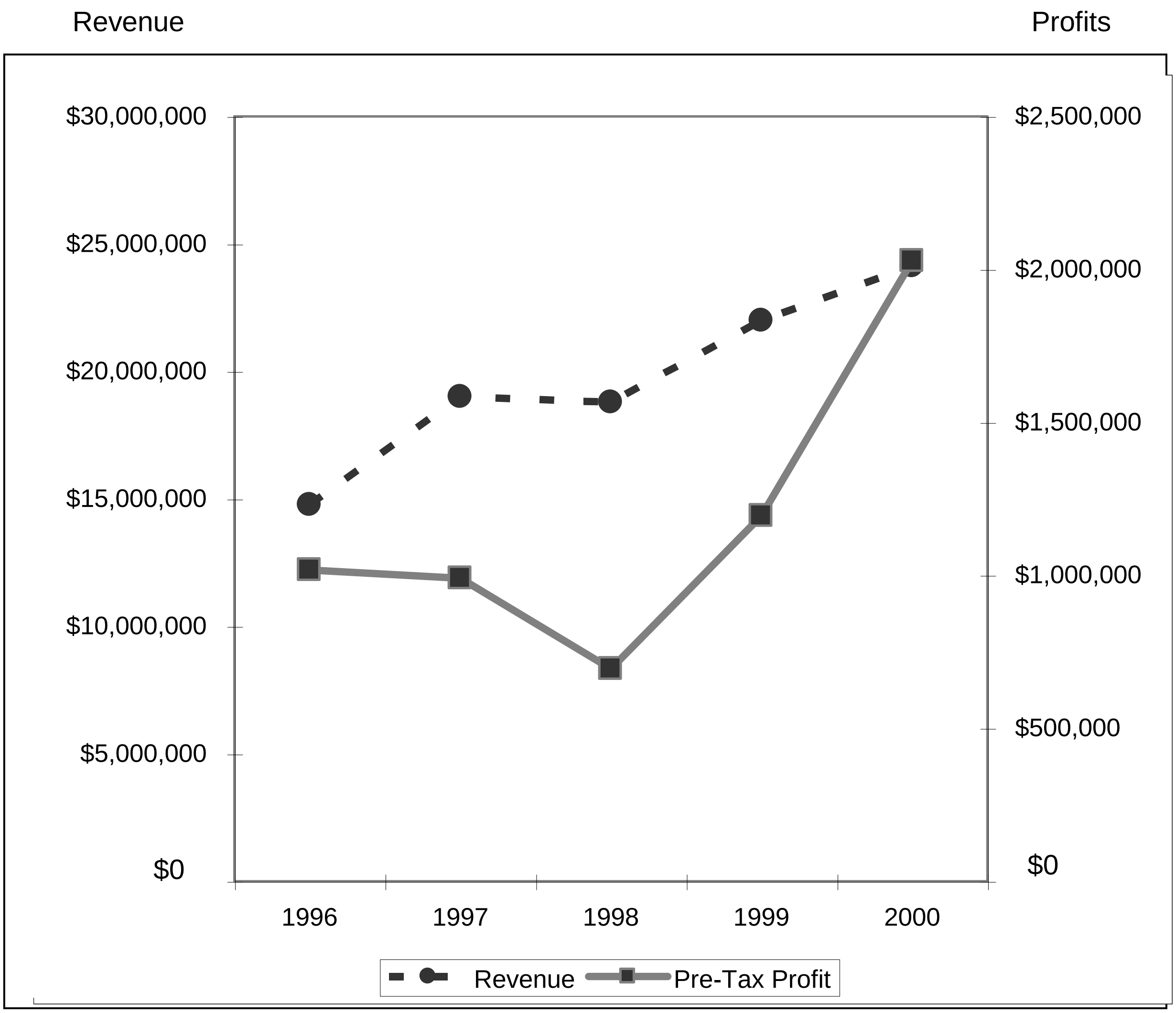


Management Query: What appears to management to be the reason for the dip in revenue in 1998?

Management Response: Plant expansion; our management team concentrated more resources to plant expansion and less to revenue generation.

Analyst Disposition: Fits the rest of data being gathered. Note for comment in final report.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Revenue and Pre-Tax Profit

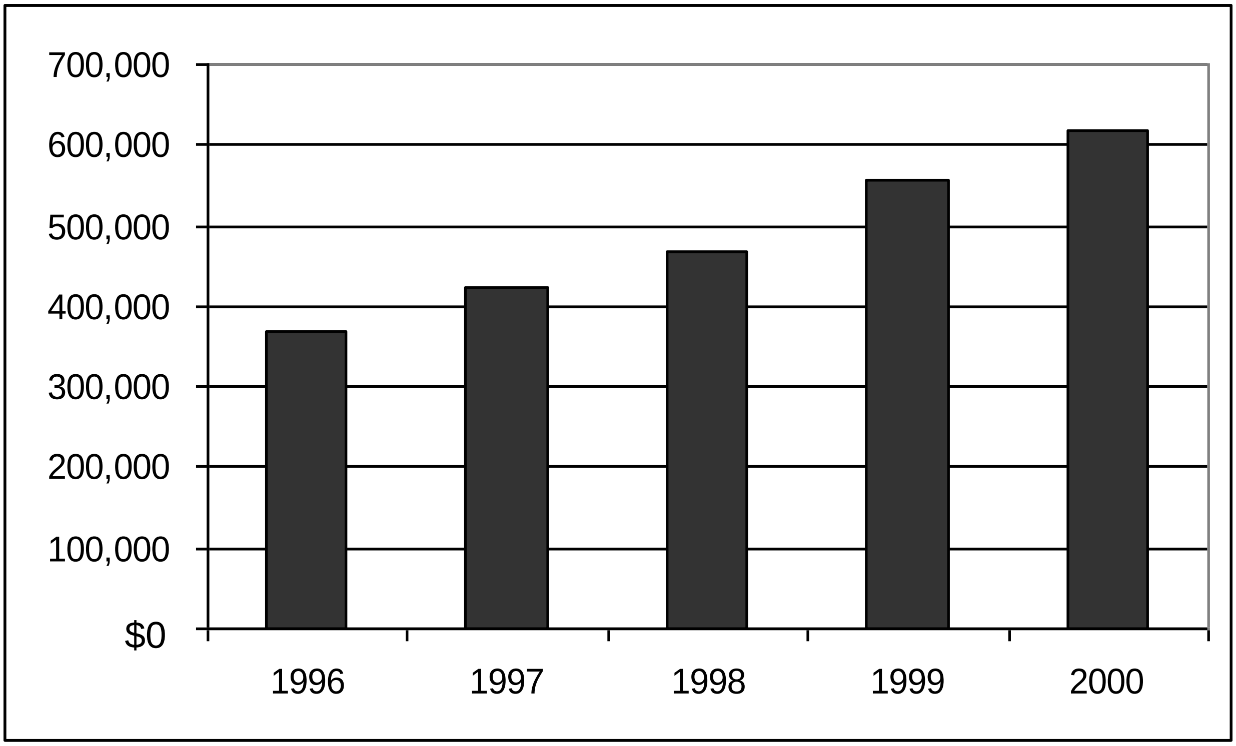


Management Query: 1998 and 1999—the years of facility expansion.

Management Response: Yes, as you can see, much of our time and energy and monies were involved in the expansion. We could see profits suffering, but felt in the long run, the expansion and adding a new line of products would prepare Adler for the future, and even increase our profits – by both increased sales and lowered costs.

Analyst Disposition: Noted, reviewed, and pass adjustment.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Officers Compensation

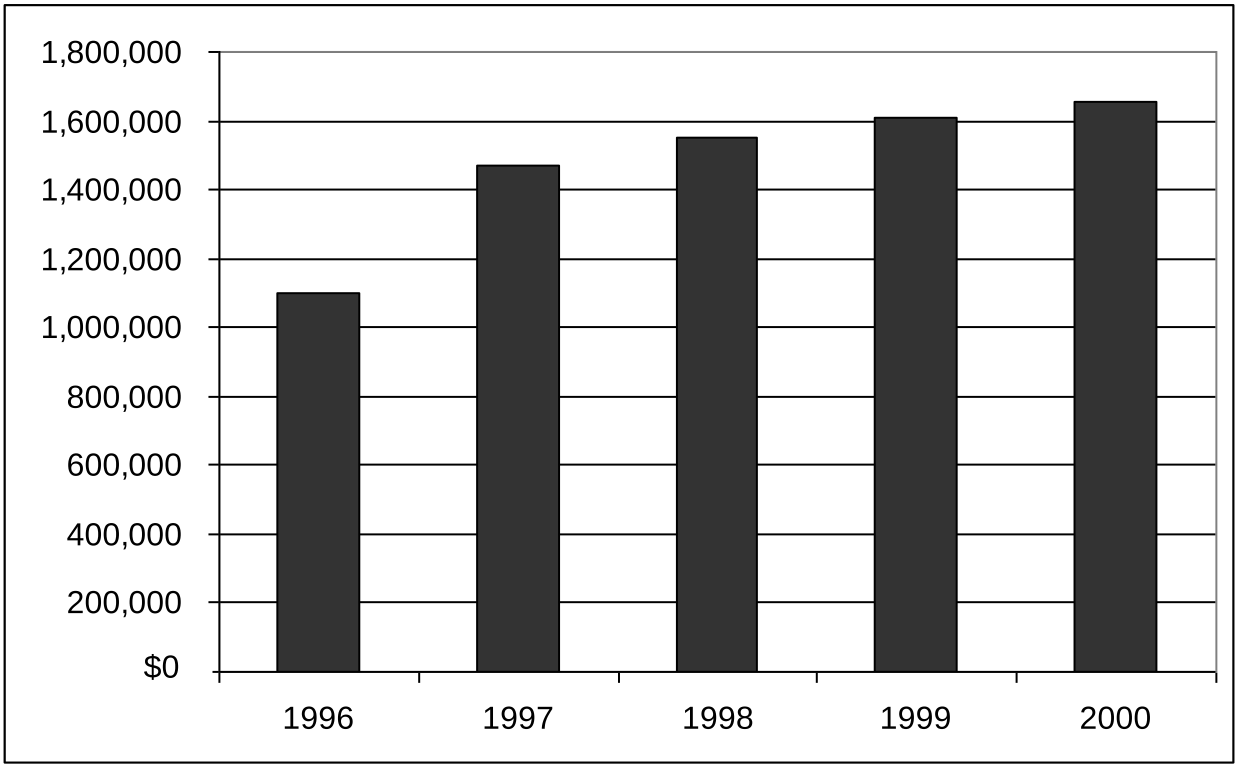


Management Query: Is compensation for Raymond included in this line item?

Management Response: Yes.

Analyst Disposition: Adjust for Raymond in this line item and in benefits and related areas. Check related items such as automobile payments, etc., to adjust as needed.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Other Salaries & Wages

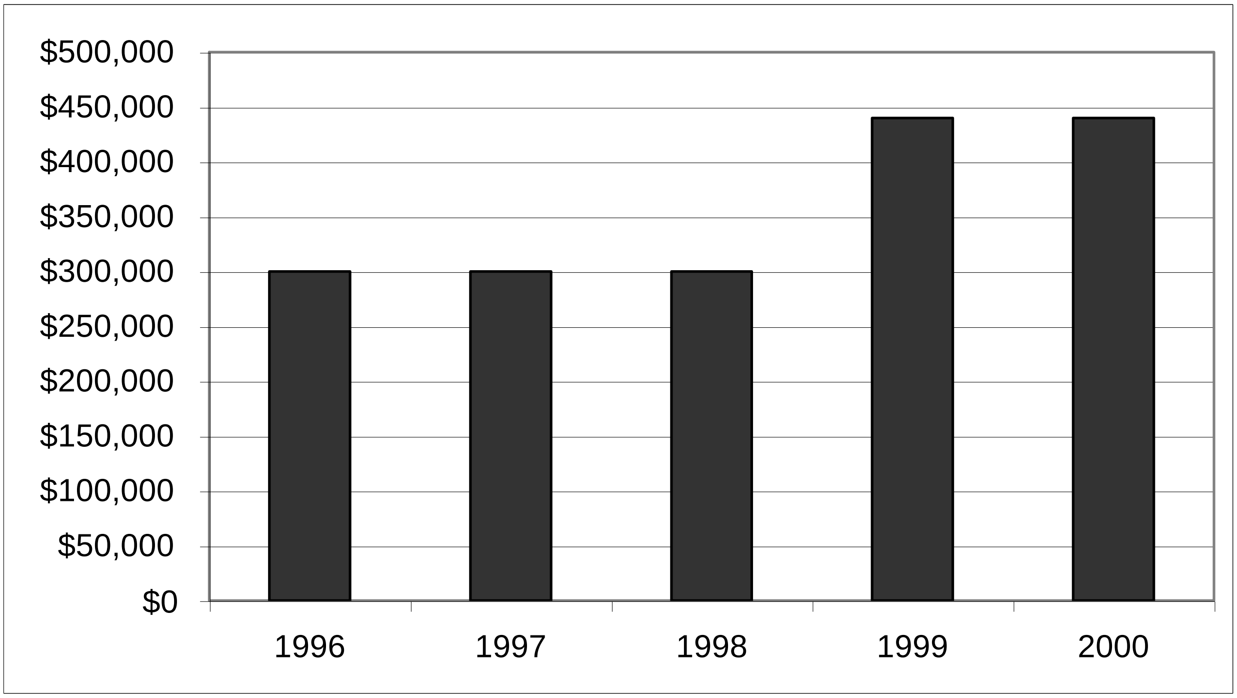


Management Query: Are there costs for Raymond in this account?

Management Response: No.

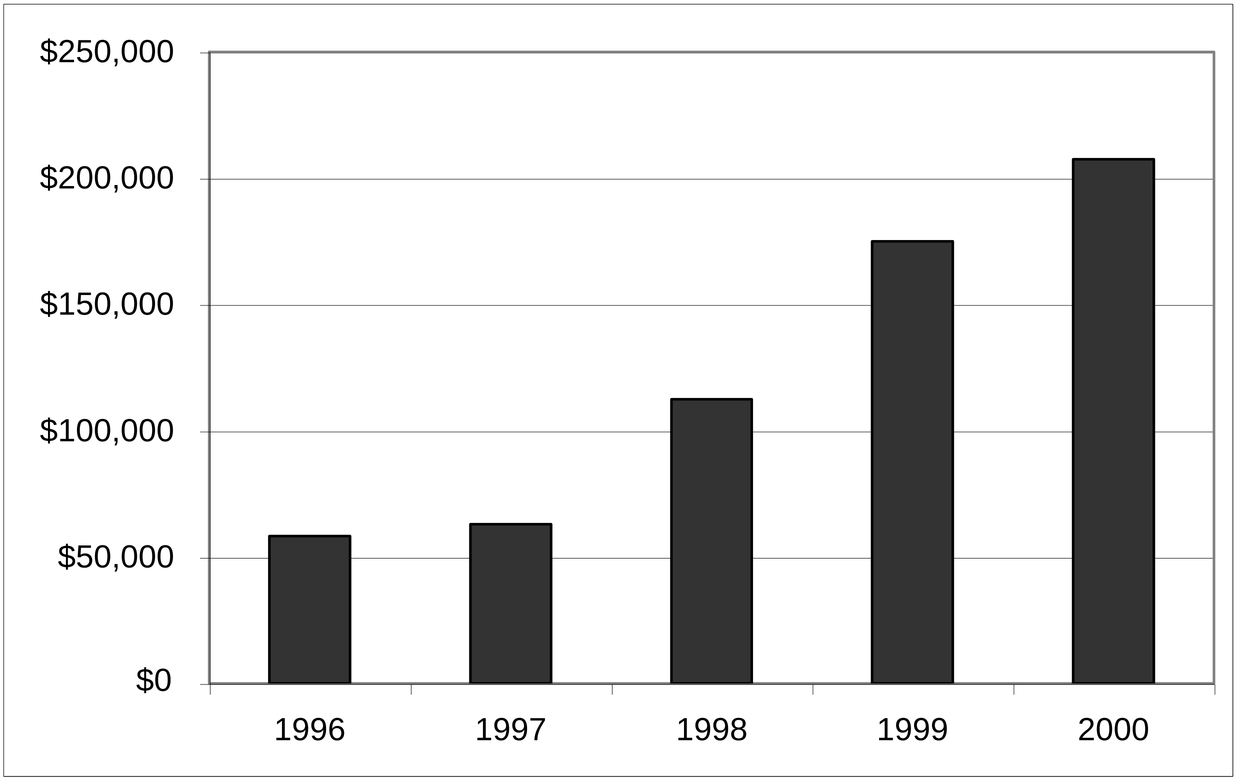
Analyst Disposition: Note, review and pass adjustments.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Rent



Management Query:	To whom does Adler pay rent?
Management Response:	Adler-Cottino Real Estate Development Company, LLP
Management Query:	Who owns the real estate company?
Management Response:	Mrs. Raymond Harrison, first name is Anabelle, and David (her son). Other family members may have some interest in the RE company.
Analyst Disposition:	Not part of estate. Need to check on current rents in the area to see if amount paid is comparable to others in the area.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Insurance



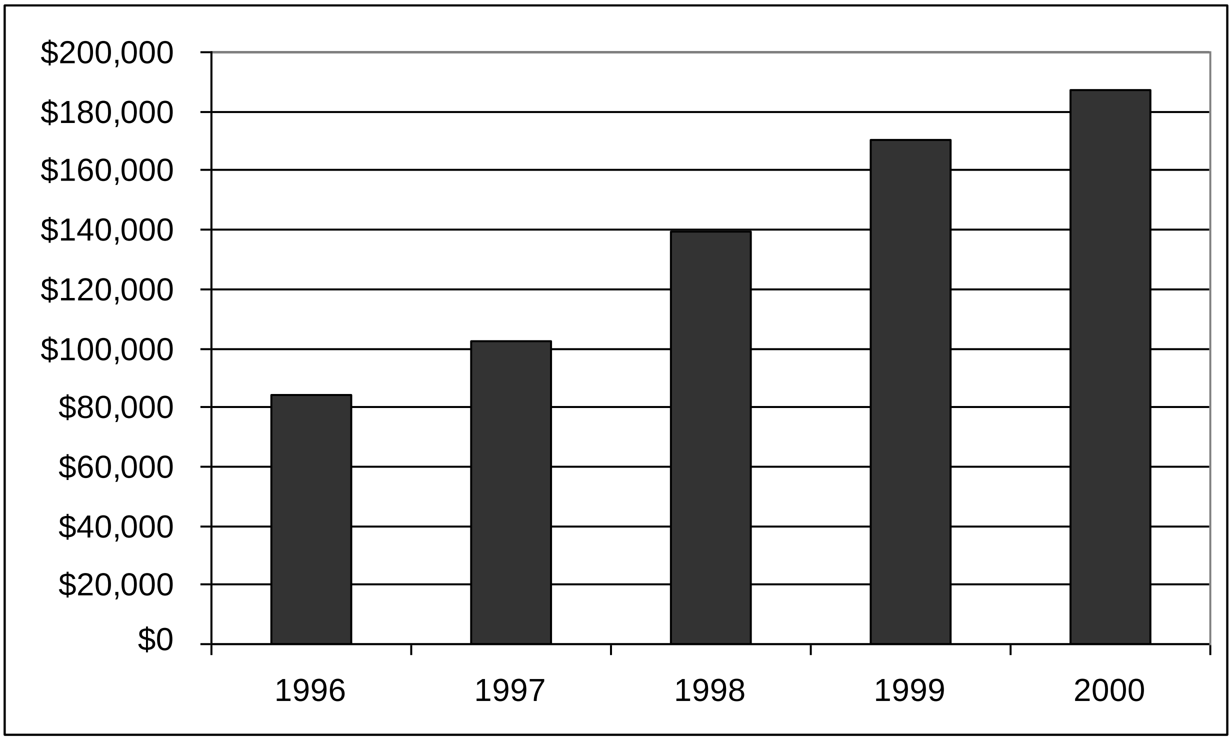
Management Query: What is the cause of the jump in insurance? What is in this line item?

Management Response: Several items—salesmen's automobiles, trucks for delivery, workers compensation and insurance related to potential environmental problems.

To date, no major claims are on file or expected.

Analyst Disposition: Review in detail for any item related to Raymond and adjust as needed.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Selling Expenses

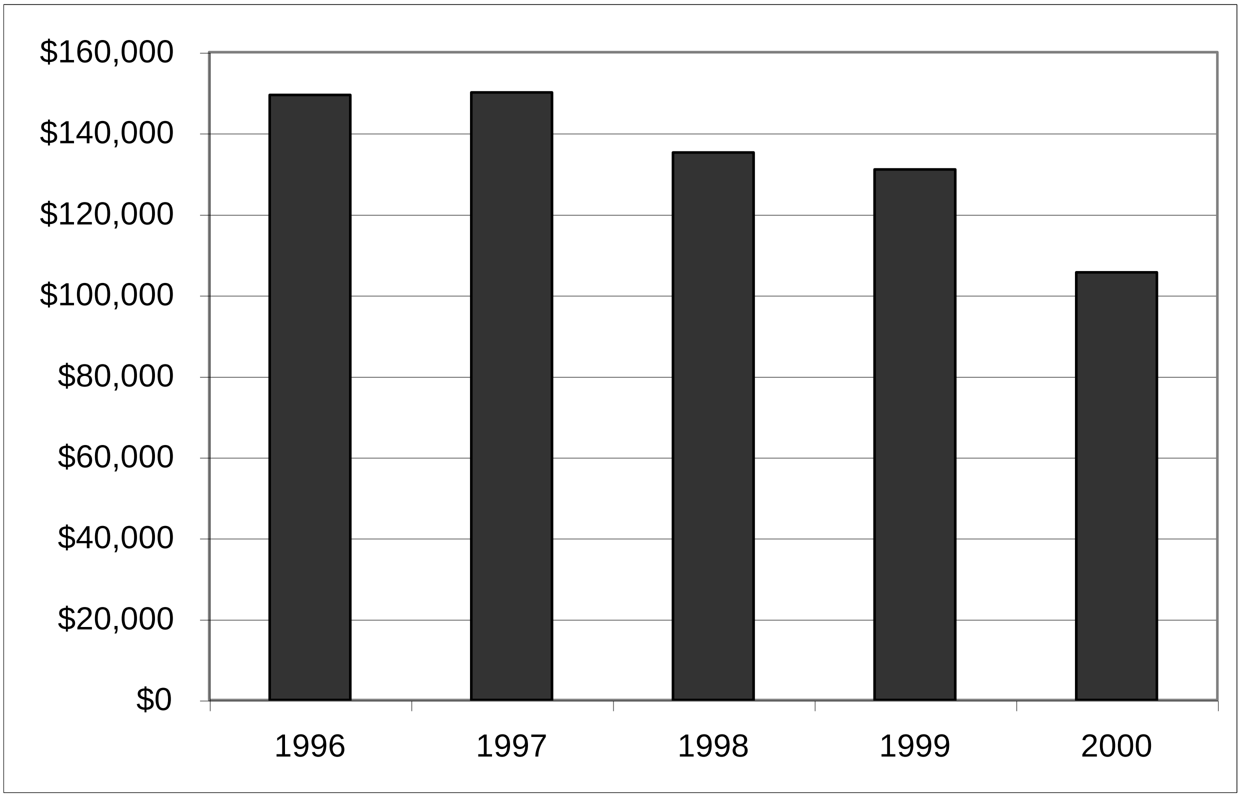


Management Query: Selling expense continues to climb.

Management Response: Yes, we see this and discuss in our management meetings. It is a trend we are watching closely since the expansion, to see where these costs are generated and how we might better control them. It is a trend we do not like, but do not want to react to until we are more certain of the reasons.

Analyst Disposition: Note.

Exhibit 10-6 Continued
Adler-Cottino Wood Furniture Inc.
Income Statement—Historical Summary
Interest Expense



Management Query: Interest expense is heading down.

Management Response: Yes, a trend we like. We attribute to the change in funding of our business and the decrease in the short-term loans with their higher rates.

Analyst Disposition: Logical; check and if reasonable, pass adjustments.

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EXHIBIT 10-7

COMPARATIVE ANALYSIS OF HISTORICAL FINANCIAL STATEMENTS

Exhibit 10-7
Adler-Cottino Wood Furniture, Inc.
Comparative Analysis of Historical Financial Statements[5]

	1997			1998			1999			2000		
SELECTED ITEMS	RMA	INTE GRA	CO	RMA	INTE GRA	CO	RMA	INTE GRA	CO	RMA	INTE GRA	CO
ASSETS												
Current Assets:												
Cash	3.3%	7.0%	11.2%	6.2%	6.9%	10.7%	6.3%	6.9%	9.5%	2.6%	6.9%	10.3%
Marketable Securities		0.0%	0.0%		0.1%	0.0%		0.0%	0.0%		0.1%	0.0%
Accounts Receivable	26.1%	27.2%	25.6%	22.9%	26.9%	25.1%	25.0%	26.7%	25.3%	26.9%	26.9%	25.0%
Inventory	37.7%	36.1%	38.0%	36.8%	35.7%	37.1%	37.6%	35.5%	34.7%	31.2%	35.8%	34.6%
Prepaid Expenses	0.7%	3.1%	0.7%	1.3%	3.0%	1.0%	1.1%	2.9%	0.9%	1.5%	3.0%	1.0%
Total Current Assets	67.8%	73.4%	75.5%	67.2%	72.6%	73.9%	70.0%	72.0%	70.4%	62.2%	72.7%	70.9%
Property & Equipment - Net			18.0%			20.4%			24.8%			24.7%
Land			0.0%			0.0%			0.0%			0.0%
Net Fixed Assets	26.3%	21.9%	18.0%	26.7%	22.7%	20.4%	21.4%	23.4%	24.8%	30.6%	23.6%	24.7%
Other Assets:												
Intangible Assets	1.3%	0.8%	0.0%	1.2%	0.8%	0.0%	2.3%	0.9%	0.0%	1.4%		0.0%
Investments		2.4%	0.0%		2.4%	0.0%		2.3%	0.0%		2.3%	0.0%
Other Assets	4.6%	1.5%	6.5%	4.9%	1.5%	5.7%	6.3%	1.4%	4.8%	5.8%	1.4%	4.4%
Total Other Assets	5.9%	4.7%	6.5%	6.1%	4.7%	5.7%	8.6%	4.6%	4.8%	7.2%	3.7%	4.4%
Total Assets	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
LIAB. & S/Hs EQUITY												
Current Liabilities:												
Short Term Debt	23.8%	10.8%	14.4%	17.4%	11.0%	9.4%	23.5%	11.0%	5.7%	26.4%	11.0%	4.3%
Accounts Payable	11.8%	12.7%	20.4%	12.0%	12.8%	20.5%	12.5%	12.8%	19.7%	15.1%	12.7%	13.1%
Other Current Liabilities	7.2%	9.5%	8.1%	10.7%	9.6%	8.2%	9.5%	9.4%	8.4%	8.3%	9.4%	8.9%
Total Current Liab	42.8%	33.0%	42.9%	40.1%	33.4%	38.1%	45.5%	33.2%	33.8%	49.8%	33.1%	26.3%
Long-Term Liabilities:												
Long-Term Debt	14.1%	12.5%	9.5%	13.0%	12.8%	7.4%	13.5%	13.0%	10.6%	19.1%	13.1%	8.0%
Loans from Shareholders		7.3%	0.0%		7.6%	0.0%		7.7%	0.0%		7.7%	0.0%
Other Liabilities	4.5%	1.2%	9.6%	3.3%	1.2%	13.3%	3.7%	1.3%	10.1%	6.1%	1.2%	6.8%
Total-Long-Term Liabilities	18.6%	21.0%	19.1%	16.3%	21.6%	20.7%	17.2%	22.0%	20.7%	25.2%	22.0%	14.8%
Total Liabilities	61.4%	54.0%	62.0%	56.4%	55.0%	58.8%	62.7%	55.2%	54.5%	75.0%	55.1%	41.1%
Shareholders' Equity:												
Capital Stock			0.1%			0.1%			0.1%			0.1%
Additional Paid-In Capital			4.4%			4.0%			3.5%			3.5%
Retained Earnings			33.5%			37.1%			41.9%			55.3%
Total S/Hs Equity	38.6%	46.0%	38.0%	43.6%	45.0%	41.2%	37.3%	44.8%	45.5%	25.0%	44.9%	58.9%
Total Liabilities.& S/Hs Equity	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[5] Source: SIC Code 2511, NAICS Code 337122, RMA Annual Statement Studies, average of about 32 companies with total sales between $10M-$25M; Integra Business Profiler, 42 companies with sales between $10M-$25M.

EXHIBIT 10-8

SELECTED UNADJUSTED RATIO SUMMARY

Exhibit 10-8
Adler-Cottino Wood Furniture Inc.
Selected Unadjusted Ratio Summary

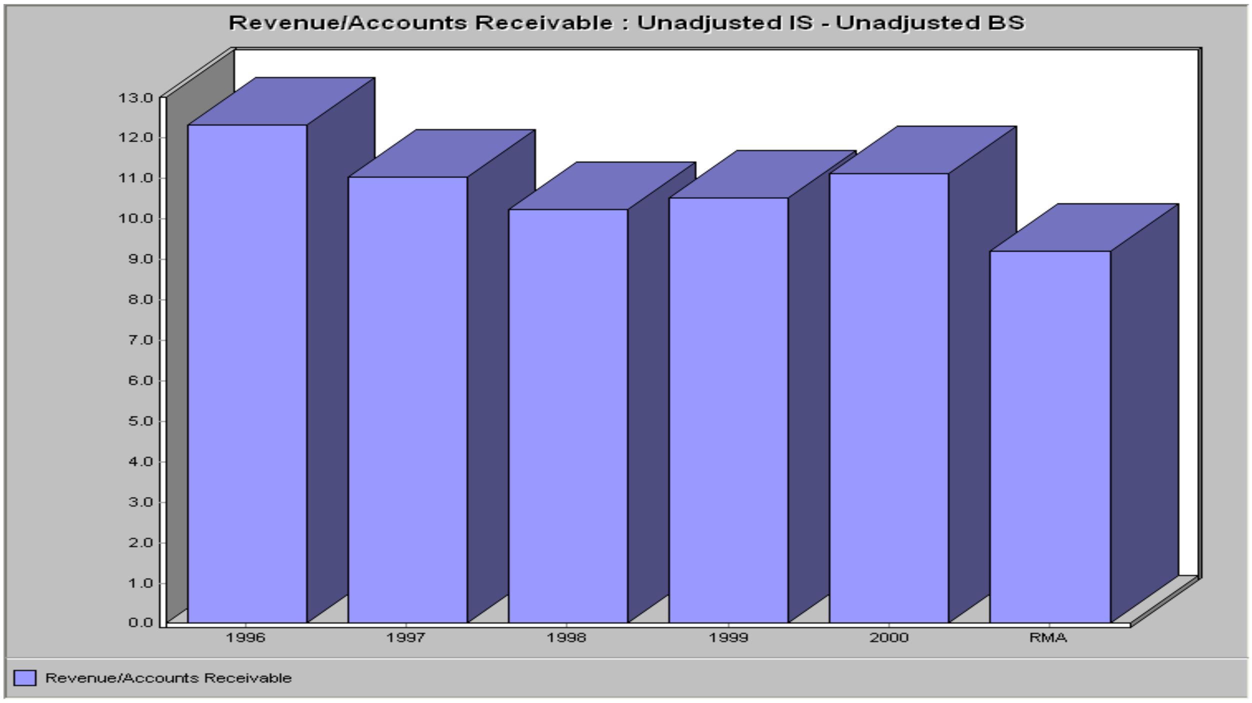
	Median RMA 2000	Integra 2000	2000	1999	1998	1997	1996
LIQUIDITY RATIOS:							
Current Ratio	1.2	2.2	2.7	2.1	1.9	1.8	1.5
Quick (Acid-Test) Ratio	0.5	1.0	1.3	1.0	0.9	0.9	0.7
Revenue/Accounts Receivable	9.2	7.5	11.1	10.5	10.2	11.0	12.3
Average Collection Period	39.7	48.7	32.9	34.8	35.8	33.2	29.7
Inventory Turnover	4.6		5.9	5.7	5.3	5.7	5.0
Days' Inventory	79.3	0.0	61.9	64.0	68.9	64.0	73.0
COGS/Payables	16.6		15.4	10.1	9.5	10.6	8.1
Days' Payables	22.0	0.0	23.7	36.1	38.4	34.4	45.1
Revenue/Working Capital	22.8	5.1	6.2	7.3	7.2	8.7	11.1
COVERAGE RATIOS:							
Times Interest Earned	2.4	4.3	20.2	10.1	6.1	7.6	7.8
NI+Non-Cash Expenditures / Current L.T. Debt	4.5		13.6	6.6	6.8	9.1	9.9
LEVERAGE RATIOS:							
Fixed Assets/Tangible Worth	0.5		0.4	0.5	0.5	0.5	0.6
Debt-to-Tangible Net Worth	3.0	1.2	0.7	1.2	1.4	1.6	2.0
Debt-to-Equity	1.0		0.7	1.2	1.4	1.6	2.0
OPERATING RATIOS:							
Gross Profit Margin	23.30%		27.32%	25.36%	23.97%	23.29%	25.85%
EBT/Tangible Worth	14.20%	12.40%	39.76%	31.74%	23.05%	38.70%	52.72%
EBT/Total Assets	5.20%	5.60%	23.38%	14.44%	9.49%	14.69%	17.83%
Fixed-Asset Turnover	9.6	8.5	11.3	10.7	12.6	15.6	12.4
Total Asset Turnover	2.4	2.0	2.8	2.7	2.6	2.8	2.6
EXPENSE TO REVENUE RATIOS:							
% Deprtn., Depltn., Amort./Revenue	0.00%		1.65%	1.60%	1.35%	1.23%	1.43%
% Officer's &/or Owner's Compensation/Revenue	N/A	4.00%	2.56%	2.53%	2.50%	2.22%	2.51%

EXHIBIT 10-9

SELECTED RATIO GRAPHS

Exhibit 10-9
Adler-Cottino Wood Furniture Inc.

Unadjusted Ratios: Sales/Receivables



Unadjusted Ratios: Inventory Turnover

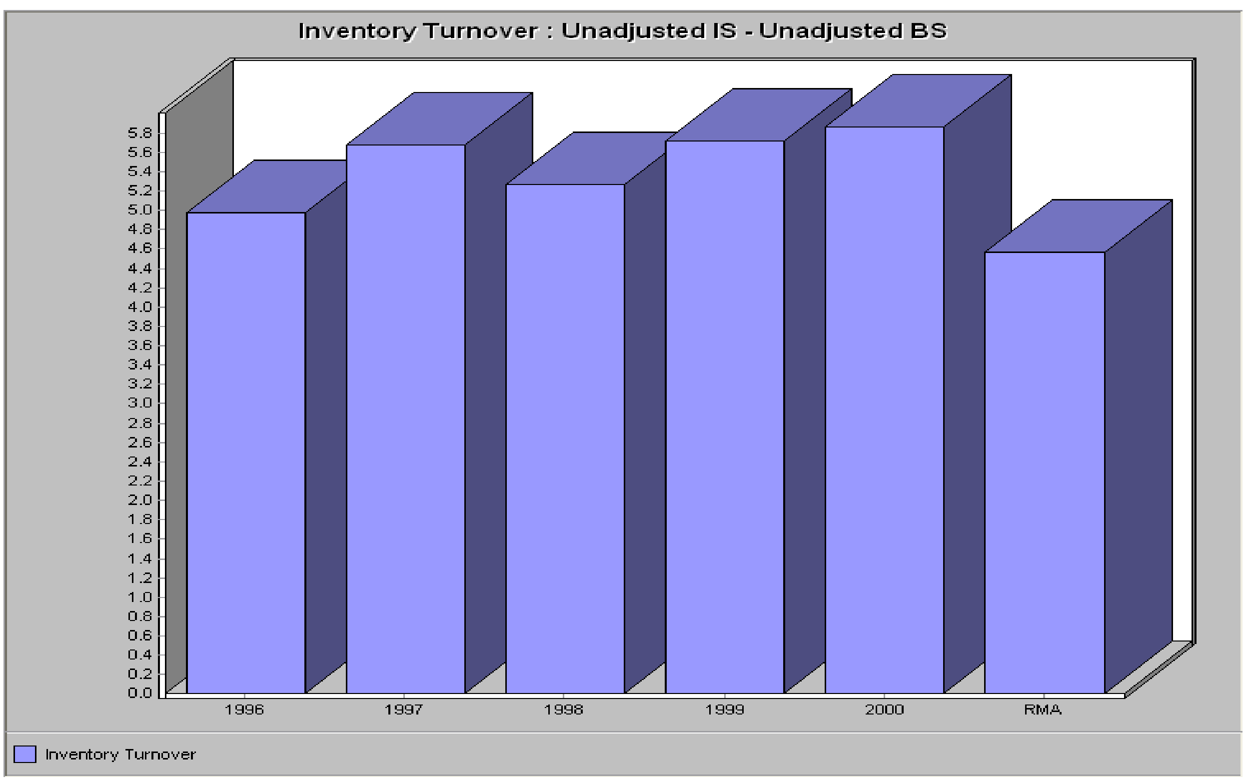
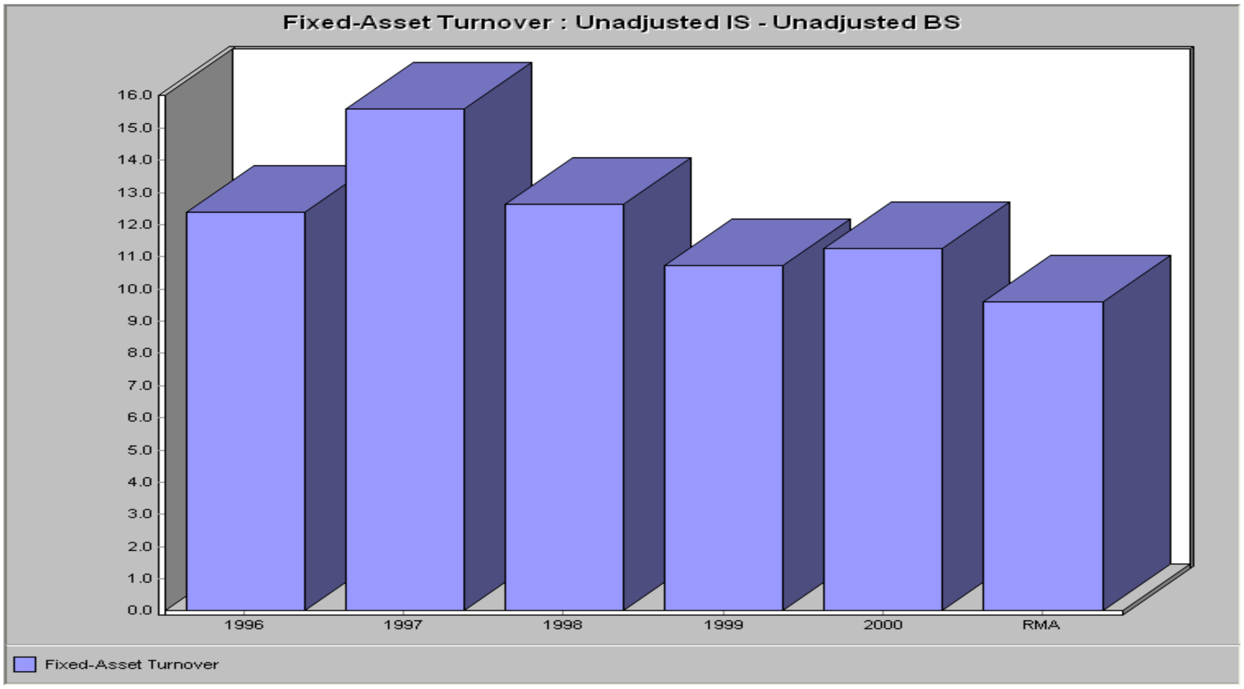


Exhibit 10-9 Continued
Adler-Cottino Wood Furniture Inc.

Unadjusted Ratios: Sales/Fixed Assets (Fixed Asset Turnover)



Unadjusted Ratios: Sales/Total Assets

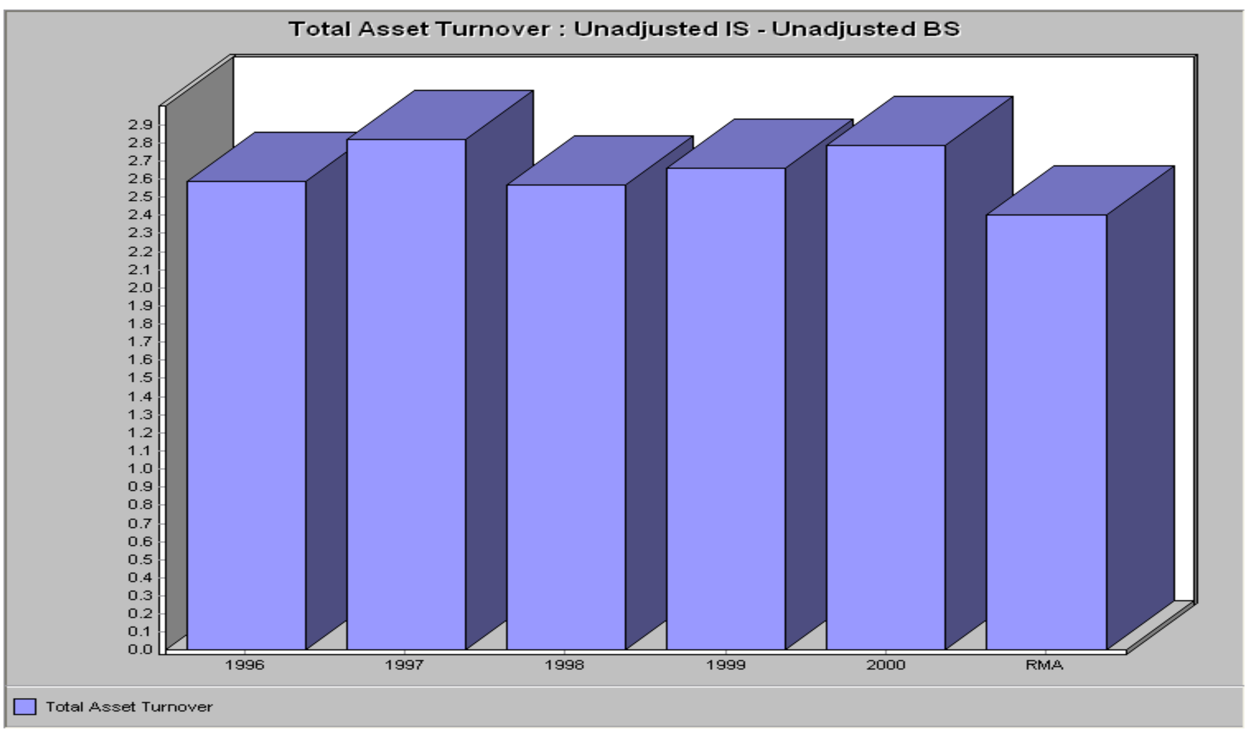


Exhibit 10-9 Continued
Adler-Cottino Wood Furniture Inc.

Unadjusted Ratios: Total Debt/Equity

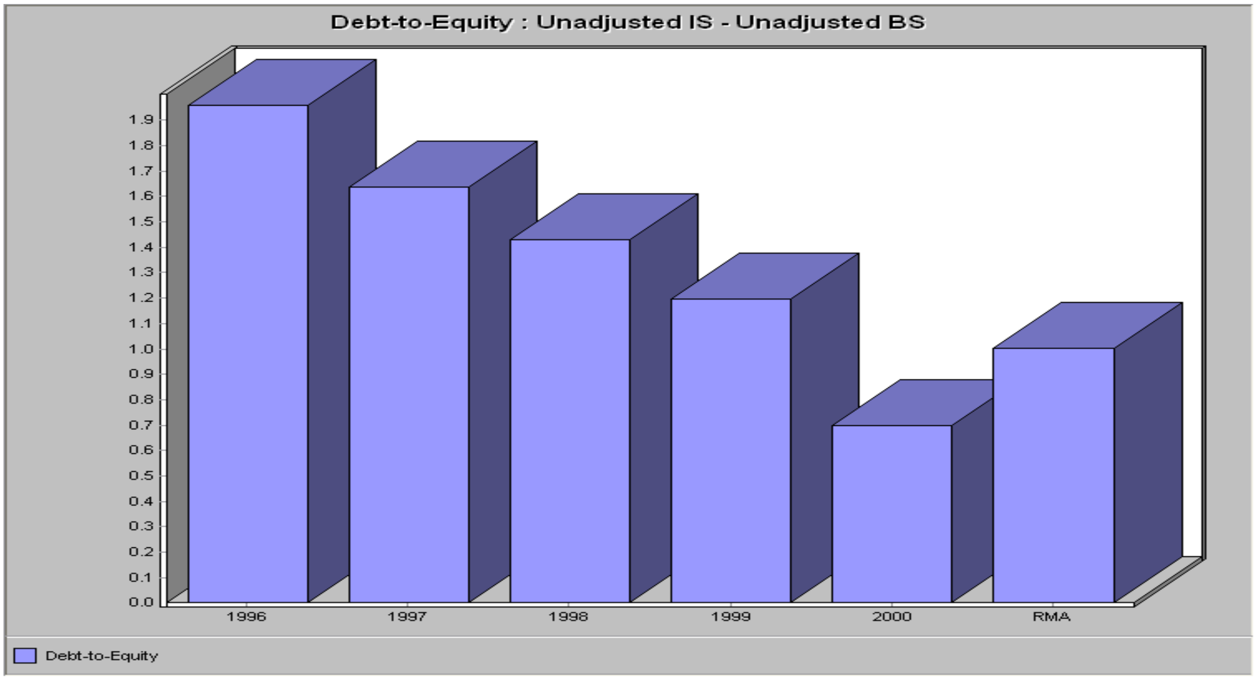


Exhibit 10-9 Continued
Adler-Cottino Wood Furniture Inc.

Unadjusted Ratios: Quick Ratio

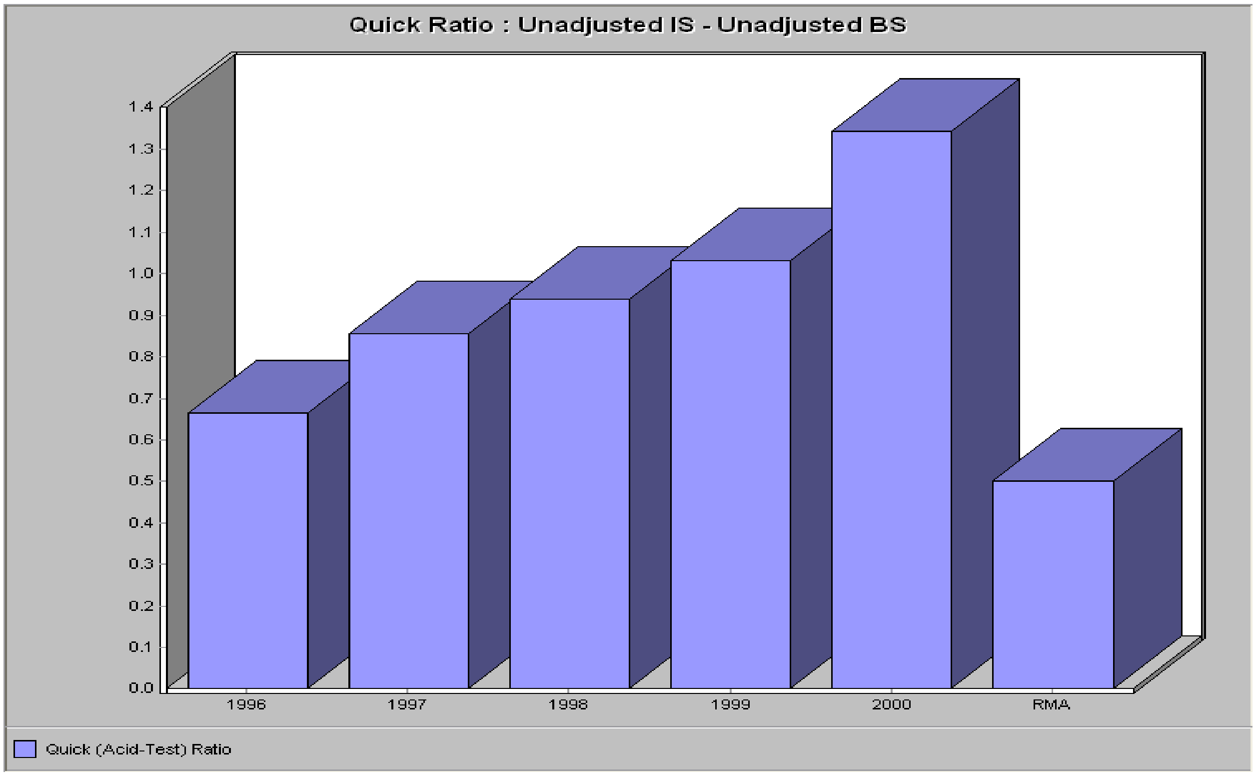


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EXHIBIT 10-10

Comprehensive Business Valuation Development Checklist

Comprehensive Business Valuation Development Checklist

Use of this document in obtaining the necessary information and addressing the specific areas of development to conduct your analysis in the performance of a business valuation in a valuation engagement, and will help in complying with the Development Standards promulgated by the National Association of Certified Valuators and Analysts (NACVA) and the American Institute of Certified Public Accountants (AICPA) in their Statement on Standards for Valuation Services No. 1 (SSVS). Both standards have an effective implementation date of January 1, 2008.

Disclaimers:

1) **Though this document is quite comprehensive, one should not construe it to suggest that every item noted herein is required to be obtained or addressed in the development of a business valuation. Each engagement and each business is different. Thus, some or many items noted herein may not be necessary for consideration in the given circumstances.**

2) By no means is the use of this document intended to replace the User's responsibility for having read and being fully conversant with both NACVA's and the AICPA's standards. The authors of this document are fallible and it is very possible that items have been overlooked. Thereby, we disclaim any and all liability for one's use of this document should it turn out that the valuation report produced while using this Checklist is not in compliance with the aforementioned standards.

3) Provisions under SSVS #46 pertaining to "Calculation of Value" have been omitted.

4) This comprehensive checklist is designed for use in engagement to determine a "Conclusion of Value" to be communicated in either a "Detailed" or Summary" Report. Thus, depending on which type of report the engagement calls for will determine which items on this checklist are applicable or not applicable.

5) SSVS #24 states that the sequence of implementation of the Developmental Standards is at the option of the Valuation Analyst.

6) SSVS #45 provides that the Valuation Analyst should retain the documentation for a period of time sufficient to meet the needs of applicable legal, regulatory, or other professional requirements for records retention.

7) All SSVS references herein, are to paragraph numbers in the SSVS.

8) This document is a work in process and will be updated and improved on an ongoing basis. We appreciate any suggestions you may have. Please e-mail them to nacva1@nacva.com.

Comprehensive Business Valuation Development Checklist

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—— Table of Contents ——

(continued)

Workpapers Page Reference

I. ANALYSIS OF THE SUBJECT INTEREST OWNERSHIP INFORMATION

Company Information

Name: Adler-Cottino Wood Furniture Inc. Company: ______

Street address: 1111 South Birch Highway

City: Atlanta State: GA ZIP: 30309

Tel: (404) 486-0600 Fax: ______ Email: ______

DBA (if applicable): N/A

Organizational Information

- Corporation type: C-corp
- Date incorporated: 7/1/1980
- State of incorporation: Georgia
- S election: ______
- Merger date: ______
- Recapitalization ______
- Agreement: ______

Common Shares

- # of shares authorized: 100,000
- # of shares issued and outstanding: 100,000
- Restrictions, if any: None
- Voting or non-voting: ______

Treasury Shares

- # of shares held: None
- Date of purchase: ______
- Purchase price: ______
- Date of cancellation: ______

Preferred Shares

- # of shares authorized: None
- # of shares issued and outstanding: ______
- Description of preference: ______
- Dividend %: ______

Shareholder Information

	Common		Preferred		
Name	# of Shares	%	# of Shares	%	
Raymond C. Harrison	100,000	100%	N/A	N/A	
(Deceased 12/31/00)					
Totals:	100,000	100%	N/A	N/A	

This page and above addresses: SSVS 13b, 13c

Ownership

- Determine the type of ownership interest being valued and ascertain whether that interest exhibits control characteristics: ______

Workpapers Page Reference

- Analyze the different ownership interests of other owners and assess the potential effect on the value of the subject interest: ______

- Understand the classes of equity ownership interests and rights attached thereto: ______

- Understand the rights included in, or excluded from, each intangible asset: ______

Understand other matters that may affect the value of the subject interest, such as:

- For a business, business ownership interest, or security: shareholder agreements, partnership agreements, operating agreements, voting trust agreements, buy-sell agreements, loan covenants, restrictions, and other contractual obligations or restrictions affecting the owners and the subject interest. ______

- For an intangible asset: legal rights, licensing agreements, sublicense agreements, non-disclosure agreements, development rights, commercialization or exploitation rights, and other contractual obligations: ______

- To the extent any of these agreements are applicable, request for our file: ______

Participation

Name	Title	% of Time Devoted to Business	Duties	
Raymond C. Harrison	Chairman, Sr. V.P.	3% at most	Advisor and Public Relations	

This page and above addresses: SSVS 23, 27, 28

Workpapers Page Reference

Related Party Information

Name	Relationship	Involvement Described	Workpapers Page Reference
None	None	None	

Recent Stock Sale Information

- Type of stock sold: N/A
- Sold to:
- # of shares sold:
- Price of shares sold:
- Date of sale:
- % sold:
- Restrictions, if any:
- Reason for sale:
- How valued:
- Stock options:
- Terms:
- Type:

- Type of stock sold: N/A
- Sold to:
- # of shares sold:
- Price of shares sold:
- Date of sale:
- % sold:
- Restrictions, if any:
- Reason for sale:
- How valued:
- Stock options:
- Terms:
- Type:

This page and above addresses: SSVS 13c, 29

II. VALUATION ESSENTIALS

Purpose of Valuation

- Purpose of valuation: Estate—file with tax form 706 (Fed)
- Valuation date: 12/31/2000
- # of shares to be valued: 100,000
- % of interest to be valued: 100%

Assumptions and limiting conditions: *use Exhibit I*

- Type of report to be issued:
- Use of specialists:
- Competency issue:

Standard / Premise of Valuation

- Define standard of value: FMV—REV. Ruling 59-60 must be addressed in valuation process and valuation report.
- Define premise of value: Going concern—In business since 1870, incorporated in 1980, in-place workers, factory customers.

Workpapers Page Reference

- Are we valuing equity, invested capital or intangible assets? ______ ______
- Is there a jurisdictional exception: ______ ______
- Are there governmental regulations: ______ ______
- AICPA professional standards: ______ ______

Check those that apply:

- ❑ AICPA Code of Professional Conduct: ______ ______
- ❑ Statement on Standards for Consulting Services: ______ ______
- ❑ Consulting services: definitions & standards AICPA professional standards, Vol. 2, CS Sec 100: ______ ______
- ❑ Rule 201-A professional competence of AICPA Code of Professional Conduct: ______ ______

- Is this an attest client? If so, the firm is not able to perform the engagement unless the analyst meets all requirements of Interpretation 101-3: ______ ______

This page and above addresses: SSVS 3, 12d (iii, iv), 12e, 13c, 14, 15, 20, 25

Requesting Party

Name: The estate executor: David B. Harrison Title: ______ ______
Street address: ______ ______
City: ______ State: ______ ZIP: ______ ______
Tel: ______ Fax: ______ Email: ______ ______
Relationship: ______ ______

Describe understanding with client:

- Scope limitations: ______ ______
- Restrictions: ______ ______
- Hypothetical conditions: ______ ______
- Obligation to update: ______ ______
- Conflicts of interest: ______ ______
- Independence issues: ______ ______
- Due date: ______ ______
- Client's responsibilities: ______ ______
- Analyst's responsibilities: ______ ______
- Assumptions: ______ ______
- Report type: ______ ______
- Nature, purpose and objective of valuation: ______ ______
  ______ ______

- Document terms of valuation engagement, procedural requirements, objectivity, and independence:
  ______ ______
  ______ ______
  ______ ______

This page and above addresses: SSVS 13a, 14, 16, 17

Workpapers Page Reference

Contact Person

Name: Mr. David B. Harrison Title: President—Adler-Cottino Wood Furniture Inc.

Street address: 1111 South Birch Highway

City: Atlanta State: GA ZIP: 30309

Tel: (404) 372-4545 Fax: ______ Email: ______

Relationship: Executor of Raymond C. Harrison Estate

III. NON-FINANCIAL INFORMATION

- History / background: German & Italian woodcarver Friedrich H. Adler came to Chicago in 1806, worked for Baldwin Piano. Alberto R. Cottino also worked at Baldwin, their sons Raphael Cottino and Harrison Adler, also worked at Baldwin. In 1828 Harrison Adler married Isabella, Raphael's daughter. Skilled carvers add some tradesmen marking of their own to their creations, since 1870 Adler-Cottino has used an engraved eagle as their tradesman mark.

- Major historical events: 1865—Harrison & Isabella move to Georgia. 1870—opens Adler-Cottino Cabinet Making—a kind of guild, and adds "AC" to the tradesman mark. 1980—Raymond C. Harrison incorporates (7/1/80)(C-Corp) as Adler-Cottino Wood Furniture. 1999—adds ready-to-assemble furniture to the product line, which caused a need for factory expansion. Owns condo in Jonesboro NC, which is used to show furniture and to entertain during High Point convention. Leases factory space from Adler-Cottino Real Estate Development LLC (a separate affiliate).

- Annual gross revenues: $24 Million
- Average # of employees: Approx. 100 (averaged)

Location Information

Location	Date Occupied	Leased/ Owned	Function
1111 South Birch Highway	1996 (75,000 sq ft)	Leased	Factory & Offices
Atlanta, GA 30309		month to	
Expanded (same address)	1999 (110,000 sq ft)	month	

- SIC code: 2511
- NAICS code: ______

- Principle activity: Manufacturing of wood furniture—high end—primarily household (some office) furniture. Added Ready-to-Assemble (RTA) in 1999.

Employee Turnover

- Describe management turnover: ______

- Describe non-management turnover: ______

This page and above addresses: SSVS 27

Workpapers Page Reference

Family Involvement

- Does the company have family members working for the company? ____
- How many family members work for the company? ____
- What is the amount and basis for each family member's compensation? ____
- Do family members have proper education and experience for position held? ____
- Is there absentee management? ____
- Provide owners and family fringe benefits: ____
- Describe related party transactions: ____

This page and above addresses: SSVS 27

IV. MANAGEMENT

Key Management

Name	Title	Duties	Age / Health	
David B. Harrison	President	General Management	36 / Excellent	
Raymond C. Harrison	Chairman/Senior Vice Pres	(Deceased)	60 / Deceased	
John Jones	Sales Manager	Sales and customer relations	50 / Excellent	
Harry White	Production Manager	Manufacturing	58 / Excellent	
Bob Black	Purchasing Manager	Purchasing	53 / Excellent	

- Describe key management background, education, longevity, and experience: ____
  See copy of resumes in work paper file.

  Note: All members of key management have been with the company since its inception in 1980, and the above management are considered experts in the industry in their respective areas of reasponsibility.

- Are employment contracts in place? Yes* • Are key man policies in place? No

  Describe: *Unionized workforce only

Workpapers Page Reference

Identify Basis of Officer / Owner Compensation

Name	Title	Basis of Compensation	Workpapers Page Reference
Raymond C. Harrison (Deceased)	Chairman/Senior Vice Pres	$100,000 / year since 1992	

Identify Officer / Owner Prerequisites

Name	Title	Type of Benefit	Annual Cost	Workpapers Page Reference

Board of Directors and Level of Involvement

Name	Title	Basis of Compensation	Workpapers Page Reference
David B. Harrison	Board Member/President		
Raymond C. Harrison	Chairman/Senior Vice Pres		
Gary Anderson (Attorney)	Board Member/Attorney	250/hour = $2,000/year (legal fees)	
Paul Riddleman	Controller (CPA)	All others: None for Board involvement but	
N. Maddox	Ret. Senator	any direct expense paid, plus use of	
		townhome in Greensboro for golf outings.	

Staffing

	Total	Full-Time	Part-Time	Workpapers Page Reference
• Number of employees:				
• Number of managers:				
• Number of sales staff:				
• Number of service staff:				
• Number of clerical staff:				

This page and above addresses: SSVS 27, 29

V. PRODUCTS / SERVICES AND MARKETS

- Describe products / services *(indicate proprietary nature, if any)*:
  1) Uses trademark eagle, which is burned on underside or other hidden area
  2) Hardwood bedroom sets, dining sets, office furniture sets, and entertainment centers
  3) Hardwood Ready-to-Assemble (RTA) entertainment centers, bookcases, and computer desks
  4) Custom orders are accepted

- Describe customers: End customer is typically wealthy.
  1) Retail furniture stores—some direct distributors
  2) No outlet or office stores
  3) Custom orders—usually architects or designers
  4) Referrals—usually for custom orders

Workpapers Page Reference

- Describe market area:
  1) Mostly U.S. customers
  2) Some international—usually custom orders
  - Estimated total market: Ranks #460 of top 500
  - Estimated market share: (Not available)
- Describe cyclical or seasonal: Cyclical—tends to follow housing starts
- Describe distribution channels: National distributors—Retail outlets
- Summary of barriers to market entry: Industry is relatively highly capitalized. Requires skilled artisans. Unionized labor force.

Description of Barriers to Entry

- Describe the economies of scale:
- Describe the product differentiation:
- Describe the capital requirements:
- Describe the access to distribution channels:

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe the cost disadvantages independent of scale: ______
- Describe the proprietary product technology: patents / trademarks: ______
- Describe the favorable access to raw materials: ______
- Describe the favorable locations: ______
- Describe the government subsidies: ______
- Describe the learning or experience curve: ______
- Describe the government policies applicable to the company: ______
- Describe the bargaining power of your suppliers: ______
- Describe the bargaining power of your customers: ______
- Describe the threat of substitute products: ______
- Describe the rivalry between incumbent companies in the industry: ______
- Describe the stability of earnings: ______

This page and above addresses: SSVS 27

Workpapers Page Reference

VI. COMPETITION AND PRODUCT DIFFERENTIATION

Identify Major Competitors

Name	Location	Estimated Market Share
Hooker	Virginia	
Basset	Virginia	

- Describe product differentiation from competition: Long history. Niche—Expensive to own, caters to high end client who can pay for solid, hand finished, hardwood furniture. One of the largest manufacturers of hardwood furniture in Atlanta.
- List competitive strengths: Long history, solid reputation, quality of product—no seconds, and craftsmen can replicate unique items.
- List competitive weaknesses: Rush orders not possible. No computerized manufacturing.
- List product lines: Hardwood bedroom sets, dining sets, office furniture sets, and entertainment centers. Hardwood Ready-to-Assemble (RTA) entertainment centers, bookcases, and computer desks.
- Describe the method of pricing competition:
- Describe any proprietary content:
- Describe any patents:
- Describe any copyrights:

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe the product mix: ______________________________ ______

Environmental Issues

Describe any environmental issues related to the following:

- Asbestos: ______________________________ ______
- Polychlorinated biphenyl's (PCB's): ______________________________ ______
- Fuel/chemical tanks, drums, and pipelines: ______________________________ ______
- Water discharges: ______________________________ ______
- Air emissions: ______________________________ ______
- Waste disposal: ______________________________ ______
- Soil contamination: ______________________________ ______
- Agricultural property / pesticides, herbicides, or other agricultural chemicals: ______________________________ ______

Market Size and Share

- Describe customer's status in the industry and their estimated market share: ______________________________ ______
- Describe the market area that the company serves: ______________________________ ______

This page and above addresses: SSVS 27

VII. FINANCIAL INFORMATION

Workpapers Page Reference

- Describe financial statement generation (in-house, CPA, etc.): Accrual—prepared by an in-house CPA
- If CPA involvement, indicate type—GAAP, tax basis or other: XYZ, CPA's are retained to review the company's financial statements. There has not been a change in the CPA firm since 1982.
- What is the fiscal year-end of company: December 31st
- How often are financial statements generated: Annually
- Describe significant accounting policies: Inventories: LIFO lower of cost or market (not full absorption)
- Describe extent of GAAP compliance:
- Identify recent changes in accounting policies: None
- Describe book to tax adjustments:
- Are budgets or forecasts prepared: Yes
  - If so, how often: Annual
- How has company performed relative to budget: Management provided forecast
- Describe future planned capital expenditures: No plans for major capital expenditures
- Describe short-term financing arrangements: A line of credit was established with Bank of Wachovia, expires 9/30/01
- Describe long-term financing arrangements: Prime plus ½ point—used for expansion—Bank of Wachovia

This page and above addresses: SSVS 29

Workpapers Page Reference

- Describe retirement plan:
- Identify pending or threatened litigation: Attorney Gary Anderson of Anderson, Waldo & Jones—"No pending or threatened litigation." Ph: (801) 801-8010
- Identify major customers: No customer large enough to be 5% of sales. No supplier a single source.
- Identify major vendors: No supplier or vendor a single source.
- Identify primary discretionary expenses: Townhome and compensation & benefits of Raymond C. Harrison, as his active involvement was limited to the High Point Furniture shows and related entertaining. He did attend most board meetings.
- Identify major non-recurring and extraordinary expenses: Factory expansion
- Identify non-operating assets & liabilities: In 1995 the Company purchased townhome in Greensboro, NC: cost $325,000. Art for townhome: $10,000. Cash: excess $200,000.
- Are current appraisals of tangible assets available? Describe: Yes. Machinery & equipment appraisal for $2,500,000 on 12/31/00—will use letters & appraisal documents not part of report, appraisal documents on file at Adler. Artwork: $50,000. Townhome: $400,000.
- Has company been denied credit? Describe: No.
- Are there contracts of advantage or disadvantage to company? Describe:
- Is company carrying assets not in use? Describe: No.
- Are there any subsidiaries owned by the company? Describe:

This page and above addresses: SSVS 27, 29

Workpapers Page Reference

- If yes, describe the subsidiaries (name, date acquired, ownership interest, etc.):

- Describe leasing activities: Leases month-to-month facility from affiliate, market rate for area.
- Describe government and/or environmental regulations: OSHA manufacturing facility. Paint, lacquer, varnish, fumes capture. Dust, woodchips capture.
- Is company capital intensive? Describe: Yes. Mill working equipment. Professional grade planners, joiners & lathes. Paint, lacquer, varnish hoods and vents.
- Is company labor intensive? Describe: Yes. Furniture is "hand finished." Hand carving and decorating.
- Discuss condition of facilities and equipment: Excellent—No observed level of deferred maintenance. Appeared clean—no grease. Noise control equipment.
- Describe merger authority:
- Describe any tax issues:
- Describe recent merger activity:
- Contingent off balance sheet financing:
- Describe the regulatory issues that impact the company:
- Describe other significant matters: Unionized labor force. No computerized manufacturing or milling.

This page and above addresses: SSVS 27, 29

Workpapers Page Reference

The valuation analyst should obtain, where applicable and available, financial information on the subject entity such as:

- Historical financial information (including annual and interim financial statements and key financial statement ratios and statistics) for an appropriate number of years: ______________ ______

- Prospective financial information (for example, budgets, forecasts, and projections): ______________ ______

- Comparative summaries of financial statements or information covering a relevant time period: ______ ______

- Comparative common size financial statements for the subject entity for an appropriate number of years: ______

- Comparative common size industry financial information for a relevant time period: ______________ ______

- Income tax returns for an appropriate number of years: ______________ ______

- Describe recent merger activity: ______________ ______

This page and above addresses: SSVS 27, 29

VIII. NATIONAL AND LOCAL ECONOMIC INFORMATION

National

- Valuation date short-term bond yield: ______________ Source: ______________ ______
- Valuation date intermediate bond yield: 5.9% 3-month Source: Federal Reserve Website ______
- Valuation date long-term bond yield: 5.6% 20-year Source: SBBI ______
- Expected inflation rate: ______________ Source: ______________ ______
- Expected GNP growth: ______________ Source: ______________ ______
- Current unemployment rate: 3.50% Source: KeyValueData ______

This section above addresses: SSVS 27

Workpapers Page Reference

- Describe current and/or expected major changes in tax law: None.

  Source:

- General description of the economy: See Appendix VII

  Source: KeyValueData, 4575 Galley Road, Suite 200E, Colorado Springs, CO 80915

Local and Regional

- Describe local and regional market: See Appendix VII

  Source: KeyValueData, Ph: (800) 246-8488

- Describe personal income growth:

  Source:

IX. NATIONAL AND LOCAL INDUSTRY INFORMATION

National

- Total market: Source:
- Short-term industry growth: Source:
- Long-term industry growth: Source:

- Growth industry stability: See Appendix VII

  Source: KeyValueData

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe market trends: ____________________

  Source: ____________________
- Describe technology advancements: ____________________

  Source: ____________________
- Describe effects of government regulation: ____________________

  Source: ____________________
- Describe industry outlook: ____________________

  Source: ____________________
- Describe industry financial data: ____________________

  Source: ____________________
- Describe industry long-term prospects: ____________________

  Source: ____________________
- Source of industry financial data: ____________________
  - Period covered: ____________________

This page and above addresses: SSVS 27

Workpapers Page Reference

Local and Regional

- Total market: ______ Source: ______ ______
- Short-term industry growth: ______ Source: ______ ______
- Long-term industry growth: ______ Source: ______ ______
- Describe: ______ ______
- Growth industry stability: See Appendix VII ______ ______

  Source: KeyValueData ______ ______

  Describe: ______ ______
- Describe local market trends: ______ ______

  Source: ______ ______
- Describe effects of local government regulation: ______ ______

  Source: ______ ______

  Describe: ______ ______
- Describe local industry outlook: ______ ______

  Source: ______ ______
- Describe local industry long-term prospects: ______ ______

  Source: ______ ______
- Source of local industry financial data: ______ ______
  - Period covered: ______ ______

This page and above addresses: SSVS 27

Workpapers Page Reference

X. VALUATION APPROACHES AND METHODS—CONSIDERATIONS

Income Approach:

- ❑ Capitalization of earnings / cash flow: ______ ______
- ❑ Normalization adjustments: ______ ______
- ❑ Non-recurring revenue and expense items: ______ ______
- ❑ Taxes: ______ ______
- ❑ Capital structure and financing costs: ______ ______
- ❑ Appropriate capital investments: ______ ______
- ❑ Non-cash items: ______ ______
- ❑ Qualitative judgments for risks used to compute discount and capitalization rates: ______ ______
- ❑ Expected changes (growth or decline) in future benefits (for example, earnings, or cash flows): ______ ______

Discounted future benefits method (for example, earnings, or cash flows). In addition to the items above, the valuation analyst should consider:

- ❑ Forecast/projection assumptions: ______ ______
- ❑ Forecast/projected earnings or cash flows: ______ ______
- ❑ Terminal value: ______ ______

For an intangible asset, the valuation analyst should consider:

- ❑ Remaining useful life: ______ ______
- ❑ Current and anticipated future use of the intangible asset: ______ ______
- ❑ Rights attributable to the intangible asset: ______ ______
- ❑ Position of intangible asset in its life cycle: ______ ______
- ❑ Appropriate discount rate for the intangible asset: ______ ______
- ❑ Appropriate capital or contributory asset charge, if any: ______ ______
- ❑ Research and development or marketing expense needed to support the intangible asset in its existing state: ______ ______
- ❑ Allocation of income (for example, incremental income, residual income, or profit split income) to intangible asset: ______ ______
- ❑ Whether any tax amortization benefit would be included in the analysis: ______ ______
- ❑ Discounted multi-year excess earnings: ______ ______
- ❑ Market royalties: ______ ______
- ❑ Relief from royalty method: ______ ______

This page and above addresses: SSVS 33a, 33b, 33c

Workpapers Page Reference

Asset Approach and Cost Approach:

When using the adjusted net asset method in valuing a business, business ownership interest, or security, the valuation analyst should consider, as appropriate, the following information related to the premise of value:

- ❑ Identification of the assets and liabilities: ____________________ ________
- ❑ Value of the assets and liabilities (individually or in the aggregate): ____________________ ________
- ❑ Liquidation costs (if applicable): ____________________ ________

When using methods under the cost approach to value intangible assets, the valuation analyst should consider the type of cost to be used (for example, reproduction cost or replacement cost), and, where applicable, the appropriate forms of depreciation and obsolescence and the remaining useful life of the intangible asset.

- ❑ Describe: ____________________ ________

____________________ ________

____________________ ________

____________________ ________

Market Approach:

Three frequently used market approach valuation methods for intangible assets are:

- ❑ Comparable uncontrolled transactions method (which is based on arm's-length sales or licenses of guideline intangible assets) ________
- ❑ Comparable profit margin method (which is based on comparison of the profit margin earned by the subject entity that owns or operates the intangible asset to profit margins earned guideline companies) ________
- ❑ Relief from royalty method (which is based on the royalty rate, often expressed as a percentage of revenue that the subject entity that owns or operates the intangible asset would be obligated to pay to a hypothetical third-party licensor for the use of that intangible asset) ________

For the methods involving guideline intangible assets (for example, the comparable profit margin method), the valuation analyst should consider the subject intangible asset's remaining useful life relative to the remaining useful life of the guideline intangible assets, if available.

In applying the methods listed above or other methods to determine valuation pricing multiples or metrics, the valuation analyst should consider:

- ❑ Qualitative and quantitative comparisons ________
- ❑ Arm's-length transactions and prices ________
- ❑ The dates and, consequently, the relevance of the market data ________

Rules of thumb. Although technically not a valuation method, some valuation analysts use rules of thumb or industry benchmark indicators (hereinafter, collectively referred to as rules of thumb) in a valuation engagement. A rule of thumb is typically a reasonableness check against other methods used and should generally not be used as the only method to estimate the value of the subject interest.

- ❑ Describe: ____________________ ________

____________________ ________

____________________ ________

____________________ ________

This page and above addresses: SSVS 34, 35, 36, 37, 39

XI. GUIDELINE PUBLIC COMPANY AND MARKET APPROACH

Guideline Company Search

Name	Customer IP #	Exchanges	Historical Beta	Total Equity	Total Assets	Mil $ Net Sales	5-Year Earnings Growth	5-Year ROE	SIC
1. Bush	7020310	NYSE				451.2			2511
2. Basset Furniture, Inc.	23323010	NASDAQ				367.5			2511
3. Rowe	50573910	NASDAQ				348.4			2510
4. Stanley Furniture Co.	74535310	NASDAQ				283.1			2510
5. Chromecraft	85430520	NASDAQ				259.4			2511
6. Hooker	45850710	NYSE				250.8			2510

- Workpapers page reference: ______________________
- Source: ______________________
- Comments: ______________________

____

____

Sales Transaction Search

SIC	Description	Ask Price	Annual Gross	SDE	Sales Date	Sales Price
1. 2511	IBA			347,000	Oct-88	1,900,000
2. 2511	IBA			210,000	Mar-97	1,050,000
3. 2511	IBA			80,000	May-96	169,000
4. 2511	IBA			4,000	Oct-83	72,000
5. 2511	IBA			105,000	Aug-97	100,000
6. 2511	IBA			106,000	Jul-97	140,000
7. 2511	IBA			33,000	Aug-91	84,000
8. 2511	Done Deals			(4,200,000)	Sep-99	7,400,000
9. 2511	Done Deals			1,700,000	Feb-99	14,800,000
10. 2511	Done Deals			3,500,000	Jun-99	24,600,000
11. 2511	Pratt’s Stats			7,173,000	Dec-01	122,000,000
12. 2511	Pratt’s Stats			8,132,000	May-01	75,000,000
13. 2511	Pratt’s Stats			426,000	Apr-01	1,200,000
14. 2511	Pratt’s Stats			295,000	Oct-01	1,000,000
15. 2511	Pratt’s Stats			75,000	Dec-99	555,000
16. 2511	BIZCOMPS			485,000	Oct-97	1,750,000
17. 2511	BIZCOMPS			210,000	Mar-97	1,310,000
18. 2511	BIZCOMPS			80,000	May-97	169,000

SDE—Seller’s discretionary earnings

% Down	Terms	Sales/Gross	Sales/Net	FF&E	Area
1.			4,150,000		
2.			2,500,000		
3.			1,496,000		
4.			570,000		
5.			469,000		
6.			320,000		
7.			254,000		
8.			54,700,000		
9.			19,300,000		
10.			165,900,000		
11.			503,912,000		
12.			149,665,000		
13.			3,566,000		
14.			2,780,000		
15.			674,000		
16.			3,702,000		
17.			2,500,000		
18.			1,496,000		

FF&E—Furniture, fixtures & equipment

- Workpapers page reference: ______________________________
- Source: ______________________________
- Comments: ______________________________

____

____

  - Are they comparable? Describe: ______________________________

This page and above addresses: SSVS 36

Workpapers Page Reference

XII. VALUATION ADJUSTMENTS

Examples of valuation adjustments for valuation of a business, business ownership interest, or security include a discount for lack of marketability or liquidity and a discount for lack of control. An example of a valuation adjustment for valuation of an intangible asset is obsolescence.

❑ Lack of control: ____________________

❑ Voting / non-voting: ____________________

❑ Lack of marketability or liquidity: ____________________

XIII. NON-OPERATING / EXCESS ASSETS

When valuing a controlling ownership interest under the income approach, the value of any non-operating assets, non-operating liabilities, or excess or deficient operating assets should be excluded from the computation of the value based on the operating assets and should be added to or deleted from the value of the operating entity. When valuing a non-controlling ownership interest under the income approach, the value of any non-operating assets, non-operating liabilities, or excess or deficient operating assets may or may not be used to adjust the value of the operating entity depending on the valuation analyst's assessment of the influence exercisable by the non-controlling interest. In the asset-based or cost approach, it may not be necessary to separately consider non-operating assets, non-operating liabilities, or excess or deficient operating assets.

❑ Comments: ____________________

This page and above addresses: SSVS 40, 41

XIV. SUBSEQUENT EVENTS

The valuation date is the specific date at which the valuation analyst estimates the value of the subject interest and concludes on his or her estimation of value. Generally, the valuation analyst should consider only circumstances existing at the valuation date and events occurring up to the valuation date. An event that could affect the value may occur subsequent to the valuation date; such an occurrence is referred to as a *subsequent event.* Subsequent events are indicative of conditions that were not known or knowable at the valuation date, including conditions that arose subsequent to the valuation date. The valuation would not be updated to reflect those events or conditions. Moreover, the valuation report would typically not include a discussion of those events or conditions because a valuation is performed as of a point in time-the valuation date-and the events described in this subparagraph, occurring subsequent to that date, are not relevant to the value determined as of that date.

❑ Comments: ____________________

XV. DOCUMENTATION

Workpapers Page Reference

Documentation is the principal record of information obtained and analyzed, procedures performed, valuation approaches and methods considered and used, and the conclusion of value. The quantity, type, and content of documentation are matters of the valuation analyst's professional judgment. Documentation may include:

- ❑ Document understanding with client ________
- ❑ Information gathered and analyzed to obtain an understanding of matters that may affect the value of the subject interest ________
- ❑ Assumptions and limiting conditions ________
- ❑ Any restriction or limitation on the scope of the valuation analyst's work or the data available for analysis ________
- ❑ Basis for using any valuation assumption during the valuation engagement ________
- ❑ Valuation approaches and methods considered ________
- ❑ Valuation approaches and methods used including the rationale and support for their use ________
- ❑ If applicable, information relating to subsequent events considered by the valuation analyst ________
- ❑ For any rule of thumb used in the valuation, source(s) of data used, and how the rule of thumb was applied to the engagement by the valuation analyst ________
- ❑ Other documentation considered relevant to the engagement by the valuation analyst ________
- ❑ The analyst should read and evaluate information to determine that it is reasonable for the purposes of the engagement ________

This page and above addresses: SSVS 16, 17, 43, 44

XVI. OTHER

- ❑ Management representation letter: ____________________ ________

Copyright Clearance

- ❑ RMA: ____________________ ________

  ____________________ ________

  ____________________ ________

- ❑ Other: ____________________ ________

  ____________________ ________

  ____________________ ________

This page and above addresses: SSVS 44

XVII. DOCUMENT AND DATA REQUEST CONTROL FORM

Workpapers Page Reference

Request from: David B. Harrison Title: President ______

Requested by: Jerry Mills Title: Senior Staff B/G and Company ______

Subject Company Financial Data

Description	Date Requested	Date Received	Comments	Workpapers Page Reference
Engagement letter:	1/15/01	1/31/01	Signed	______
Financial statements for 5 years:	2/1/01	4/30/01	1996 – 2000	______
Federal & state income tax returns for 5 years:	2/1/01	4/30/01	1996 - 2000	______
Historical budget vs. actual report for ____ years:	No			______
Prospective budget report for year:	No			______
Accounts receivable aging report:	3/26/01	4/16/01		______
Inventory summary reports and costing method summaries:	2/1/01	4/16/01		______
Detailed schedule of fixed assets:	3/26/01	4/16/01		______
Schedule of investments:	2/1/01	4/16/01		______
Accounts payable aging report:	3/26/01	4/16/01		______
Schedule of accrued liabilities:	2/1/01	1/15/01		______
Schedule of notes payable, equipment, or real property leases & other term debt:	2/1/01	4/16/01		______
Appraisal reports: - Real Estate	3/26/01	4/16/01		______
- Equipment	3/26/01	4/16/01		______
- Other (trademarks & patents)	3/26/01	4/16/01		______
Key-man life policies:	No			______
Other:	No			______

This page and above addresses: SSVS 16, 44

Operational and Legal Documentation

Description	Date Requested	Date Received	Comments	Workpapers Page Reference
Organizational chart:	None			______
Buy / Sell agreements:	None			______
Stockholders agreements:	None			______
Stock subscription agreements:	None			______
Public or private offering memoranda:	None			______
Employment contracts:	None			______
Pension / profit sharing plans:				______
Other Benefit Plans:				______
Schedule of pension / profit sharing funding for _____ years:	None			______
Significant contracts:				______
Property tax returns for _____ years:	None			______
Client representation letter:				______
Legal representation letter:				______
Other: · a) ______________________				______
· b) ______________________				______
· c) ______________________				______
· d) ______________________				______
· e) ______________________				______
· f) ______________________				______
· g) ______________________				______
· h) ______________________				______
· i) ______________________				______
· j) ______________________				______
· k) ______________________				______

This page and above addresses: SSVS 13d, 13e, 18 (Appendix A), 25

Workpapers Page Reference

EXHIBIT I

List of Assumptions and Limiting Conditions

- Comments: Furniture composition: Bedroom sets can include bed triple, armoires, high boys, jewelry stand, cedar benches, night tables, mirrors, and quilt stands. Dining sets can include table, arm chairs, chairs, buffet, side boards, silver carts, hutches (corner, single, double, triple), tea carts, and serving carts. Entertainment centers for TV, DVD, videos, & stereo. Bookcases (open end with doors), file cabinets (letter, legal, and lateral), roll-top desks, executive desks, computer desks, office chairs. Can convert two-table lines to conference form with matching chairs and padded leather cushions. Ready-to-assemble line is simple construction by hand—wood is tongue-n-groove fitted. Includes bookcases, computer desks, and entertainment centers, all in pre-finished oak.

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BUSINESS VALUATIONS:

FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 10

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 10: Search for Adjustments

1. After the historical financial statements have been adjusted for economic or normalizing items, the analyst should begin a thorough financial analysis of the adjusted financial statement data. Such analysis helps to identify all of the following trends EXCEPT?

   a. Where has the company been?
   b. Where is the company today?
   c. What are the current and future management needs?
   d. Where might the company be in the future?

2. When adjustments have been made to increase the value of assets to their appraised or market value, a corresponding adjustment recognizing the amount of deferred income taxes should also be made. There have been conflicting arguments for doing so in valuation literature. What is the most often cited argument against recording deferred income taxes on the increased value of assets over book values?

   a. When selling the stock of an entity and not the asset itself, the assets do not have to be adjusted to fair market value, therefore, deferred taxes would not need to be adjusted.
   b. Deferred taxes are only booked for timing issues related to the recognition of income statement items.
   c. Deferred taxes should not be recorded unless the company has specific plans to liquidate within a reasonable period following the date of the valuation.
   d. The tax court has ruled in the *Estate of Dunn*, *Estate of Davis,* and the appeal of *Dunn* that no discount was given for taxes.

3. Which of the following are categorized as “Risk” ratios of a company?

   a. Accounts Receivable Turnover Ratios and Current Liabilities as a percent of assets
   b. Total Debt as a percent of Assets and Long term Debt as a percent of Assets
   c. Operating Profit as a percent of Sales and Interest Coverage Ratio
   d. Current Ratio and Quick Ratio

4. When comparing Adler-Cottino to the Industry in Exhibits 10-7 and 10-8, Chapter 10, which of the following statements is/are true?

   a. The Company’s current, quick, and debt/equity ratios are all significantly favorable relative to the industry
   b. The Company has a different asset mix than the companies that make up the median of the RMA data
   c. The Company’s long-term debt as a percentage of assets is lower than the industry median
   d. The Company’s operating performance is much better than the industry on average and is superior to the industry relative to financial strength, leverage and liquidity
   e. All of the above

5. A Comparative Analysis utilizes information from two sources and can involve either a comparison of the subject company with specific comparable companies or with industry averages for a historical period of one or more years. Which two sources of the subject company are used to perform a Comparative Analysis?

    a. RMA and Integra
    b. Common-Size Analysis and Ratio Analysis
    c. Historical and Normalized Financial Statements
    d. Forecasted and Budgeted Financial Statements

6. Normalized financial statements should allow the valuation analyst to:

    a. Present a financial picture which represents fair market values
    b. Present a financial picture to appease the client
    c. Present a financial picture to reflect a predetermined answer
    d. To increase a valuation analysts fees

7. What is the best way to determine if a normalizing adjustment should be made to Accounts Receivable?

    a. Common size the balance sheet
    b. Use trend analysis
    c. Look at accounts receivable aging
    d. Discuss with management

8. In Exhibit 10-2, what would be a good reference source to use as a bench mark to determine excess cash?

    a. Ibbotson
    b. BizComps
    c. RMA
    d. An inquiry with management provides enough support

9. Ratio Analysis can be an effective tool to compare how well a company is performing to industry bench marks.

    a. True
    b. False

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CHAPTER ELEVEN

PRACTICE CASE—WORKSHOP

I. VALUATION ASSIGNMENT

A local attorney has retained you to value a business by the name of Adler-Cottino Wood Furniture, Inc. Adler-Cottino is a closely held company that has the following stock ownership percentages:

Shareholder	Number of Shares	Percent
Raymond C. Harrison	100,000	100%

Raymond C. Harrison is deceased. An appraisal of Adler-Cottino Wood Furniture, Inc. is required in connection with the estate settlement. David B. Harrison, Raymond's son, is the President of Adler-Cottino and Executor of the estate. The attorney who has retained you is representing David Harrison and requests the valuation represent a 100 percent interest in Adler-Cottino. For purposes of the estate settlement, it is anticipated that the business will continue to function as it currently does and no sale of the enterprise is anticipated.

You have been asked to value Adler-Cottino as of December 31, 2000 and to provide a formal written report to be submitted to the court.

II. COMPANY BACKGROUND

Adler-Cottino manufactures primarily high-quality wood furniture products for homes and also provides a few lines of office furniture. It began marketing its products through retail furniture outlets in Atlanta, Georgia, but has since developed many national distributors of its products. Its wooden furniture for the home features bedroom and dining suites, as well as home office pieces. Office furniture includes desks, conference tables and bookcases. The Company also recently introduced ready-to-assemble ("RTA") furniture (desks and other office furniture, entertainment centers and storage units).

A. SUBSIDIARIES AND AFFILIATES

Adler-Cottino Wood Furniture, Inc. has no subsidiaries, but does have an affiliated company. Adler-Cottino Real Estate Development Company, LLP owns the real estate leased to Adler-Cottino Wood Furniture, Inc. Raymond C. Harrison and other family members owned this affiliate.

B. COMPETITION

Adler-Cottino's position relative to its competition is that it is part of a small group of firms in the nation that are recognized for the highest quality product. In their local Georgia market, Adler-Cottino is unique in that it is one of the largest shops of its kind. The machinery and equipment is either unique to the area or the largest of its kind.

C. LOCATION

Adler-Cottino Wood Furniture, Inc. operates from its headquarters and manufacturing facility located at 1111 South Birch Highway, Atlanta, GA 30309. Adler-Cottino's affiliated limited liability partnership, Adler-Cottino Real Estate Development, LLP, owns the real property. The Company, under David B. Harrison's direction expanded its distribution channels and thereby, its operations. In 1996, the Company moved to a new 75,000 square foot manufacturing facility, which was expanded to 110,000 square feet in 1999. This real property is leased on a month-to-month basis.

III. YOUR ASSIGNMENT

Value 100,000 shares (100 percent) of Adler-Cottino common stock as of December 31, 2000.

A. STEPS

1. Prepare adjusted net assets worksheet
2. Select an appropriate benefit stream and capitalize the future benefit stream

    a) What benefit stream are you going to capitalize and/or discount? Why?
    b) How are you going to determine the amount of income to capitalize? Why?
    c) Projected versus historical earnings
    d) What method of estimating future earnings are you going to use? Why?
    e) How are you going to determine the "appropriate" capitalization rate? Why?

3. Value a 100% controlling interest in the Company

B. ADDITIONAL COMPANY INFORMATION

The following was determined as part of your analysis, inquiries of management and site visit:

1. Townhouse and Art

    a) Recorded as other assets
    b) Townhouse depreciated over 27 years using straight-line method
    c) Art depreciated over seven years using MACRS (1/2 year convention)
    d) Company rounds depreciation to the nearest $100

2. Federal and state income tax rate is 40 percent
3. Payroll tax and benefits are 20 percent of wages
4. Non-operating expenses are approximately $20,000 a year
5. Management anticipates the future non-cash charges to be $400,000 per year
6. Management anticipates the future capital expenditures necessary to support projected operations to be $300,000 per year
7. Your analysis of the working capital indicates approximately $100,000 per year of cash flow will be needed to support future working capital needs

8. Management does not anticipate the need for additional borrowings to support projected operations
9. Your analysis of the debt indicates approximately $100,000 of the cash flow per year will be needed for repayments to support projected operations
10. Your analysis of the Ibbotson buildup method provided the following information:

    a) Ibbotson's Rates:

        (1) Risk Free 4.8%
        (2) Equity Risk Premia (historical) 7.2%
        (3) Size Premia (10th Decile) 6.41%

    b) Industry Premia 1.50%
    c) Company Specific Risk Factors to be determined by participant

11. You determined a three percent long-term sustainable growth rate
12. Your analysis determined that the cash to earnings factor was 5.97 percent
13. Your analysis determined that the net present value of the built-in gains tax was $168,400
14. Your analysis determined that the net present value of the deferred tax on the townhouse and art is $62,000

C. INDUSTRY, LOCAL, AND NATIONAL ECONOMIC RESEARCH

This research has been performed for you and can be found in Appendix VI.

ADLER-COTTINO WOOD FURNITURE, INC.
BALANCE SHEET

Source 1996 Through the Year Ended December 31, 2000: Per Books

	1996	1997	1998	1999	2000
Assets					
Current Assets					
Cash	$ 618,400	$ 752,979	$ 783,736	$ 789,050	$ 896,406
Accounts Receivable	1,198,600	1,722,800	1,833,973	2,090,600	2,166,908
Inventory	2,200,800	2,565,114	2,713,191	2,869,339	2,994,742
Other Current Assets	42,800	44,400	71,800	69,600	88,600
Total Current Assets	4,060,600	5,085,293	5,402,700	5,818,589	6,146,656
Property & Equipment – Net	1,192,950	1,216,881	1,487,800	2,050,683	2,144,453
Land	-	-	-	-	-
Total Fixed Assets	1,192,950	1,216,881	1,487,800	2,050,683	2,144,453
Other Assets					
Deposits	102,400	110,000	110,000	110,000	110,000
Other	349,674	329,857	310,040	290,223	270,406
Total Other Assets	452,074	439,857	420,040	400,223	380,406
Total Assets	$5,705,624	$6,742,031	$7,310,540	$8,269,495	$8,671,515
Liabilities & Equity					
Current Liabilities					
Accounts Payable	$1,360,400	$1,377,800	$1,496,966	$1,632,000	$1,137,600
Other Current Liabilities	564,000	544,200	597,400	690,400	769,200
Current Maturity – Long-Term Debt	85,464	94,413	104,299	167,049	127,285
Notes Payable (Short-Term)	718,800	873,000	587,600	306,200	247,800
Total Current Liabilities	2,728,664	2,889,413	2,786,265	2,795,649	2,281,885
Long-Term Liabilities					
Long-Term Debt	737,173	642,760	538,460	874,906	695,793
Other Long-Term Liabilities	309,740	650,892	975,847	836,680	593,259
Total Long-Term Liabilities	1,046,913	1,293,652	1,514,307	1,711,586	1,289,052
Total Liabilities	3,775,577	4,183,065	4,300,572	4,507,235	3,570,937
Stockholder’s Equity					
Capital Stock	1,000	1,000	1,000	1,000	1,000
Paid-In Capital	300,000	300,000	300,000	300,000	300,000
Retained Earnings	1,629,047	2,257,966	2,708,968	3,461,260	4,799,578
Total Stockholder’s Equity	1,930,047	2,558,966	3,009,968	3,762,260	5,100,578
Total Liabilities & Equity	$5,705,624	$6,742,031	$7,310,540	$8,269,495	$8,671,515

ADLER-COTTINO WOOD FURNITURE, INC.
INCOME STATEMENT

Source 1996 Through the Year Ended December 31, 2000: Per Books

	1996	1997	1998	1999	2000
Months of Operations in Period	12	12	12	12	12
Sales	$14,770,000	$18,998,000	$18,784,400	$21,988,800	$24,127,600
Cost of Sales	10,952,500	14,572,480	14,282,612	16,413,380	17,535,276
Gross Profit	3,817,500	4,425,520	4,501,788	5,575,420	6,592,324
Operating Expenses					
Officers' Compensation	370,400	422,000	469,200	556,600	617,800
Other Salaries & Wages	1,097,460	1,471,136	1,551,200	1,611,800	1,657,500
Rent	300,000	300,000	300,000	440,000	440,000
Payroll Taxes	133,428	191,060	188,632	191,840	192,724
Auto & Truck Expenses	25,200	25,800	26,960	25,600	28,960
Insurance	58,360	63,000	112,500	175,100	207,520
Selling Expenses	84,420	102,564	139,570	170,490	187,150
Professional Expense	32,000	30,000	52,840	62,800	80,200
Travel & Entertainment	79,600	69,600	71,800	64,800	70,600
Other Operating Expenses	253,260	372,960	467,524	557,920	585,556
Total Operating Expenses	2,434,128	3,048,120	3,380,226	3,856,950	4,068,010
Operating EBITDA (1)	1,383,372	1,377,400	1,121,562	1,718,470	2,524,314
Depreciation & Amortization	211,400	234,312	253,100	352,500	396,900
Operating Inc (Loss) EBIT (2)	1,171,972	1,143,088	868,462	1,365,970	2,127,414
Miscellaneous (Inc) Expense	5,126	2,617	39,417	40,817	(5,983)
Interest Expense	149,413	150,048	135,195	131,038	105,643
Income (Loss) Before Taxes	1,017,433	990,423	693,850	1,194,115	2,027,754
Income Taxes	386,625	361,504	242,848	441,823	689,436
Net Income (Loss)	630,808	628,919	451,002	752,292	1,338,318
Retained Earnings – Beg of Year	998,239	1,629,047	2,257,966	2,708,968	3,461,260
Dividends	-	-	-	-	-
Retained Earnings – End of Year	$ 1,629,047	$ 2,257,966	$ 2,708,968	$ 3,461,260	$ 4,799,578

Notes
(1) Operating EBITDA = Earnings, Before Interest, Taxes Depreciation & Amortization
(2) Operating EBIT = Earnings Before Interest and Taxes

Adler-Cottino Wood Furniture, Inc.
Adjusted Net Assets
December 31, 2000

	Book	Ref	Adjustments	Adjusted Net Assets
Current assets				
Cash	$ 896,406			
Accounts receivable	2,166,908			
Inventory	2,994,742			
Other current assets	88,600			
Total current assets	6,146,656			
Property and equipment - net	2,144,453			
Other assets				
Deposits	110,000			
Townhouse and art - net of depr.	270,406			
Total other assets	380,406			
Total assets	$ 8,671,515			
Current liabilities				
Accounts payable	$ 1,137,600			
Short term debt	247,800			
Current maturities - LTD	127,285			
Other current liabilities	769,200			
Total current liabilities	2,281,885			
Long-term debt				
Long-term debt	695,793			
Other long-term liabilities	593,259			
Deferred income taxes	0			
Total long term liabilities	1,289,052			
Total liabilities	3,570,937			
Shareholder's Equity				
Common stock	1,000			
Paid-in capital	300,000			
Retained earnings	4,799,578			
Total shareholder's equity	5,100,578			
Total liabilities and shareholders' equity	$ 8,671,515			

Adler-Cottino Wood Furniture, Inc.
Normalized Earnings
For Years Indicated

	1996	1997	1998	1999	2000
Revenues	$14,770,000	$18,998,000	$18,784,400	$21,988,800	$24,127,600
Cost of sales	10,952,500	14,572,480	14,282,612	16,413,380	17,535,276
Gross profit	3,817,500	4,425,520	4,501,788	5,575,420	6,592,324
Operating expenses	2,063,728	2,626,120	2,911,026	3,300,350	3,450,210
Officers' compensation	370,400	422,000	469,200	556,600	617,800
Operating EBITDA	1,383,372	1,377,400	1,121,562	1,718,470	2,524,314
Depreciation and amortization	211,400	234,312	253,100	352,500	396,900
Operating income (loss) – EBIT	1,171,972	1,143,088	868,462	1,365,970	2,127,414
Miscellaneous (income) expense	5,126	2,617	39,417	40,817	(5,983)
Interest expense	149,413	150,048	135,195	131,038	105,643
Income before taxes	$ 1,017,433	$ 990,423	$ 693,850	$ 1,194,115	$ 2,027,754
Normalized adjustments:					
Total normalized adjustments					
Normalized income before tax					
Income taxes					
Normalized net income					

The following worksheets are provided to assist you with your calculations. Please select the appropriate worksheet for your calculation.

Adler-Cottino Wood Furniture, Inc
Capitalized Earnings
December 31, 2000

Type of Earnings	Years	Normalized Earnings	Weights if any	Weighted Normalized Earnings
Totals				
Future benefit stream				
Capitalization rate				
Operating value				
Non-operating assets				
Marketable controlling interest value				

Adler-Cottino Wood Furniture, Inc
Capitalized Net Cash Flows to Equity
December 31, 2000

Type of Earnings	Years	Normalized Earnings	Weights if any	Weighted Normalized Earnings
Totals				
Future benefit stream				
Non-cash charges				
Capital expenditures necessary to support projected operations				
Add (delete) to net working capital necessary to support projected earnings				
Changes in LT debt from borrowing necessary to support projected operations				
Changes in LT debt from repayments necessary to support projected operations				
Net cash flow to equity				
Capitalization rate				
Operating value				
Non-operating assets				
Marketable controlling interest value				

Adler-Cottino Wood Furniture, Inc
Discounted Future Net Cash Flows to Equity
December 31, 2000

2001	2002	2003	2004	Terminal

Capitalization rate	
Terminal value	
Present value factor	
Net present value	
Sum of net present value of future cash flows to equity	
Non-operating assets	
Marketable controlling interest value	

Adler-Cottino Wood Furniture, Inc.
Summary of Values
December 31, 2000

Adjusted net assets ____________________

Goodwill (Intangibles) ____________________

Marketable controlling interest value of equity ____________________

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BUSINESS VALUATIONS: FUNDAMENTALS, TECHNIQUES AND THEORY (FT&T)

CHAPTER 11

REVIEW QUESTIONS

FT&T

CHAPTER REVIEW QUESTIONS

Chapter 11: Practice Case Workshop

1. In gathering the necessary information to complete Adler-Cottino as an example of a report you can use for later reference:

   a. It is necessary to be able to fully describe the history and nature of the business being valued
   b. It is not necessary to understand this business or any business, as the company's management is running the business
   c. A personal tour of the business can't be done, so there is not a way to put anything meaningful in the report
   d. Note that the type of organizational structure will not be applicable to any other company you would value

2. In defining the valuation engagement prior to issuing a valuation report:

   a. Ascertain whether the necessary client information and technical resources are available. If not, decline the valuation
   b. Define the ownership interest to be valued as this will affect any premiums or discounts to be discussed in the final report
   c. You must obtain a client representation letter
   d. You must obtain a client engagement letter

APPENDIX I

Daubert
and
Kumho Tire

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WILLIAM DAUBERT, ET UX., ETC., ET AL., PETITIONERS V. MERRELL DOW PHARMACEUTICALS, INC.

No. 92-102

SUPREME COURT OF THE UNITED STATES

509 U.S. 579; 113 S. Ct. 2786; 125 L. Ed. 2d 469; 1993 U.S. LEXIS 4408; 61 U.S.L.W. 4805; 27 U.S.P.Q.2D (BNA) 1200; CCH Prod. Liab. Rep. P13,494; 93 Cal. Daily Op. Service 4825; 93 Daily Journal DAR 8148; 23 ELR 20979; 7 Fla. L. Weekly Fed. S 632

March 30, 1993, Argued
June 28, 1993, Decided

PRIOR HISTORY: ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT.

DISPOSITION: 951 F.2d 1128, vacated and remanded.

DECISION: "General acceptance" of principle underlying scientific evidence held not to be necessary precondition to admissibility of such evidence under Federal Rules of Evidence.

SUMMARY: A minor child and his parents, together with another minor child and his mother, brought suit in a California state court against a drug company which had marketed the prescription drug Bendectin. The plaintiffs alleged that the children's birth defects had been caused by the mothers' ingestion of Bendectin during pregnancy. The suit was removed, on diversity grounds, to the United States District Court for the Southern District of California. The company moved for summary judgment and submitted, in support of the motion, the affidavit of an epidemiologist to the effect that no published epidemiological (human statistical) study had demonstrated a statistically significant association between Bendectin and birth defects. In response, the plaintiffs offered expert opinion testimony based on (1) test-tube and live-animal studies that had allegedly found a link between Bendectin and birth defects; (2) pharmacological studies that allegedly showed similarities between the chemical structure of Bendectin and that of substances known to cause birth defects; and (3) the reanalysis, or recalculation, of previously published epidemiological studies. The District Court, granting summary judgment in favor of the company, expressed the view that (1) scientific evidence is admissible under the Federal Rules of Evidence only if the principle on which such evidence is based is sufficiently established to have general acceptance in the field to which it belongs; (2) epidemiological studies were the most reliable evidence of causation of birth defects; (3) the testimony based on test-tube, live-animal, and pharmacological studies was inadmissible because such testimony was not based on epidemiological evidence; and (4) the testimony based on reanalyses was inadmissible because the reanalyses (a) apparently had never been published or subjected to peer review, and (b) failed to show a statistically significant association between Bendectin and birth defects (727 F Supp 570). The United States Court of Appeals for the Ninth Circuit, affirming on appeal, expressed the view that (1) expert opinion based on a scientific technique is inadmissible if the technique is not generally accepted as reliable in the relevant scientific community; and (2) under the general acceptance standard, the plaintiffs' evidence provided an insufficient foundation to allow admission of expert testimony that Bendectin caused birth defects (951 F2d 1128).

On certiorari, the United States Supreme Court vacated the Court of Appeals' judgment and remanded the case for further proceedings. In an opinion by Blackmun, J., expressing the unanimous view of the court as to holding 1 below, and joined by White, O'Connor, Scalia, Kennedy, Souter, and Thomas, JJ., as to holdings 2 and 3 below, it was held that (1) the "general acceptance" test of Frye v United States

(1923) 54 App DC 46, 293 F 1013, 34 ALR 145, was superseded by the Federal Rules of Evidence (FRE), and thus general acceptance is not a necessary precondition to the admissibility of scientific evidence under the FRE, given that (a) nothing in the text of Rule 702 of the FRE, governing expert testimony, establishes general acceptance as an absolute prerequisite to admissibility, and (b) there is no indication that Rule 702 or the FRE as a whole were intended to incorporate a general acceptance standard; (2) under the FRE, a federal trial judge must insure that any and all scientific testimony or evidence is not only relevant but reliable; and (3) in a federal case involving scientific evidence, evidentiary reliability is based on scientific validity.

Rehnquist, Ch. J., joined by Stevens, J., concurring in part and dissenting in part, (1) agreed that (a) the Frye "general acceptance" rule did not survive the enactment of the FRE, and (b) Rule 702 of the FRE confides to the trial judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony; but (2) expressed the view that the Supreme Court should have left the further development of the area of the law in question to future cases.

LAWYERS' EDITION HEADNOTES:

[***LEdHN1]
EVIDENCE §641
expert scientific testimony -- admissibility -- general acceptance standard --
Headnote: [1A] [1B] [1C] [1D] [1E]

A standard under which the exclusive test for admitting expert scientific testimony is whether the principle on which such testimony is based has general acceptance in the field to which it belongs is not to be applied in federal trials; the "general acceptance" test of Frye v United States (1923) 54 App DC 46, 293 F 1013, 34 ALR 145, is superseded by the Federal Rules of Evidence (FRE), and thus general acceptance is not a necessary precondition to the admissibility of scientific evidence under the FRE, given that (1) nothing in the text of Rule 702 of the FRE, governing expert testimony, establishes general acceptance as an absolute prerequisite to admissibility; and (2) there is no indication that Rule 702 or the FRE as a whole are intended to incorporate a general acceptance standard, as (a) the drafting history makes no mention of the Frye decision, and (b) a rigid general acceptance requirement would be at odds with the liberal thrust of the FRE and their general approach of relaxing the traditional barriers to opinion testimony.

[***LEdHN2]
COURTS §538.11
construction of rules --
Headnote: [2]

A court properly interprets the legislatively enacted Federal Rules of Evidence as the court would interpret any statute.

[***LEdHN3]
EVIDENCE §641
expert scientific testimony -- reliability --
Headnote: [3A] [3B] [3C]

Under the Federal Rules of Evidence (FRE), a federal trial judge is not disabled from screening purportedly scientific evidence; rather, the trial judge must insure that any and all scientific testimony or evidence admitted is not only relevant but reliable; the primary locus of this obligation is Rule 702 of the FRE, which governs expert testimony as to scientific knowledge; for purposes of Rule 702, "scientific" implies a grounding in the methods and procedure of science, and "knowledge" connotes more than subjective belief or unsupported speculation; although it would be unreasonable to conclude that the subject of scientific testimony must be known to a certainty, Rule 702 requires that proposed scientific testimony be supported by appropriate validation--that is, good grounds--based on what is known; Rule 702's requirement that an expert's scientific testimony pertain to "scientific knowledge" establishes a standard of evidentiary reliability, that is, trustworthiness; in a federal case involving scientific evidence, evidentiary reliability is based on scientific validity. (Rehnquist, Ch. J., and Stevens, J., dissented in part from this holding.)

[***LEdHN4]
EVIDENCE §641
expert scientific testimony -- relevance --
Headnote: [4A] [4B]

The "helpfulness" standard of Rule 702 of the Federal Rules of Evidence (FRE), which requires that scientific evidence or testimony assist the trier of fact to understand the evidence or to determine a fact in issue--a condition that goes primarily to relevance--requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility; for purposes of Rule 702, expert testimony which does not relate to any issue in the case at hand is not relevant and thus is non-helpful.

[***LEdHN5]
EVIDENCE §641
expert witnesses --
Headnote: [5]

Unlike an ordinary witness, an expert witness is permitted wide latitude, under the Federal Rules of Evidence, to offer opinions, including those that are not based on firsthand knowledge or observation.

[***LEdHN6]
EVIDENCE §641
expert scientific testimony --
Headnote: [6]

Pursuant to Rule 104(a) of the Federal Rules of Evidence, governing preliminary questions concerning the admissibility of evidence, a federal trial judge who is faced with a proffer of expert scientific testimony must determine at the outset whether the expert is proposing to testify to scientific knowledge that will assist the trier of fact to understand or determine a fact in issue; this determination entails a preliminary assessment of (1) whether the reasoning or methodology underlying the testimony is scientifically valid, and (2) whether that reasoning or methodology properly can be applied to the facts in issue. (Rehnquist, Ch. J., and Stevens, J., dissented in part from this holding.)

[***LEdHN7]
EVIDENCE §383
burden of proof --
Headnote: [7A] [7B]

Matters to be determined by a federal trial court pursuant to Rule 104(a) of the Federal Rules of Evidence--that is, preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence--are to be established by a preponderance of proof.

[***LEdHN8]
EVIDENCE §67
science -- admissibility -- judicial notice --
Headnote: [8A] [8B]

The requirements of Rule 702 of the Federal Rules of Evidence (FRE) for the admissibility of expert scientific evidence do not apply specially or exclusively to unconventional evidence; however, theories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice under Rule 201 of the FRE.

[***LEdHN9]
EVIDENCE §641
expert scientific testimony -- admissibility --
Headnote: [9]

In determining whether a theory or technique is scientific knowledge that will assist the trier of fact, so as to be the basis of admissible evidence under Rule 702 of the Federal Rules of Evidence, (1) a key question to be answered is, ordinarily, whether the theory or technique can be and has been tested; (2) a pertinent consideration is whether the theory or technique has been subjected to peer review and publication, although the fact of publication, or lack thereof, in a peer-reviewed journal is not a dispositive consideration; (3) the court should ordinarily consider the known or potential rate of error of a particular scientific technique; (4) the assessment of reliability permits, but does not require, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance of the theory or technique within that community, as (a) widespread acceptance can be an important factor in ruling particular evidence admissible, and (b) a known technique that has been able to attract only minimal support within the scientific community may properly be viewed with skepticism; and (5) the inquiry is a flexible one, and the focus must be solely on principles and methodology, not on the conclusions that such principles and methodology generate. (Rehnquist, Ch. J., and Stevens, J., dissented in part from this holding.)

[***LEdHN10]
TRIAL §15
witnesses -- control --
Headnote: [10]

Since expert evidence can be both powerful and misleading because of the difficulty in evaluating such evidence, a federal trial judge--in weighing, under Rule 403 of the Federal Rules of Evidence, the possible danger of unfair prejudice resulting from such evidence against the evidence's probative force--exercises more control over experts than over lay witnesses.

[***LEdHN11]
EVIDENCE §641
SUMMARY JUDGMENT AND JUDGMENT ON PLEADINGS §1
TRIAL §199
WITNESSES §59
scientific testimony -- attack --
Headnote: [11]

In federal cases, the appropriate means of attacking scientific testimony, where the basis of such testimony meets the admissibility standards of Rule 702 of the Federal Rules of Evidence, are (1) vigorous cross-examination, (2) presentation of contrary evidence, and (3) careful instruction on the burden of proof; additionally, in the event that the trial court concludes that a scintilla of such evidence presented to support a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment under Rule 50(a) of the Federal Rules of Civil Procedure (FRCP) and to grant summary judgment under Rule 56 of the FRCP.

[***LEdHN12]
APPEAL §1692.3
remand -- misconception of law --
Headnote: [12]

On certiorari to review a United States Court of Appeals judgment which upheld a United States District Court's ruling that proffered scientific evidence as to the alleged causation of birth defects was inadmissible, the United States Supreme Court will vacate the Court of Appeals' judgment and remand the case for further proceedings, where (1) the inquiries of the District Court and the Court of Appeals as to the admissibility of the evidence focused almost exclusively on whether the principle on which the evidence was based had gained "general acceptance," as gauged by publication and the decisions of other courts; and (2) the Supreme Court holds that general acceptance is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence.

SYLLABUS: Petitioners, two minor children and their parents, alleged in their suit against respondent that the children's serious birth defects had been caused by the mothers' prenatal ingestion of Bendectin, a prescription drug marketed by respondent. The District Court granted respondent summary judgment based on a well-credentialed expert's affidavit concluding, upon reviewing the extensive published scientific literature on the subject, that maternal use of Bendectin has not been shown to be a risk factor for human birth defects. Although petitioners had responded with the testimony of eight other well-credentialed experts, who based their conclusion that Bendectin can cause birth defects on animal studies, chemical structure analyses, and the unpublished "reanalysis" of previously published human statistical studies, the court determined that this evidence did not meet the applicable "general acceptance" standard for the admission of expert testimony. The Court of Appeals agreed and affirmed, citing *Frye* v. *United States*, 54 App. D.C. 46, 47, 293 F. 1013, 1014, for the rule that expert opinion based on a scientific technique is inadmissible unless the technique is "generally accepted" as reliable in the relevant scientific community.

Held: The Federal Rules of Evidence, not *Frye*, provide the standard for admitting expert scientific testimony in a federal trial. Pp. 585-597.

(a) *Frye*'s "general acceptance" test was superseded by the Rules' adoption. The Rules occupy the field, *United States* v. *Abel*, 469 U.S. 45, 49, 83 L. Ed. 2d 450, 105 S. Ct. 465, and, although the common law of evidence may serve as an aid to their application, *id.*, at 51-52, respondent's assertion that they somehow assimilated *Frye* is unconvincing. Nothing in the Rules as a whole or in the text and drafting history of Rule 702, which specifically governs expert testimony, gives any indication that "general acceptance" is a necessary precondition to the admissibility of scientific evidence. Moreover, such a rigid standard would be at odds with the Rules' liberal thrust and their general approach of relaxing the traditional barriers to "opinion" testimony. Pp. 585-589.

(b) The Rules -- especially Rule 702 -- place appropriate limits on the admissibility of purportedly scientific evidence by assigning to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. The reliability standard is established by Rule 702's requirement that an expert's testimony pertain to "scientific . . . knowledge," since the adjective "scientific" implies a grounding in science's methods and procedures, while the word "knowledge" connotes a body of known facts or of ideas inferred from such facts or accepted as true on good grounds. The Rule's requirement that the testimony "assist the trier of fact to understand the evidence or to determine a fact in issue" goes primarily to relevance by demanding a valid scientific connection to the pertinent inquiry as a precondition to admissibility. Pp. 589-592.

(c) Faced with a proffer of expert scientific testimony under Rule 702, the trial judge, pursuant to Rule 104(a), must make a preliminary assessment of whether the testimony's underlying reasoning or methodology is scientifically valid and properly can be applied to the facts at issue. Many considerations will bear on the inquiry, including whether the theory or technique in question can be (and has been) tested, whether it has been subjected to peer review and publication, its known or potential error rate and the existence and maintenance of standards controlling its operation, and whether it has attracted widespread acceptance within a relevant scientific community. The inquiry is a flexible one, and its focus must be solely on principles and methodology, not on the conclusions that they generate. Throughout, the judge should also be mindful of other applicable Rules. Pp. 592-595.

(d) Cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof, rather than wholesale exclusion under an uncompromising "general acceptance" standard, is the appropriate means by which evidence based on valid principles may be challenged. That even limited screening by the trial judge, on occasion, will prevent the jury from hearing of authentic scientific breakthroughs is simply a consequence of the fact that the Rules are not designed to seek cosmic understanding but, rather, to resolve legal disputes. Pp. 595-597.

COUNSEL: Michael H. Gottesman argued the cause for petitioners. With him on the briefs were Kenneth J. Chesebro, Barry J. Nace, David L. Shapiro, and Mary G. Gillick.

Charles Fried argued the cause for respondent. With him on the brief were Charles R. Nesson, Joel I. Klein, Richard G. Taranto, Hall R. Marston, George E. Berry, Edward H. Stratemeier, and W. Glenn Forrester. *

* Briefs of amici curiae urging reversal were filed for the State of Texas et al. by Dan Morales, Attorney General of Texas, Mark Barnett, Attorney General of South Dakota, Marc Racicot, Attorney General of Montana, Larry EchoHawk, Attorney General of Idaho, and Brian Stuart Koukoutchos; for the American Society of Law, Medicine and Ethics et al. by Joan E. Bertin, Marsha S. Berzon, and Albert H. Meyerhoff; for the Association of Trial Lawyers of America by Jeffrey Robert White and Roxanne Barton Conlin; for Ronald Bayer et al. by Brian Stuart Koukoutchos, Priscilla Budeiri, Arthur Bryant, and George W. Conk; and for Daryl E. Chubin et al. by Ron Simon and Nicole Schultheis.

Briefs of amici curiae urging affirmance were filed for the United States by Acting Solicitor General Wallace, Assistant Attorney General Gerson, Miguel A. Estrada, Michael Jay Singer, and John P. Schnitker; for the American Insurance Association by William J. Kilberg, Paul Blankenstein, Bradford R. Clark, and Craig A. Berrington; for the American Medical Association et al. by Carter G. Phillips, Mark D. Hopson, and Jack R. Bierig; for the American Tort Reform Association by John G. Kester and John W. Vardaman, Jr.; for the Chamber of Commerce of the United States by Timothy B. Dyk, Stephen A. Bokat, and Robin S. Conrad; for the Pharmaceutical Manufacturers Association by Louis R. Cohen and Daniel Marcus; for the Product Liability Advisory Council, Inc., et al. by Victor E. Schwartz, Robert P. Charrow, and Paul F. Rothstein; for the Washington Legal Foundation by Scott G. Campbell, Daniel J. Popeo, and Richard A. Samp; and for Nicolaas Bloembergen et al. by Martin S. Kaufman.

Briefs of amici curiae were filed for the American Association for the Advancement of Science et al. by Richard A. Meserve and Bert Black; for the American College of Legal Medicine by Miles J. Zaremski; for the Carnegie Commission on Science, Technology, and Government by Steven G. Gallagher, Elizabeth H. Esty, and Margaret A. Berger; for the Defense Research Institute, Inc., by Joseph A.

Sherman, E. Wayne Taff, and Harvey L. Kaplan; for the New England Journal of Medicine et al. by Michael Malina and Jeffrey I. D. Lewis; for A Group of American Law Professors by Donald N. Bersoff; for Alvan R. Feinstein by Don M. Kennedy, Loretta M. Smith, and Richard A. Oetheimer; and for Kenneth Rothman et al. by Neil B. Cohen.

JUDGES: BLACKMUN, J., delivered the opinion for a unanimous Court with respect to Parts I and II-A, and the opinion of the Court with respect to Parts II-B, II-C, III, and IV, in which WHITE, O'CONNOR, SCALIA, KENNEDY, SOUTER, and THOMAS, JJ., joined. REHNQUIST, C. J., filed an opinion concurring in part and dissenting in part, in which STEVENS, J., joined, post, p. 598.

OPINIONBY: BLACKMUN

OPINION: [*582] [***476] [**2791] JUSTICE BLACKMUN delivered the opinion of the Court.

[***LEdHR1A] [1A]In this case we are called upon to determine the standard for admitting expert scientific testimony in a federal trial.

IPetitioners Jason Daubert and Eric Schuller are minor children born with serious birth defects. They and their parents sued respondent in California state court, alleging that the birth defects had been caused by the mothers' ingestion of Bendectin, a prescription antinausea drug marketed by respondent. Respondent removed the suits to federal court on diversity grounds.

After extensive discovery, respondent moved for summary judgment, contending that Bendectin does not cause birth defects in humans and that petitioners would be unable to come forward with any admissible evidence that it does. In support of its motion, respondent submitted an affidavit of Steven H. Lamm, physician and epidemiologist, who is a well-credentialed expert on the risks from exposure to various chemical substances. n1 Doctor Lamm stated that he had reviewed all the literature on Bendectin and human birth defects -- more than 30 published studies involving over 130,000 patients. No study had found Bendectin to be a human teratogen (*i.e.*, a substance capable of causing malformations in fetuses). On the basis of this review, Doctor Lamm concluded that maternal use of Bendectin during the first trimester of pregnancy has not been shown to be a risk factor for human birth defects.

- - - - - - - - - - - - - - Footnotes - - - - - - - - - - - - - - -

n1 Doctor Lamm received his master's and doctor of medicine degrees from the University of Southern California. He has served as a consultant in birth-defect epidemiology for the National Center for Health Statistics and has published numerous articles on the magnitude of risk from exposure to various chemical and biological substances. App. 34-44.

- - - - - - - - - - - - End Footnotes- - - - - - - - - - - - - -

[*583] Petitioners did not (and do not) contest this characterization of the published record regarding Bendectin. Instead, they responded to respondent's motion with the testimony of eight experts of their own, each of whom also possessed impressive credentials. n2 These experts had concluded that Bendectin can cause birth defects. Their conclusions were based upon "in vitro" (test tube) and "in vivo" (live) animal studies that [***477] found a link between Bendectin and malformations; pharmacological studies of the chemical structure of Bendectin that purported to show similarities between the structure of the drug and that of other substances known to cause birth defects; and the "reanalysis" of previously [**2792] published epidemiological (human statistical) studies.

- - - - - - - - - - - - - - Footnotes - - - - - - - - - - - - - - -

n2 For example, Shanna Helen Swan, who received a master's degree in biostatistics from Columbia University and a doctorate in statistics from the University of California at Berkeley, is chief of the section of the California Department of Health and Services that determines causes of birth defects and has served as a consultant to the World Health Organization, the Food and Drug Administration, and the National Institutes of Health. *Id.*, at 113-114, 131-132. Stuart A. Newman, who received his bachelor's degree in chemistry from Columbia University and his master's and doctorate in chemistry from the University of Chicago, is a professor at New York Medical College and has spent over a decade studying the effect of chemicals on limb development. *Id.*, at 54-56. The credentials of the others are similarly impressive. See *id.*, at 61-66, 73-80, 148-153, 187-192, and Attachments 12, 20, 21, 26, 31, and 32 to Petitioners' Opposition to Summary Judgment in No. 84-2013-G(I) (SD Cal.).

- - - - - - - - - - - - End Footnotes- - - - - - - - - - - - - -

The District Court granted respondent's motion for summary judgment. The court stated that scientific evidence is admissible only if the principle upon which it is based is "'sufficiently established to have general acceptance in the field to which it belongs.'" 727 F. Supp. 570, 572 (SD Cal. 1989), quoting *United States* v. *Kilgus*, 571 F.2d 508, 510 (CA9 1978). The court concluded that petitioners' evidence did not meet this standard. Given the vast body of epidemiological data concerning Bendectin, the court held, expert opinion which is not based on epidemiological evidence [*584] is not admissible to establish causation. 727 F. Supp. at 575. Thus, the animal-cell studies, live-animal studies, and chemical-structure analyses on which petitioners had relied could not raise by themselves a reasonably disputable jury issue regarding causation. *Ibid*. Petitioners' epidemiological analyses, based as they were on recalculations of data in previously published studies that had found no causal link between the drug and birth defects, were ruled to be inadmissible because they had not been published or subjected to peer review. *Ibid*.

The United States Court of Appeals for the Ninth Circuit affirmed. 951 F.2d 1128 (1991). Citing *Frye* v. *United States*, 54 App. D.C. 46, 47, 293 F. 1013, 1014 (1923), the court stated that expert opinion based on a scientific technique is inadmissible unless the technique is "generally accepted" as reliable in the relevant scientific community. 951 F.2d at 1129-1130. The court declared that expert opinion based on a methodology that diverges "significantly from the procedures accepted by recognized authorities in the field . . . cannot be shown to be 'generally accepted as a reliable technique.'" *Id.*, at 1130, quoting *United States* v. *Solomon*, 753 F.2d 1522, 1526 (CA9 1985).

The court emphasized that other Courts of Appeals considering the risks of Bendectin had refused to admit reanalyses of epidemiological studies that had been neither published nor subjected to peer review. 951 F.2d at 1130-1131. Those courts had found unpublished reanalyses "particularly problematic in light of the massive weight of the original published studies supporting [respondent's] position, all of which had undergone full scrutiny from the scientific community." *Id.*, at 1130. Contending that reanalysis is generally accepted by the scientific community only when it is subjected to verification and scrutiny by others in the field, the Court of Appeals rejected petitioners' reanalyses as "unpublished, not subjected to the normal peer review process and generated solely for use in litigation." *Id.*, at 1131. The [*585] court concluded that petitioners' evidence provided an insufficient foundation to allow admission of expert testimony that Bendectin caused their injuries and, accordingly, that petitioners could not satisfy their burden of proving causation at trial.

We granted certiorari, 506 U.S. 914 [***478] (1992), in light of sharp divisions among the courts regarding the proper standard for the admission of expert testimony. Compare, *e.g.*, *United States* v. *Shorter*, 257 U.S. App. D.C. 358, 363-364, 809 F.2d 54, 59-60 (applying the "general acceptance" standard), cert. denied, 484 U.S. 817, 98 L. Ed. 2d 35, 108 S. Ct. 71 (1987), with *DeLuca* v. *Merrell Dow Pharmaceuticals, Inc.*, 911 F.2d 941, 955 (CA3 1990) (rejecting the "general acceptance" standard).

II A

In the 70 years since its formulation in the *Frye* case, the "general acceptance" test has been the dominant standard for determining the admissibility of novel scientific evidence at trial. See E. Green & C. Nesson, Problems, Cases, and Materials on Evidence 649 (1983). Although under increasing attack of late, the rule continues to be followed by a [**2793] majority of courts, including the Ninth Circuit. n3

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n3 For a catalog of the many cases on either side of this controversy, see P. Giannelli & E. Imwinkelried, Scientific Evidence § 1-5, pp. 10-14 (1986 and Supp. 1991).

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The *Frye* test has its origin in a short and citation-free 1923 decision concerning the admissibility of evidence derived from a systolic blood pressure deception test, a crude precursor to the polygraph machine. In what has become a famous (perhaps infamous) passage, the then Court of Appeals for the District of Columbia described the device and its operation and declared:

> "Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages [*586] is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, *the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs*." 54 App. D.C. at 47, 293 F. at 1014 (emphasis added).

Because the deception test had "not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made," evidence of its results was ruled inadmissible. *Ibid*.

[***LEdHR1B] [1B]The merits of the *Frye* test have been much debated, and scholarship on its proper scope and application is legion. n4 [*587] Petitioners' primary [***479] attack, however, is not on the content but on the continuing authority of the rule. They contend that the *Frye* test was superseded by the adoption of the Federal Rules of Evidence. n5 We agree.

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n4 See, *e.g.*, Green, Expert Witnesses and Sufficiency of Evidence in Toxic Substances Litigation: The Legacy of *Agent Orange* and Bendectin Litigation, 86 Nw. U. L. Rev. 643 (1992) (hereinafter Green); Becker & Orenstein, The Federal Rules of Evidence After Sixteen Years -- The Effect of "Plain Meaning" Jurisprudence, the Need for an Advisory Committee on the Rules of Evidence, and Suggestions for Selective Revision of the Rules, 60 Geo. Wash. L. Rev. 857, 876-885 (1992); Hanson, James Alphonzo Frye is Sixty-Five Years Old; Should He Retire?, 16 West. St. U. L. Rev. 357 (1989); Black, A Unified Theory of Scientific Evidence, 56 Ford. L. Rev. 595 (1988); Imwinkelried, The "Bases" of Expert Testimony: The Syllogistic Structure of Scientific Testimony, 67 N. C. L. Rev. 1

(1988); Proposals for a Model Rule on the Admissibility of Scientific Evidence, 26 Jurimetrics J. 235 (1986); Giannelli, The Admissibility of Novel Scientific Evidence: *Frye* v. *United States*, a Half-Century Later, 80 Colum. L. Rev. 1197 (1980); The Supreme Court, 1986 Term, 101 Harv. L. Rev. 7, 119, 125-127 (1987).

Indeed, the debates over *Frye* are such a well-established part of the academic landscape that a distinct term -- "*Frye*-ologist" -- has been advanced to describe those who take part. See Behringer, Introduction, Proposals for a Model Rule on the Admissibility of Scientific Evidence, 26 Jurimetrics J. 237, 239 (1986), quoting Lacey, Scientific Evidence, 24 Jurimetrics J. 254, 264 (1984).

n5 Like the question of *Frye*'s merit, the dispute over its survival has divided courts and commentators. Compare, *e.g.*, *United States* v. *Williams*, 583 F.2d 1194 (CA2 1978) (*Frye* is superseded by the Rules of Evidence), cert. denied, 439 U.S. 1117, 59 L. Ed. 2d 77, 99 S. Ct. 1025 (1979), with *Christophersen* v. *Allied-Signal Corp.*, 939 F.2d 1106, 1111, 1115-1116 (CA5 1991) (en banc) (*Frye* and the Rules coexist), cert. denied, 503 U.S. 912, 117 L. Ed. 2d 506, 112 S. Ct. 1280 (1992), 3 J. Weinstein & M. Berger, Weinstein's Evidence P702[03], pp. 702-36 to 702-37 (1988) (hereinafter Weinstein & Berger) (*Frye* is dead), and M. Graham, Handbook of Federal Evidence § 703.2 (3d ed. 1991) (*Frye* lives). See generally P. Giannelli & E. Imwinkelried, Scientific Evidence § 1-5, at 28-29 (citing authorities).

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[***LEdHR2] [2]We interpret the legislatively enacted Federal Rules of Evidence as we would any statute. *Beech Aircraft Corp.* v. *Rainey*, 488 U.S. 153, 163, 102 L. Ed. 2d 445, 109 S. Ct. 439 (1988). Rule 402 provides the baseline:

> "All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, [**2794] by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible."

"Relevant evidence" is defined as that which has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Rule 401. The Rules' basic standard of relevance thus is a liberal one.

Frye, of course, predated the Rules by half a century. In *United States* v. *Abel*, 469 U.S. 45, 83 L. Ed. 2d 450, 105 S. Ct. 465 (1984), we considered the pertinence of background common law in interpreting the Rules of Evidence. We noted that the Rules occupy the field, *id.*, at 49, but, quoting Professor Cleary, the Reporter, [*588] explained that the common law nevertheless could serve as an aid to their application:

> "'In principle, under the Federal Rules no common law of evidence remains. "All relevant evidence is admissible, except as otherwise provided . . . ." In reality, of course, the body of common law knowledge continues to exist, though in the somewhat altered form of a source of guidance in the exercise of delegated powers.'" *Id.*, at 51-52.

We found the common-law precept at issue in the *Abel* case entirely consistent with Rule 402's general requirement of admissibility, and considered it unlikely that the drafters had intended to change the rule. *Id.*, at 50-51. In *Bourjaily* v. *United States*, 483 U.S. 171, 97 L. Ed. 2d 144, 107 S. [***480] Ct. 2775 (1987), on the other hand, the Court was unable to find a particular common-law doctrine in the Rules, and so held it superseded.

[***LEdHR1C] [1C] Here there is a specific Rule that speaks to the contested issue. Rule 702, governing expert testimony, provides:

> "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

Nothing in the text of this Rule establishes "general acceptance" as an absolute prerequisite to admissibility. Nor does respondent present any clear indication that Rule 702 or the Rules as a whole were intended to incorporate a "general acceptance" standard. The drafting history makes no mention of *Frye*, and a rigid "general acceptance" requirement would be at odds with the "liberal thrust" of the Federal Rules and their "general approach of relaxing the traditional barriers to 'opinion' testimony." *Beech Aircraft Corp.* v. *Rainey*, 488 U.S. at 169 (citing Rules 701 to 705). See also Weinstein, Rule 702 of the Federal Rules of Evidence is [*589] Sound; It Should Not Be Amended, 138 F.R.D. 631 (1991) ("The Rules were designed to depend primarily upon lawyer-adversaries and sensible triers of fact to evaluate conflicts"). Given the Rules' permissive backdrop and their inclusion of a specific rule on expert testimony that does not mention "general acceptance," the assertion that the Rules somehow assimilated *Frye* is unconvincing. *Frye* made "general acceptance" the exclusive test for admitting expert scientific testimony. That austere standard, absent from, and incompatible with, the Federal Rules of Evidence, should not be applied in federal trials. n6

[***LEdHR1D] [1D]

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n6 Because we hold that *Frye* has been superseded and base the discussion that follows on the content of the congressionally enacted Federal Rules of Evidence, we do not address petitioners' argument that application of the *Frye* rule in this diversity case, as the application of a judgemade rule affecting substantive rights, would violate the doctrine of *Erie R. Co.* v. *Tompkins*, 304 U.S. 64, 82 L. Ed. 1188, 58 S. Ct. 817 (1938).

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[***LEdHR3A] [3A]That the *Frye* test was displaced by the Rules of Evidence does not mean, [**2795] however, that the Rules themselves place no limits on the admissibility of purportedly scientific evidence. n7 Nor is the trial judge disabled from screening such evidence. To the contrary, under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.

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n7 THE CHIEF JUSTICE "do[es] not doubt that Rule 702 confides to the judge some gatekeeping responsibility," *post*, at 600, but would neither say how it does so nor explain what that role entails. We believe the better course is to note the nature and source of the duty.

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The primary locus of this obligation is Rule 702, which clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify. "*If scientific*, technical, or other specialized *knowledge will assist the trier of fact* to understand the evidence or to determine a fact in issue" an expert "may testify *thereto*." (Emphasis added.) The subject of an expert's testimony must [*590] be "scientific . . . [***481] knowledge." n8 The adjective "scientific" implies a grounding in the methods and procedures of science. Similarly, the word "knowledge" connotes more than subjective belief or unsupported speculation. The term "applies to any body of known facts or to any body of ideas inferred from such facts or accepted as truths on good grounds." Webster's Third New International Dictionary 1252 (1986). Of course, it would be unreasonable to conclude that the subject of scientific testimony must be "known" to a certainty; arguably, there are no certainties in science. See, *e.g.*, Brief for Nicolaas Bloembergen et al. as *Amici Curiae* 9 ("Indeed, scientists do not assert that they know what is immutably 'true' -- they are committed to searching for new, temporary, theories to explain, as best they can, phenomena"); Brief for American Association for the Advancement of Science et al. as *Amici Curiae* 7-8 ("Science is not an encyclopedic body of knowledge about the universe. Instead, it represents a *process* for proposing and refining theoretical explanations about the world that are subject to further testing and refinement" (emphasis in original)). But, in order to qualify as "scientific knowledge," an inference or assertion must be derived by the scientific method. Proposed testimony must be supported by appropriate validation -- *i.e.*, "good grounds," based on what is known. In short, the requirement that an expert's testimony pertain to "scientific knowledge" establishes a standard of evidentiary reliability. n9

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n8 Rule 702 also applies to "technical, or other specialized knowledge." Our discussion is limited to the scientific context because that is the nature of the expertise offered here.

[***LEdHR3B] [3B]

n9 We note that scientists typically distinguish between "validity" (does the principle support what it purports to show?) and "reliability" (does application of the principle produce consistent results?). See Black, 56 Ford. L. Rev., at 599. Although "the difference between accuracy, validity, and reliability may be such that each is distinct from the other by no more than a hen's kick," Starrs, *Frye v. United States* Restructured and Revitalized: A Proposal to Amend Federal Evidence Rule 702, 26 Jurimetrics J. 249, 256 (1986), our reference here is to *evidentiary* reliability -- that is, trustworthiness. Cf., *e.g.*, Advisory Committee's Notes on Fed. Rule Evid. 602, 28 U.S.C. App., p. 755 ("'The rule requiring that a witness who testifies to a fact which can be perceived by the senses must have had an opportunity to observe, and must have actually observed the fact' is a 'most pervasive manifestation' of the common law insistence upon 'the most reliable sources of information'" (citation omitted)); Advisory Committee's Notes on Art. VIII of Rules of Evidence, 28 U.S.C. App., p. 770 (hearsay exceptions will be recognized only "under circumstances supposed to furnish guarantees of trustworthiness"). In a case involving scientific evidence, *evidentiary reliability* will be based upon *scientific validity*.

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[***LEdHR4A] [4A]Rule 702 further requires that the evidence or testimony "assist the trier of fact to understand the evidence or to determine a fact in issue." This condition goes primarily to relevance. "Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful." 3 Weinstein & Berger P702[02], p. 702-18. See also *United States* v. *Downing*, 753 F.2d 1224, 1242 (CA3 1985) ("An additional consideration [**2796] under Rule 702 -- and another aspect of relevancy -- is whether expert testimony proffered in the case is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute"). The consideration has been aptly described by Judge Becker as one of "fit." *Ibid*. "Fit" is not always obvious, [***482] and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes. See Starrs, *Frye v. United States* Restructured and Revitalized: A Proposal to Amend Federal Evidence Rule 702, 26 Jurimetrics J. 249, 258 (1986). The study of the phases of the moon, for example, may provide valid scientific "knowledge" about whether a certain night was dark, and if darkness is a fact in issue, the knowledge will assist the trier of fact. However (absent creditable grounds supporting such a link), evidence that the moon was full on a certain night will not assist the trier of fact in determining whether an individual was unusually likely to have behaved irrationally on that night. Rule 702's "helpfulness" [*592] standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility.

[***LEdHR5] [5]That these requirements are embodied in Rule 702 is not surprising. Unlike an ordinary witness, see Rule 701, an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation. See Rules 702 and 703. Presumably, this relaxation of the usual requirement of firsthand knowledge -- a rule which represents "a 'most pervasive manifestation' of the common law insistence upon 'the most reliable sources of information,'" Advisory Committee's Notes on Fed. Rule Evid. 602, 28 U.S.C. App., p. 755 (citation omitted) -- is premised on an assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline.

C

[***LEdHR6] [6] [***LEdHR7A] [7A] [***LEdHR8A] [8A]Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a), n10 whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. n11 This entails a preliminary assessment of whether the reasoning or methodology [*593] underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue. We are confident that federal judges possess the capacity to undertake this review. Many factors will bear on the inquiry, and we do not presume to set out a definitive checklist or test. But some general observations are appropriate.

[***LEdHR7B] [7B]

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n10 Rule 104(a) provides:

"Preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence shall be determined by the court, subject to the provisions of subdivision (b) [pertaining to conditional admissions]. In making its determination it is not bound by the rules of evidence except those with respect to privileges." These matters should be established by a preponderance of proof. See *Bourjaily* v. *United States*, 483 U.S. 171, 175-176, 97 L. Ed. 2d 144, 107 S. Ct. 2775 (1987).

[***LEdHR8B] [8B]

n11 Although the *Frye* decision itself focused exclusively on "novel" scientific techniques, we do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence. Of course, well-established propositions are less likely to be challenged than those that are novel, and they are more handily defended. Indeed, theories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice under Federal Rule of Evidence 201.

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[***LEdHR9] [9]Ordinarily, a key question to be answered in determining whether [***483] a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested. "Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry." Green 645. See also C. Hempel, Philosophy of Natural Science 49 (1966) [**2797] ("The statements constituting a scientific explanation must be capable of empirical test"); K. Popper, Conjectures and Refutations: The Growth of Scientific Knowledge 37 (5th ed. 1989) ("The criterion of the scientific status of a theory is its falsifiability, or refutability, or testability") (emphasis deleted).

Another pertinent consideration is whether the theory or technique has been subjected to peer review and publication. Publication (which is but one element of peer review) is not a *sine qua non* of admissibility; it does not necessarily correlate with reliability, see S. Jasanoff, The Fifth Branch: Science Advisors as Policymakers 61-76 (1990), and in some instances well-grounded but innovative theories will not have been published, see Horrobin, The Philosophical Basis of Peer Review and the Suppression of Innovation, 263 JAMA 1438 (1990). Some propositions, moreover, are too particular, too new, or of too limited interest to be published. But submission to the scrutiny of the scientific community is a component of "good science," in part because it increases the likelihood that substantive flaws in methodology will be detected. See J. Ziman, Reliable Knowledge: An Exploration [*594] of the Grounds for Belief in Science 130-133 (1978); Relman & Angell, How Good Is Peer Review?, 321 New Eng. J. Med. 827 (1989). The fact of publication (or lack thereof) in a peer reviewed journal thus will be a relevant, though not dispositive, consideration in assessing the scientific validity of a particular technique or methodology on which an opinion is premised.

Additionally, in the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error, see, *e.g.*, *United States* v. *Smith*, 869 F.2d 348, 353-354 (CA7 1989) (surveying studies of the error rate of spectrographic voice identification technique), and the existence and maintenance of standards controlling the technique's operation, see *United States* v. *Williams*, 583 F.2d 1194, 1198 (CA2 1978) (noting professional organization's standard governing spectrographic analysis), cert. denied, 439 U.S. 1117, 59 L. Ed. 2d 77, 99 S. Ct. 1025 (1979).

Finally, "general acceptance" can yet have a bearing on the inquiry. A "reliability assessment does not require, although it does permit, explicit identification of a relevant scientific community and an express determination of a particular degree of acceptance within that community." *United States* v. *Downing*, 753 F.2d at 1238. See also 3 Weinstein & Berger P702[03], pp. 702-41 to 702-42. Widespread acceptance can be an important factor in ruling particular evidence admissible, and "a known technique which has been able to attract only minimal support within the community," *Downing*, 753 F.2d at 1238, may properly be viewed with skepticism.

The inquiry envisioned by Rule [***484] 702 is, we emphasize, a flexible one. n12 Its overarching subject is the scientific validity [*595] -- and thus the evidentiary relevance and reliability -- of the principles that underlie a proposed submission. The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate.

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n12 A number of authorities have presented variations on the reliability approach, each with its own slightly different set of factors. See, *e.g.*, *Downing*, 753 F.2d at 1238-1239 (on which our discussion draws in part); 3 Weinstein & Berger P702[03], pp. 702-41 to 702-42 (on which the *Downing* court in turn partially relied); McCormick, Scientific Evidence: Defining a New Approach to Admissibility, 67 Iowa L. Rev. 879, 911-912 (1982); and Symposium on Science and the Rules of Evidence, 99 F.R.D. 187, 231 (1983) (statement by Margaret Berger). To the extent that they focus on the reliability of evidence as ensured by the scientific validity of its underlying principles, all these versions may well have merit, although we express no opinion regarding any of their particular details.

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[***LEdHR10] [10]Throughout, a judge assessing a proffer of expert scientific testimony under Rule 702 should also be mindful of other applicable rules. Rule 703 provides that expert opinions based on otherwise inadmissible [**2798] hearsay are to be admitted only if the facts or data are "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject." Rule 706 allows the court at its discretion to procure the assistance of an expert of its own choosing. Finally, Rule 403 permits the exclusion of relevant evidence "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury . . . ." Judge Weinstein has explained: "Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it. Because of this risk, the judge in weighing possible prejudice against probative force under Rule 403 of the present rules exercises more control over experts than over lay witnesses." Weinstein, 138 F.R.D. at 632.

III

[***LEdHR11] [11] We conclude by briefly addressing what appear to be two underlying concerns of the parties and *amici* in this case. Respondent expresses apprehension that abandonment of "general acceptance" as the exclusive requirement for admission will result in a "free-for-all" in which befuddled juries are confounded by absurd and irrational pseudoscientific assertions. [*596] In this regard respondent seems to us to be overly pessimistic about the capabilities of the jury and of the adversary system generally. Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence. See *Rock* v. *Arkansas*, 483 U.S. 44, 61, 97 L. Ed. 2d 37, 107 S. Ct. 2704 (1987). Additionally, in the event the trial court concludes that the scintilla of evidence presented supporting a position is insufficient to allow a reasonable juror to conclude that the position more likely than not is true, the court remains free to direct a judgment, Fed. Rule Civ. Proc. 50(a), and likewise to grant summary judgment, Fed. Rule Civ. Proc. 56. Cf., *e.g., Turpin* v. *Merrell Dow Pharmaceuticals, Inc.*, 959 F.2d 1349 (CA6) (holding that scientific evidence that provided foundation for expert testimony, viewed in the light most favorable to plaintiffs, was not sufficient to allow a jury to find it more probable than not that defendant [***485] caused plaintiff's injury), cert. denied, 506 U.S. 826, 121 L. Ed. 2d 47, 113 S. Ct. 84 (1992); *Brock* v. *Merrell Dow Pharmaceuticals, Inc.*, 874 F.2d 307 (CA5 1989) (reversing judgment entered on jury verdict for plaintiffs because evidence regarding causation was insufficient), modified, 884 F.2d 166 (CA5 1989), cert. denied, 494 U.S. 1046 (1990); Green 680-681. These conventional devices, rather than wholesale exclusion under an uncompromising "general acceptance" test, are the appropriate safeguards where the basis of scientific testimony meets the standards of Rule 702.

Petitioners and, to a greater extent, their *amici* exhibit a different concern. They suggest that recognition of a screening role for the judge that allows for the exclusion of "invalid" evidence will sanction a stifling and repressive scientific orthodoxy and will be inimical to the search for truth. See, *e.g.*, Brief for Ronald Bayer et al. as *Amici Curiae*. It is true that open debate is an essential part of both legal and scientific analyses. Yet there are important differences between the quest for truth in the courtroom and the quest [*597] for truth in the laboratory. Scientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly. The scientific project is advanced by broad and wide-ranging consideration of a multitude of hypotheses, for those that are incorrect will eventually be shown to be so, and that in itself is an advance. Conjectures that are probably wrong are of little use, however, in the project of reaching a quick, final, and binding legal judgment -- often of great consequence -- about a particular set of events in the past. We recognize that, in practice, a gatekeeping role for the judge, no matter how flexible, inevitably on occasion will prevent the jury from learning of authentic [**2799] insights and innovations. That, nevertheless, is the balance that is struck by Rules of Evidence designed not for the exhaustive search for cosmic understanding but for the particularized resolution of legal disputes. n13

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n13 This is not to say that judicial interpretation, as opposed to adjudicative factfinding, does not share basic characteristics of the scientific endeavor: "The work of a judge is in one sense enduring and in another ephemeral. . . . In the endless process of testing and retesting, there is a constant rejection of the dross and a constant retention of whatever is pure and sound and fine." B. Cardozo, The Nature of the Judicial Process 178-179 (1921).

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IV

[***LEdHR1E] [1E] [***LEdHR3C] [3C] [***LEdHR4B] [4B]To summarize: "General acceptance" is not a necessary precondition to the admissibility of scientific evidence under the Federal Rules of Evidence, but the Rules of Evidence -- especially Rule 702 -- do assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Pertinent evidence based on scientifically valid principles will satisfy those demands.

[***LEdHR12] [12]The inquiries of the District Court and the Court of Appeals focused almost exclusively on "general acceptance," as gauged by publication and the decisions of other courts. Accordingly, [*598] the judgment of the Court of Appeals is vacated, and the case is remanded for further proceedings consistent with this opinion.

It is so ordered.

CONCURBY: REHNQUIST (In Part)

DISSENTBY: REHNQUIST (In Part)

DISSENT: [***486] CHIEF JUSTICE REHNQUIST, with whom JUSTICE STEVENS joins, concurring in part and dissenting in part.

The petition for certiorari in this case presents two questions: first, whether the rule of *Frye* v. *United States*, 54 App. D.C. 46, 293 F. 1013 (1923), remains good law after the enactment of the Federal Rules of Evidence; and second, if *Frye* remains valid, whether it requires expert scientific testimony to have been subjected to a peer review process in order to be admissible. The Court concludes, correctly in my view, that the *Frye* rule did not survive the enactment of the Federal Rules of Evidence, and I therefore join Parts I and II-A of its opinion. The second question presented in the petition for certiorari necessarily is mooted by this holding, but the Court nonetheless proceeds to construe Rules 702 and 703 very much in the abstract, and then offers some "general observations." *Ante*, at 593.

"General observations" by this Court customarily carry great weight with lower federal courts, but the ones offered here suffer from the flaw common to most such observations -- they are not applied to deciding whether particular testimony was or was not admissible, and therefore they tend to be not only general, but vague and abstract. This is particularly unfortunate in a case such as this, where the ultimate legal question depends on an appreciation of one or more bodies of knowledge not judicially noticeable, and subject to different interpretations in the briefs of the parties and their *amici*. Twenty-two *amicus* briefs have been filed in the case, and indeed the Court's opinion contains no fewer than 37 citations to *amicus* briefs and other secondary sources.

[*599] The various briefs filed in this case are markedly different from typical briefs, in that large parts of them do not deal with decided cases or statutory language -- the sort of material we customarily interpret. Instead, they deal with definitions of scientific knowledge, scientific method, scientific validity, and peer review -- in short, matters far afield from the expertise of judges. This is not to say that such materials are not useful or even necessary in deciding how Rule 702 should be applied; but it is to say that the unusual subject matter should cause us to proceed with great caution in deciding more than we have to, because our reach can so easily exceed our grasp.

But even if it were desirable to make "general observations" not necessary to decide [**2800] the questions presented, I cannot subscribe to some of the observations made by the Court. In Part II-B, the Court concludes that reliability and relevancy are the touchstones of the admissibility of expert testimony.

Ante, at 590-592. Federal Rule of Evidence 402 provides, as the Court points out, that "evidence which is not relevant is not admissible." But there is no similar reference in the Rule to "reliability." The Court constructs its argument by parsing the language "if scientific, technical, or other specialized [***487] knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, . . . an expert . . . may testify thereto . . . ." Fed. Rule Evid. 702. It stresses that the subject of the expert's testimony must be "scientific . . . knowledge," and points out that "scientific" "implies a grounding in the methods and procedures of science" and that the word "knowledge" "connotes more than subjective belief or unsupported speculation." *Ante*, at 590. From this it concludes that "scientific knowledge" must be "derived by the scientific method." *Ibid.* Proposed testimony, we are told, must be supported by "appropriate validation." *Ibid.* Indeed, in footnote 9, the Court decides that "in a case involving scientific evidence, *evidentiary [*600] reliability* will be based upon *scientific validity." Ante*, at 591, n. 9 (emphasis in original).

Questions arise simply from reading this part of the Court's opinion, and countless more questions will surely arise when hundreds of district judges try to apply its teaching to particular offers of expert testimony. Does all of this *dicta* apply to an expert seeking to testify on the basis of "technical or other specialized knowledge" -- the other types of expert knowledge to which Rule 702 applies -- or are the "general observations" limited only to "scientific knowledge"? What is the difference between scientific knowledge and technical knowledge; does Rule 702 actually contemplate that the phrase "scientific, technical, or other specialized knowledge" be broken down into numerous subspecies of expertise, or did its authors simply pick general descriptive language covering the sort of expert testimony which courts have customarily received? The Court speaks of its confidence that federal judges can make a "preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue." *Ante*, at 592-593. The Court then states that a "key question" to be answered in deciding whether something is "scientific knowledge" "will be whether it can be (and has been) tested." *Ante*, at 593. Following this sentence are three quotations from treatises, which not only speak of empirical testing, but one of which states that the "'criterion of the scientific status of a theory is its falsifiability, or refutability, or testability.'" *Ibid.*

I defer to no one in my confidence in federal judges; but I am at a loss to know what is meant when it is said that the scientific status of a theory depends on its "falsifiability," and I suspect some of them will be, too.

I do not doubt that Rule 702 confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony. But I do not think [*601] it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role. I think the Court would be far better advised in this case to decide only the questions presented, and to leave the further development of this important area of the law to future cases.

REFERENCES: Return To Full Text Opinion

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32B Am Jur 2d, Federal Rules of Evidence 435

12 Federal Procedure, L Ed, Evidence 33:131; 33 Federal Procedure, L Ed, Witnesses 80: 133

2 Am Jur Trials 585, Selecting and Preparing Expert Witness; 3 Am Jur Trials 427, Preparing and Using Experimental Evidence

28 USCS Appx, Federal Rules of Evidence, Rule 702

Am Law Prod Liab 3d 54:70, 54:71, 89:38

Ausman & Snyder's Medical Library, L Ed, Pediatrics 5:102

L Ed Digest, Evidence 641

L Ed Index, Experiments or Tests; Expert and Opinion Evidence; Rules of Evidence

ALR Index, Evidence Rules; Experiments and Tests; Expert and Opinion Evidence; Frye Test; Science and Scientific Matters

Annotation References:

Reliability of scientific technique and its acceptance within scientific community as affecting admissibility, at federal trial, of expert testimony as to result of test or study based on such technique--modern cases. 105 ALR Fed 299.

When will expert testimony "assist trier of fact" so as to be admissible at federal trial under Rule 702 of Federal Rules of Evidence. 75 ALR Fed 461.

KUMHO TIRE COMPANY, LTD., ET AL., PETITIONERS v. PATRICK CARMICHAEL, ETC., ET AL.

No. 97-1709

SUPREME COURT OF THE UNITED STATES

526 U.S. 137; 119 S. Ct. 1167; 143 L. Ed. 2d 238; 1999 U.S. LEXIS 2189; 67 U.S.L.W. 4179; 50 U.S.P.Q.2D (BNA) 1177; 50 Fed. R. Evid. Serv. (Callaghan) 1373; CCH Prod. Liab. Rep. P15,470; 99 Cal. Daily Op. Service 2059; 29 ELR 20638; 1999 Colo. J. C.A.R. 1518; 12 Fla. L. Weekly Fed. S 141

December 7, 1998, Argued
March 23, 1999, Decided

PRIOR HISTORY: ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT.

DISPOSITION: 131 F.3d 1433, reversed.

DECISION: Federal trial judge's gatekeeping obligation under Federal Rules of Evidence--to insure that expert witness' testimony rests on reliable foundation and is relevant to task at hand--held to apply to all expert testimony, not only scientific.

SUMMARY: In Daubert v Merrell Dow Pharmaceuticals, Inc. (1993) 509 US 579, 125 L Ed 2d 469, 113 S Ct 2786, a case involving the admissibility of scientific expert testimony, the United States Supreme Court held that (1) such testimony was admissible only if relevant and reliable; (2) the Federal Rules of Evidence (FRE) assigned to the trial judge the task of insuring that an expert's testimony rested on a reliable foundation and was relevant to the task at hand; and (3) some or all of certain specific factors--such as testing, peer review, error rates, and acceptability in the relevant scientific community--might possibly prove helpful in determining the reliability of a particular scientific theory or technique. In 1993, after a tire on a minivan blew out and the minivan overturned, one passenger died and the others were injured. The survivors and the decedent's representative, claiming that the failed tire had been defective, brought a diversity suit in the United States District Court for the Southern District of Alabama against the tire's maker and distributor. The plaintiffs rested their case in significant part upon the depositions of a mechanical engineer--an expert in tire failure analysis--who intended to testify that, in his expert opinion, a defect in the tire's manufacture or design caused the blowout. The expert's opinion was based upon (1) a visual and tactile inspection of the tire, and (2) the theory that in the absence of at least two of four specific physical symptoms indicating tire abuse, the tire failure of the sort that occurred in the case at hand was caused by a defect. The District Court--in granting a motion to exclude the expert's testimony as well as a motion for summary judgment against the plaintiffs--(1) agreed with the defendants that the District Court ought to act as a Daubert-type reliability "gatekeeper," even though the testimony at issue could be considered "technical" rather than "scientific"; (2) examined the expert's methodology in light of the reliability-related factors that Daubert had mentioned; and (3) concluded that all those factors argued against the reliability of the expert's methods (923 F Supp 1514, 1996 US Dist LEXIS 5706). On reconsideration, the District Court--although acknowledging that the Daubert factors ought to be applied flexibly and were simply illustrative--affirmed the earlier rulings on the ground that there were insufficient indications of the reliability of the expert's methodology of tire failure analysis. The United States Court of Appeals for the Eleventh Circuit, in reversing and remanding, expressed the view that the District Court had erred as a matter of law in applying the Daubert factors to the tire expert's testimony, as (1) Daubert was limited to the scientific context, and (2) the testimony in question relied on experience rather than the application of scientific principles (131 F3d 1433, 1997 US App LEXIS 35981).

On certiorari, the Supreme Court reversed. In an opinion by Breyer, J., joined by Rehnquist, Ch. J., and O'Connor, Scalia, Kennedy, Souter, Thomas, and Ginsburg, JJ., and joined (as to points 1 and 2 below) by Stevens, J., it was held that (1) a federal trial judge's gatekeeping obligation under the FRE--to insure that an expert witness' testimony rests on a reliable foundation and is relevant to the task at hand--applies not only to testimony based on scientific knowledge, but rather to all expert testimony, that is, testimony based on technical and other specialized knowledge; (2) in determining the admissibility of an expert's testimony--including the testimony of an engineering expert--a federal trial judge may properly consider one or more of the specific Daubert factors, where doing so will help determine that testimony's reliability; and (3) in the case at hand, the District Court's decision not to admit the expert testimony in question was within the District Court's discretion.

Scalia, J., joined by O'Connor and Thomas, JJ., concurring, expressed the view that (1) a trial court's discretion in choosing the manner of testing expert reliability is not discretion to abandon the gatekeeping function or to perform that function inadequately; and (2) in a particular case, the failure to apply one or another of the Daubert factors may possibly be unreasonable and hence an abuse of discretion.

Stevens, J., concurring in part and dissenting in part, (1) agreed that a federal trial judge may properly consider the Daubert factors in analyzing the admissibility of an engineering expert's testimony, and (2) expressed the view that the case ought to have been remanded to the Court of Appeals for a study of the record to determine whether the trial judge abused his discretion in excluding the expert testimony in question.

LAWYERS' EDITION HEADNOTES:

[***LEdHN1]
EVIDENCE §641
-- expert testimony -- judge's gatekeeping obligation
Headnote:[1A][1B][1C][1D]

A federal trial judge's gatekeeping obligation under the Federal Rules of Evidence (FRE)--to insure that an expert witness' testimony rests on a reliable foundation and is relevant to the task at hand--applies not only to testimony based on scientific knowledge, but rather to all expert testimony, that is, testimony based on technical and other specialized knowledge, for (1) the language of Rule 702 of the FRE, which allows expert witnesses to give opinion testimony as to scientific, technical, or other specialized knowledge under some circumstances, (a) makes no relevant distinction between "scientific" knowledge and "technical" or "other specialized" knowledge, and (b) makes clear that any such knowledge might become the subject of expert testimony; (2) the FRE grant to all experts--not just to "scientific" ones--testimonial latitude unavailable to other witnesses on the assumption that an expert's opinion will have a reliable basis in the knowledge and experience of the expert's discipline; (3) it would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between scientific knowledge and technical or other specialized knowledge, and (4) there is no convincing need to make such distinctions.

[***LEdHN2]
EVIDENCE §641
-- expert testimony -- reliability factors
Headnote:[2A][2B][2C][2D]

In determining the admissibility of an expert's testimony, including the testimony of an engineering expert, under Rule 702 of the Federal Rules of Evidence, a federal trial judge may properly consider one or more of some specific factors--whether the theory or technique (1) can be and has been tested, (2) has been subjected to peer review or publication, (3) has (a) a high known or potential rate of error, and (b) standards controlling the technique's operation, and (4) enjoys general acceptance within a relevant scientific community--where such factors are reasonable measures of the testimony's reliability; the trial judge may ask questions of this sort not only where an expert relies on the application of scientific principles, but also where an expert relies on skill- or experience-based observation.

[***LEdHN3]
EVIDENCE §643
-- expert testimony -- cause of tire failure
Headnote:[3A][3B][3C][3D][3E]

A Federal District Court's decision not to admit expert testimony as to the cause of an automobile tire's blowout is within the court's discretion, where (1) the testimony consists of the depositions of a witness who intends to testify that, in the witness' expert opinion, a defect in the tire's manufacture or design caused the tire to blow out; (2) the witness' opinion is based upon (a) a visual and tactile inspection of the tire, and (b) a theory that in the absence of at least two of four specific physical symptoms indicating tire abuse, the tire failure of the sort that occurred in the case at hand is caused by a defect; (3) the question before the court is not the reliability of the witness' methodology in general, but rather whether the witness can reliably determine the cause of failure of the particular tire at issue; (4) the witness concedes, among other matters, that this tire bore some of the very marks that were said to indicate abuse rather than a defect; (5) the witness' own testimony casts considerable doubt upon the reliability of (a) the witness' explicit theory, and (b) the implicit proposition about the significance of visual inspection in the case at hand; (6) there is no indication in the record that (a) other experts in the industry use the witness' particular approach, or (b) tire experts normally make the very fine distinctions necessary to support the witness' conclusions; (7) there are no references to articles or papers that validate the witness' approach; and (8) the court's decision is ultimately based upon the witness' failure to satisfy either (a) specific factors involving testing, peer review, error rates, and acceptability in the relevant scientific community, or (b) any other set of reasonable reliability criteria. (Stevens, J., dissented in part from this holding.)

[***LEdHN4]
EVIDENCE §641
-- expert testimony
Headnote:[4A][4B][4C]

For purposes of determining the admissibility, under Rule 702 of the Federal Rules of Evidence, of expert testimony that is based on a theory or technique, the test of the testimony's reliability is flexible; some specific factors that may possibly bear on the reliability determination--whether the theory or technique (1) can be and has been tested, (2) has been subjected to peer review or publication, (3) has (a) a high known or potential rate of error, and (b) standards controlling the technique's operation, and (4) enjoys general acceptance within a relevant scientific community--do not constitute a definitive checklist or test; depending on the nature of the issue, the expert's particular expertise, and the subject of the expert's testimony, such factors may or may not be pertinent in assessing the testimony's reliability; because too much depends upon the particular circumstances of the particular case at issue, the United States Supreme Court can neither rule out nor rule in the applicability of these factors (1) for all cases and for all time, or (2) for subsets of cases categorized by category of expert or by kind of evidence; these factors do not all necessarily apply in every instance in which the reliability of scientific testimony is challenged.

[***LEdHN5]
EVIDENCE §641
-- expert testimony
Headnote:[5A][5B]

In determining the admissibility of expert testimony under Rule 702 of the Federal Rules of Evidence, a trial court must have the same kind of latitude in deciding how to test an expert's reliability--and to decide whether or when special briefing or other proceedings are needed to investigate reliability--as the trial court enjoys in deciding whether that expert's relevant testimony is reliable; thus, in determining the admissibility under Rule 702 of expert testimony that is based on a theory or technique, the question whether some specific factors--whether the theory or technique (1) can be and has been tested, (2) has been subjected to peer review or publication, (3) has (a) a high known or potential rate of error, and (b) standards controlling the technique's operation, and (4) enjoys general acceptance within a relevant scientific community--are reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine.

[***LEdHN6]
APPEAL §1296
-- presumptions -- expert testimony
Headnote:[6]

On certiorari to review a Federal Court of Appeals' judgment in a suit against an automobile tire's maker and distributor--in which suit an expert witness, in concluding that a defect in the tire's manufacture or design caused the tire to blow out, rests this conclusion in part upon the premises that (1) a tire's carcass should stay bound to the inner side of the tread for a significant period of time after the tread depth has worn away, (2) the tread of the tire at issue separated from the tire's inner steel-belted carcass prior to the accident, and (3) this separation caused the blowout--the United States Supreme Court must assume that these premises are not in dispute, where the witness' conclusion also rests upon some other propositions, several of which the maker and distributor dispute.

[***LEdHN7]
EVIDENCE §641
-- expert testimony
Headnote:[7]

Rule 702 of the Federal Rules of Evidence, which allows expert witnesses to give opinion testimony as to scientific, technical, or other specialized knowledge under some circumstances, establishes a standard of evidentiary reliability and requires a valid connection to the pertinent inquiry as a precondition to admissibility; where such testimony's factual basis, data, principles, methods, or their application are called sufficiently into question, the trial judge must determine whether the testimony has a reliable basis in the knowledge and experience of the relevant discipline.

[***LEdHN8]
EVIDENCE §641
-- expert testimony
Headnote:[8]

For purposes of determining the admissibility, under Rule 702 of the Federal Rules of Evidence, of expert testimony that is based on a theory or technique, the fact that the theory or technique has general acceptance within a relevant expert community does not help to show that the expert's testimony is reliable where the discipline itself lacks reliability, as, for example, theories grounded in any so-called generally accepted principles of astrology or necromancy.

[***LEdHN9]
EVIDENCE §641
-- expert testimony
Headnote:[9]

For purposes of determining the admissibility, under Rule 702 of the Federal Rules of Evidence, of expert testimony that is based on the expert's experience, (1) it is appropriate in some cases for a trial judge to ask, for example, (a) how often an engineering expert's experience-based methodology has produced erroneous results, or (b) whether such a method is generally accepted in the relevant engineering community; and (2) it is useful at times to ask even of a witness whose expertise is based purely on experience--as, for example, a perfume tester able to distinguish among 140 odors at a sniff--whether the witness' preparation is of a kind that others in the field would recognize as acceptable.

[***LEdHN10]
EVIDENCE §641
-- expert testimony
Headnote:[10]

The objective of a trial judge's gatekeeping requirement--in determining the admissibility, under Rule 702 of the Federal Rules of Evidence, of expert testimony--is to insure the reliability and relevancy of expert testimony, that is, to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.

[***LEdHN11]
APPEAL §1391
-- discretion -- expert testimony
Headnote:[11A][11B]

A Federal Court of Appeals is to apply an abuse-of-discretion standard when reviewing a federal trial court's decision to admit or exclude expert testimony; this standard applies as much to the trial court's decisions about how to determine reliability as to the trial court's ultimate conclusion, for otherwise, the trial judge would lack the discretionary authority needed to (1) avoid unnecessary reliability proceedings in ordinary cases where the reliability of an expert's methods is properly taken for granted, and (2) require appropriate proceedings in the less usual or more complex cases where cause for questioning the expert's reliability arises.

[***LEdHN12]
EVIDENCE §641
-- expert testimony
Headnote:[12]

Nothing in a United States Supreme Court decision involving the admissibility of expert testimony or in the Federal Rules of Evidence requires a Federal District Court to admit opinion evidence that is connected to existing data by only the expert's own statement.

SYLLABUS: When a tire on the vehicle driven by Patrick Carmichael blew out and the vehicle overturned, one passenger died and the others were injured. The survivors and the decedent's representative, respondents here, brought this diversity suit against the tire's maker and its distributor (collectively Kumho Tire), claiming that the tire that failed was defective. They rested their case in significant part upon the depositions of a tire failure analyst, Dennis Carlson, Jr., who intended to testify that, in his expert opinion, a defect in the tire's manufacture or design caused the blow out. That opinion was based upon a visual and tactile inspection of the tire and upon the theory that in the absence of at least two of four specific, physical symptoms indicating tire abuse, the tire failure of the sort that occurred here was caused by a defect. Kumho Tire moved to exclude Carlson's testimony on the ground that his methodology failed to satisfy Federal Rule of Evidence 702, which says: "If scientific, technical, or other specialized knowledge will assist the trier of fact . . . , a witness qualified as an expert . . . may testify thereto in the form of an opinion." Granting the motion (and entering summary judgment for the defendants), the District Court acknowledged that it should act as a reliability "gatekeeper" under *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589, 125 L. Ed. 2d 469, 113 S. Ct. 2786, in which this Court held that Rule 702 imposes a special obligation upon a trial judge to ensure that scientific testimony is not only relevant, but reliable. The court noted that *Daubert* discussed four factors -- testing, peer review, error rates, and "acceptability" in the relevant scientific community -- which might prove helpful in determining the reliability of a particular scientific theory or technique, 509 U.S. at 593-594, and found that those factors argued against the reliability of Carlson's methodology. On the plaintiffs' motion for reconsideration, the court agreed that *Daubert* should be applied flexibly, that its four factors were simply illustrative, and that other factors could argue in favor of admissibility. However, the court affirmed its earlier order because it found insufficient indications of the reliability of Carlson's methodology. In reversing, the Eleventh Circuit held that the District Court had erred as a matter of law in applying *Daubert.* Believing that *Daubert* was limited to the scientific context, the court held that the *Daubert* factors did not apply to Carlson's testimony, which it characterized as skill- or experience-based.

Held:

1. The Daubert factors may apply to the testimony of engineers and other experts who are not scientists. Pp. 7-13.

(a) The *Daubert* "gatekeeping" obligation applies not only to "scientific" testimony, but to all expert testimony. Rule 702 does not distinguish between "scientific" knowledge and "technical" or "other specialized" knowledge, but makes clear that any such knowledge might become the subject of expert testimony. It is the Rule's word "knowledge," not the words (like "scientific") that modify that word, that establishes a standard of evidentiary reliability. 509 U.S. at 589-590. *Daubert* referred only to "scientific" knowledge because that was the nature of the expertise there at issue. Id. at 590, n. 8. Neither is the evidentiary rationale underlying *Daubert*'s "gatekeeping" determination limited to "scientific" knowledge. Rules 702 and 703 grant all expert witnesses, not just "scientific" ones, testimonial latitude unavailable to other witnesses on the assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline. Id. at 592. Finally, it would prove difficult, if not impossible, for judges to administer evidentiary rules under which a "gatekeeping" obligation depended upon a distinction between "scientific" knowledge and "technical" or "other specialized" knowledge, since there is no clear line dividing the one from the others and no convincing need to make such distinctions. Pp. 7-9.

(b) A trial judge determining the admissibility of an engineering expert's testimony *may* consider one or more of the specific *Daubert* factors. The emphasis on the word "may" reflects *Daubert*'s description of the Rule 702 inquiry as "a flexible one." 509 U.S. at 594. The *Daubert* factors do *not* constitute a definitive checklist or test, id. at 593, and the gatekeeping inquiry must be tied to the particular facts, id. at 591. Those factors may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony. Some of those factors may be helpful in evaluating the reliability even of experience-based expert testimony, and the Court of Appeals erred insofar as it ruled those factors out in such cases. In determining whether particular expert testimony is reliable, the trial court should consider the specific *Daubert* factors where they are reasonable measures of reliability. Pp. 10-12.

(c) The court of appeals must apply an abuse-of-discretion standard when it reviews the trial court's decision to admit or exclude expert testimony. *General Electric Co.* v. *Joiner*, 522 U.S. 136, 138-139, 139 L. Ed. 2d 508, 118 S. Ct. 512. That standard applies as much to the trial court's decisions about how to determine reliability as to its ultimate conclusion. Thus, whether *Daubert*'s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine. See id. at 143. The Eleventh Circuit erred insofar as it held to the contrary. P. 13.

2. Application of the foregoing standards demonstrates that the District Court's decision not to admit Carlson's expert testimony was lawful. The District Court did not question Carlson's qualifications, but excluded his testimony because it initially doubted his methodology and then found it unreliable after examining the transcript in some detail and considering respondents' defense of it. The doubts that triggered the court's initial inquiry were reasonable, as was the court's ultimate conclusion that Carlson could not reliably determine the cause of the failure of the tire in question. The question was not the reliability of Carlson's methodology in general, but rather whether he could reliably determine the cause of failure of *the particular tire at issue*. That tire, Carlson conceded, had traveled far enough so that some of the tread had been worn bald, it should have been taken out of service, it had been repaired (inadequately) for punctures, and it bore some of the very marks that he said indicated, not a defect, but abuse. Moreover, Carlson's own testimony cast considerable doubt upon the reliability of both his theory about the need for at least two signs of abuse and his proposition about the significance of visual inspection in this case. Respondents stress that other tire failure experts, like Carlson, rely on visual and tactile examinations of tires. But there is no indication in the record that other experts in the industry use

Carlson's *particular* approach or that tire experts normally make the very fine distinctions necessary to support his conclusions, nor are there references to articles or papers that validate his approach. Respondents' argument that the District Court too rigidly applied *Daubert* might have had some validity with respect to the court's initial opinion, but fails because the court, on reconsideration, recognized that the relevant reliability inquiry should be "flexible," and ultimately based its decision upon Carlson's failure to satisfy either *Daubert*'s factors *or any other* set of reasonable reliability criteria. Pp. 13-19.

131 F.3d 1433, reversed.

COUNSEL: Joseph H. Babington argued the cause for petitioners.

Jeffrey P. Minear argued the cause for the United States, as amicus curiae, by special leave of court.

Sidney W. Jackson argued the cause for respondents.

JUDGES: BREYER, J., delivered the opinion of the Court, in which REHNQUIST, C. J., and O'CONNOR, SCALIA, KENNEDY, SOUTER, THOMAS, and GINSBURG, JJ., joined, and in which STEVENS, J., joined as to Parts I and II. SCALIA, J., filed a concurring opinion, in which O'CONNOR and THOMAS, JJ., joined. STEVENS, J., filed an opinion concurring in part and dissenting in part.

OPINIONBY: BREYER

OPINION: [*141] [**1171] [***246] JUSTICE BREYER delivered the opinion of the Court.

[***LEdHR1A] [1A] In *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993), this Court focused upon the admissibility of scientific expert testimony. It pointed out that such testimony is admissible only if it is both relevant and reliable. And it held that the Federal Rules of Evidence "assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." Id. at 597. The Court also discussed certain more specific factors, such as testing, peer review, error rates, and "acceptability" in the relevant scientific community, some or all of which might prove helpful in determining the reliability of a particular scientific "theory or technique." 509 U.S. at 593-594.

[***LEdHR1B] [1B] [***LEdHR2A] [2A] [***LEdHR3A] [3A] [***LEdHR4A] [4A] [***LEdHR5A] [5A]This case requires us to decide how *Daubert* applies to the testimony of engineers and other experts who are not scientists. We conclude that *Daubert*'s general holding -- setting forth the trial judge's general "gatekeeping" obligation -- applies not only to testimony based on "scientific" knowledge, but also to testimony based on "technical" and "other specialized" knowledge. See Fed. Rule Evid. 702. We also conclude that a trial court *may* consider one or more of the more specific factors that *Daubert* mentioned when doing so will help determine that testimony's reliability. But, as the Court stated in *Daubert*, the test of reliability is "flexible," and *Daubert*'s list of specific factors neither necessarily nor exclusively applies to all experts or in every case. [*142] Rather, the law grants a district court the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination. See *General Electric Co.* v. *Joiner,* 522 U.S. 136, 143, 139 L. Ed. 2d 508, 118 S. Ct. 512 (1997) (courts of [***247] appeals are to apply "abuse of discretion" standard when reviewing district court's reliability determination). Applying these standards, we determine that the District Court's decision in this case -- not to admit certain expert testimony -- was within its discretion and therefore lawful.

I

On July 6, 1993, the right rear tire of a minivan driven by Patrick Carmichael blew out. In the accident that followed, one of the passengers died, and others were severely injured. In October 1993, the Carmichaels brought this diversity suit against the tire's maker and its distributor, whom we refer to collectively as Kumho Tire, claiming that the tire was defective. The plaintiffs rested their case in significant part upon deposition testimony provided by an expert in tire failure analysis, Dennis Carlson, Jr., who intended to testify in support of their conclusion.

Carlson's depositions relied upon certain features of tire technology that are not in dispute. A steel-belted radial tire like the Carmichaels' is made up of a "carcass" containing many layers of flexible cords, called "plies," along which (between the cords and the outer tread) are laid steel strips called "belts." Steel wire loops, called "beads," hold the cords together at the plies' bottom edges. An outer layer, called the "tread," encases the carcass, and the entire tire is bound together in rubber, through the application of heat and various chemicals. See generally, *e.g.*, J. Dixon, Tires, Suspension and Handling 68-72 (2d ed. 1996). The bead of the tire sits upon a "bead seat," which is part of the wheel assembly. That assembly contains a "rim flange," which extends over the bead and rests against the side of the [*143] tire. See M. Mavrigian, Performance Wheels & Tires 81, 83 (1998) (illustrations).

[Graphic omitted; see printed opinion.]

A. Markovich, How To Buy and Care For Tires 4 (1994).

[**1172] Carlson's testimony also accepted certain background facts about the tire in question. He assumed that before the blowout the tire had traveled far. (The tire was made in 1988 and had been installed some time before the Carmichaels bought the used minivan in March 1993; the Carmichaels had driven the van approximately 7,000 additional miles in the two months they had owned it.) Carlson noted that the tire's tread depth, which was 11/32 of an inch when new, App. 242, had been worn down to depths that ranged from 3/32 of an inch along some parts of the tire, to nothing at all along others. Id. at 287. He conceded that the tire tread had at least two punctures which had been inadequately repaired. Id. at 258-261, 322.

[***LEdHR6] [6]Despite the tire's age and history, Carlson concluded that a defect in its manufacture or design caused the blow-out. He rested this conclusion in part upon three premises which, [*144] for present purposes, we must assume are not in dispute: First, a tire's carcass should stay [***248] bound to the inner side of the tread for a significant period of time after its tread depth has worn away. Id. at 208-209. Second, the tread of the tire at issue had separated from its inner steel-belted carcass prior to the accident. Id. at 336. Third, this "separation" caused the blowout. *Ibid.*

Carlson's conclusion that a defect caused the separation, however, rested upon certain other propositions, several of which the defendants strongly dispute. First, Carlson said that if a separation is *not* caused by a certain kind of tire misuse called "overdeflection" (which consists of underinflating the tire or causing it to carry too much weight, thereby generating heat that can undo the chemical tread/carcass bond), then, ordinarily, its cause is a tire defect. Id. at 193-195, 277-278. Second, he said that if a tire has been subject to sufficient overdeflection to cause a separation, it should reveal certain physical symptoms. These symptoms include (a) tread wear on the tire's shoulder that is greater than the tread wear along the tire's center, id. at 211; (b) signs of a "bead groove," where the beads have been pushed too hard against the bead seat on the inside of the tire's rim, id. at 196-197; (c) sidewalls of the tire with physical signs of deterioration, such as discoloration, id. at 212; and/or (d) marks on the tire's rim flange, id. at 219-220. Third, Carlson said that where he does not find *at least two* of the four physical signs just mentioned (and presumably where there is no reason to suspect a less common cause of separation), he concludes that a manufacturing or design defect caused the separation. Id. at 223-224.

Carlson added that he had inspected the tire in question. He conceded that the tire to a limited degree showed greater wear on [**1173] the shoulder than in the center, some signs of "bead groove," some discoloration, a few marks on the rim flange, and inadequately filled puncture holes (which can also cause heat that might lead to separation). Id. at 256-257, 258-261, [*145] 277, 303-304, 308. But, in each instance, he testified that the symptoms were not significant, and he explained why he believed that they did not reveal overdeflection. For example, the extra shoulder wear, he said, appeared primarily on one shoulder, whereas an overdeflected tire would reveal equally abnormal wear on both shoulders. Id. at 277. Carlson concluded that the tire did not bear at least two of the four overdeflection symptoms, nor was there any less obvious cause of separation; and since neither overdeflection nor the punctures caused the blowout, a defect must have done so.

Kumho Tire moved the District Court to exclude Carlson's testimony on the ground that his methodology failed Rule 702's reliability requirement. The court agreed with Kumho that it should act as a *Daubert*-type reliability "gatekeeper," even though one might consider Carlson's testimony as "technical," rather than "scientific." See *Carmichael* v. *Samyang Tires, Inc.*, 923 F. Supp. 1514, 1521-1522 (SD Ala. 1996). The court then examined Carlson's methodology in light of the reliability-related factors that *Daubert* mentioned, such as a theory's testability, whether it "has been a subject of peer review or publication," the "known or potential rate of error," and the "degree of acceptance . . . within the relevant scientific community." 923 F. Supp. at 1520 (citing *Daubert*, 509 U.S. 579 at 592-594). [***249] The District Court found that all those factors argued against the reliability of Carlson's methods, and it granted the motion to exclude the testimony (as well as the defendants' accompanying motion for summary judgment).

The plaintiffs, arguing that the court's application of the *Daubert* factors was too "inflexible," asked for reconsideration. And the Court granted that motion. *Carmichael* v. *Samyang Tires, Inc.*, 1996 U.S. Dist. LEXIS 22431, Civ. Action No. 93-0860-CB-S (June 5, 1996), App. to Pet. for Cert. 1c. After reconsidering the matter, the court agreed with the plaintiffs that *Daubert* should be applied flexibly, that its four factors were [*146] simply illustrative, and that other factors could argue in favor of admissibility. It conceded that there may be widespread acceptance of a "visual-inspection method" for some relevant purposes. But the court found insufficient indications of the reliability of

> "the component of Carlson's tire failure analysis which most concerned the Court, namely, the methodology employed by the expert in analyzing the data obtained in the visual inspection, and the scientific basis, if any, for such an analysis." Id. at 6c.

It consequently affirmed its earlier order declaring Carlson's testimony inadmissable and granting the defendants' motion for summary judgment.

The Eleventh Circuit reversed. See *Carmichael* v. *Samyang Tire, Inc.*, 131 F.3d 1433 (1997). It "reviewed . . . *de novo*" the "district court's legal decision to apply *Daubert*." 131 F.3d at 1435. It noted that "the Supreme Court in *Daubert* explicitly limited its holding to cover only the 'scientific context,'" adding that "a *Daubert* analysis" applies only where an expert relies "on the application of scientific principles," rather than "on skill- or experience-based observation." 131 F.3d at 1435-1436. It concluded that Carlson's testimony, which it viewed as relying on experience, "falls outside the scope of *Daubert*," that "the district court erred as a matter of law by applying *Daubert* in this case," and that the case must be remanded for further (non-*Daubert*-type) consideration under Rule 702. Id. at 1436.

Kumho Tire petitioned for certiorari, asking us to determine whether a trial court "may" consider *Daubert*'s specific "factors" when determining the "admissibility of an engineering expert's testimony."

Pet. for Cert. i. We granted certiorari in light of uncertainty among the lower courts about whether, or how, *Daubert* applies to expert testimony that might be characterized as based not upon "scientific" knowledge, but rather upon "technical" or "other specialized" [*147] knowledge. Fed. Rule Evid. 702; compare, *e.g., Watkins* v. *Telsmith, Inc.*, 121 F.3d 984, 990-991 (CA5 1997), with, *e.g., Compton* v. *Subaru of America, Inc.*, 82 F.3d 1513, 1518-1519 [**1174] (CA10), cert. denied, 519 U.S. 1042, 136 L. Ed. 2d 536, 117 S. Ct. 611 (1996).

II

A

[***LEdHR1C] [1C]In *Daubert*, this Court held that Federal Rule of Evidence 702 imposes a special obligation upon a trial judge to "ensure that any and all scientific testimony . . . is not only relevant, but reliable." 509 U.S. at 589. The initial question before us is whether this basic gatekeeping obligation applies only to "scientific" [***250] testimony or to all expert testimony. We, like the parties, believe that it applies to all expert testimony. See Brief for Petitioners 19; Brief for Respondents 17.

For one thing, Rule 702 itself says:

> "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

This language makes no relevant distinction between "scientific" knowledge and "technical" or "other specialized" knowledge. It makes clear that any such knowledge might become the subject of expert testimony. In *Daubert*, the Court specified that it is the Rule's word "knowledge," not the words (like "scientific") that modify that word, that "establishes a standard of evidentiary reliability." 509 U.S. at 589-590. Hence, as a matter of language, the Rule applies its reliability standard to all "scientific," "technical," or "other specialized" matters within its scope. We concede that the Court in *Daubert* referred only to "scientific" knowledge. But as the Court there said, it referred to "scientific" [*148] testimony "because that was the nature of the expertise" at issue. 509 U.S. at 590, n.8.

Neither is the evidentiary rationale that underlay the Court's basic *Daubert* "gatekeeping" determination limited to "scientific" knowledge. *Daubert* pointed out that Federal Rules 702 and 703 grant expert witnesses testimonial latitude unavailable to other witnesses on the "assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline." 509 U.S. at 592 (pointing out that experts may testify to opinions, including those that are not based on firsthand knowledge or observation). The Rules grant that latitude to all experts, not just to "scientific" ones.

Finally, it would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between "scientific" knowledge and "technical" or "other specialized" knowledge. There is no clear line that divides the one from the others. Disciplines such as engineering rest upon scientific knowledge. Pure scientific theory itself may depend for its development upon observation and properly engineered machinery. And conceptual efforts to distinguish the two are unlikely to produce clear legal lines capable of application in particular cases. Cf. Brief for National Academy of Engineering as *Amicus Curiae* 9 (scientist seeks to understand nature while the engineer seeks nature's modification); Brief for Rubber Manufacturers Association as *Amicus Curiae* 14-16 (engineering, as an "applied science," relies on "scientific reasoning and methodology"); Brief for John Allen et al. as *Amici Curiae* 6 (engineering relies upon "scientific knowledge and methods").

Neither is there a convincing need to make such distinctions. Experts of all kinds tie observations to conclusions through the use of what Judge Learned Hand called "general truths derived from . . . specialized experience." Hand, Historical and Practical Considerations Regarding Expert Testimony, [*149] 15 Harv. L. Rev. 40, 54 (1901). And whether the specific [***251] expert testimony focuses upon specialized observations, the specialized translation of those observations into theory, a specialized theory itself, or the application of such a theory in a particular case, the expert's testimony often will rest "upon an experience confessedly foreign in kind to [the jury's] own." *Ibid.* The trial judge's effort to assure that the specialized testimony is reliable and relevant can help the jury evaluate [**1175] that foreign experience, whether the testimony reflects scientific, technical, or other specialized knowledge.

[***LEdHR1D] [1D] [***LEdHR7] [7]We conclude that *Daubert*'s general principles apply to the expert matters described in Rule 702. The Rule, in respect to all such matters, "establishes a standard of evidentiary reliability." 509 U.S. at 590. It "requires a valid . . . connection to the pertinent inquiry as a precondition to admissibility." 509 U.S. at 592. And where such testimony's factual basis, data, principles, methods, or their application are called sufficiently into question, see Part III, *infra*, the trial judge must determine whether the testimony has "a reliable basis in the knowledge and experience of [the relevant] discipline." 509 U.S. at 592.

B

[***LEdHR2B] [2B]The petitioners ask more specifically whether a trial judge determining the "admissibility of an engineering expert's testimony" *may* consider several more specific factors that *Daubert* said might "bear on" a judge's gate-keeping determination. These factors include:

> -- Whether a "theory or technique . . . can be (and has been) tested";
>
> -- Whether it "has been subjected to peer review and publication";
>
> -- Whether, in respect to a particular technique, there is a high "known or potential rate of error" and whether there are "standards controlling the technique's operation"; and [*150]
>
> -- Whether the theory or technique enjoys "general acceptance" within a "relevant scientific community." 509 U.S. at 592-594.

Emphasizing the word "may" in the question, we answer that question yes.

[***LEdHR4B] [4B]Engineering testimony rests upon scientific foundations, the reliability of which will be at issue in some cases. See, *e.g.*, Brief for Stephen Bobo et al. as *Amici Curiae* 23 (stressing the scientific bases of engineering disciplines). In other cases, the relevant reliability concerns may focus upon personal knowledge or experience. As the Solicitor General points out, there are many different kinds of experts, and many different kinds of expertise. See Brief for United States as *Amicus Curiae* 18-19, and n. 5 (citing cases involving experts in drug terms, handwriting analysis, criminal *modus operandi*, land valuation, agricultural practices, railroad procedures, attorney's fee valuation, and others). Our emphasis on the word "may" thus reflects *Daubert*'s description of the Rule 702 inquiry as "a flexible one." 509 U.S. at 594. *Daubert* makes clear that the factors it mentions do *not* constitute a "definitive checklist or test." 509 U.S. at 593. And *Daubert* adds that the gatekeeping inquiry must be "'tied to the facts'" of a particular "case." 509 U.S. at 591 (quoting *United States* v. *Downing*, 753 F.2d 1224, 1242 (CA3 1985)). We agree with the Solicitor General that "the factors identified in *Daubert* may or may not be pertinent in assessing reliability, depending [***252] on the nature of the issue, the expert's particular expertise, and the subject of his testimony." Brief for United States as *Amicus Curiae* 19. The conclusion, in our view, is that we can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue. [*151] [***LEdHR4C] [4C] [***LEdHR8] [8]*Daubert* itself is not to the contrary. It made clear that its list of factors was meant to be helpful, not definitive. Indeed, those factors do not all necessarily apply even in every instance in which the reliability of scientific testimony is challenged. It might not be surprising in a particular case, for example, that a claim made by a scientific witness has never been the subject of peer review, for the particular application at issue may never previously have interested any scientist. Nor, on the other hand, does the presence of *Daubert*'s general acceptance factor help show that an expert's testimony is reliable where the discipline itself lacks reliability, as, for example, do theories grounded in any so-called generally accepted principles of astrology or necromancy.

[**1176]

[***LEdHR9] [9]At the same time, and contrary to the Court of Appeals' view, some of *Daubert*'s questions can help to evaluate the reliability even of experience-based testimony. In certain cases, it will be appropriate for the trial judge to ask, for example, how often an engineering expert's experience-based methodology has produced erroneous results, or whether such a method is generally accepted in the relevant engineering community. Likewise, it will at times be useful to ask even of a witness whose expertise is based purely on experience, say, a perfume tester able to distinguish among 140 odors at a sniff, whether his preparation is of a kind that others in the field would recognize as acceptable.

[***LEdHR2C] [2C]We must therefore disagree with the Eleventh Circuit's holding that a trial judge may ask questions of the sort *Daubert* mentioned only where an expert "relies on the application of scientific principles," but not where an expert relies "on skill- or experience-based observation." 131 F.3d at 1435. We do not believe that Rule 702 creates a schematism that segregates expertise by type while mapping certain kinds of questions to certain kinds of experts. Life and the legal cases that it generates are too complex to warrant so definitive a match.

[*152] [***LEdHR2D] [2D] [***LEdHR10] [10]To say this is not to deny the importance of *Daubert*'s gatekeeping requirement. The objective of that requirement is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field. Nor do we deny that, as stated in *Daubert*, the particular questions that it mentioned will often be appropriate for use in determining the reliability of challenged expert testimony. Rather, we conclude that the trial judge must have considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable. That is to say, a trial court should consider the specific factors identified in *Daubert* where they are reasonable measures of the reliability of expert testimony.

C

[***LEdHR5B] [5B] [***LEdHR11A] [11A]The trial court must have the same kind of latitude in deciding *how* to test an expert's reliability, and to decide whether or when special briefing or other proceedings are [***253] needed to investigate reliability, as it enjoys when it decides *whether* that expert's relevant testimony is reliable. Our opinion in *Joiner* makes clear that a court of appeals is to apply an abuse-of-discretion standard when it "reviews a trial court's decision to admit or exclude expert testimony." 522 U.S. at 138-139. That standard applies as much to the trial court's decisions about how to determine reliability as to its ultimate conclusion. Otherwise, the trial judge would lack the discretionary authority needed both to avoid unnecessary "reliability" proceedings in ordinary cases where the reliability of an expert's methods is properly taken for granted, and to require appropriate proceedings in the less usual or more complex cases where cause for questioning the expert's reliability arises. Indeed, the Rules seek to avoid "unjustifiable expense and delay" as part of their search for [*153] "truth" and the "just determination" of proceedings. Fed. Rule Evid. 102. Thus, whether *Daubert*'s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine. See *Joiner*, *supra*, at 143. And the Eleventh Circuit erred insofar as it held to the contrary.

III

[***LEdHR3B] [3B]We further explain the way in which a trial judge "may" consider *Daubert*'s factors by applying these considerations to the case at hand, a matter that has been briefed exhaustively by the parties and their 19 *amici*. The District Court did not doubt Carlson's qualifications, which included a masters degree in mechanical engineering, 10 years' work at Michelin America, Inc., and testimony as a tire failure consultant in other tort cases. Rather, it excluded the testimony because, despite those qualifications, it initially [**1177] doubted, and then found unreliable, "the methodology employed by the expert in analyzing the data obtained in the visual inspection, and the scientific basis, if any, for such an analysis." Civ. Action No. 93-0860-CB-S (SD Ala., June 5, 1996), App. to Pet. for Cert. 6c. After examining the transcript in "some detail," 923 F. Supp. at 1518-519, n. 4, and after considering respondents' defense of Carlson's methodology, the District Court determined that Carlson's testimony was not reliable. It fell outside the range where experts might reasonably differ, and where the jury must decide among the conflicting views of different experts, even though the evidence is "shaky." *Daubert*, 509 U.S. at 596. In our view, the doubts that triggered the District Court's initial inquiry here were reasonable, as was the court's ultimate conclusion.

For one thing, and contrary to respondents' suggestion, the specific issue before the court was not the reasonableness *in general* of a tire expert's use of a visual and tactile inspection to determine whether overdeflection had caused [*154] the tire's tread to separate from its steel-belted carcass. Rather, it was the reasonableness of using such an approach, along with Carlson's particular method of analyzing the data thereby obtained, to draw a conclusion regarding *the particular matter to which the expert testimony was directly relevant*. That matter concerned the likelihood that a defect in the tire at issue caused its tread to separate from its carcass. The tire in question, the expert conceded, had traveled far enough so that some of the tread had been worn bald; it should have been taken out of service; it had been repaired (inadequately) for punctures; and it bore some of the very marks that the [***254] expert said indicated, not a defect, but abuse through overdeflection. See *supra*, at 3-5; App. 293-294. The relevant issue was whether the expert could reliably determine the cause of *this* tire's separation. Nor was the basis for Carlson's conclusion simply the general theory that, in the absence of evidence of abuse, a defect will normally have caused a tire's separation. Rather, the expert employed a more specific theory to establish the existence (or absence) of such abuse. Carlson testified precisely that in the absence of *at least two* of four signs of abuse (proportionately greater tread wear on the shoulder; signs of grooves caused by the beads; discolored sidewalls; marks on the rim flange) he concludes that a defect caused the separation. And his analysis depended upon acceptance of a further implicit proposition, namely, that his visual and tactile inspection could determine that the tire before him had not been abused despite some evidence of the presence of the very signs for which he looked (and two punctures).

For another thing, the transcripts of Carlson's depositions support both the trial court's initial uncertainty and its final conclusion. Those transcripts cast considerable doubt upon the reliability of both the explicit theory (about the need for two signs of abuse) and the implicit proposition (about the significance of visual inspection in this case). Among other things, the expert could not say whether the tire had traveled [*155] more than 10, or 20, or 30, or 40, or 50 thousand miles, adding that 6,000 miles was "about how far" he could "say with any certainty." Id. at 265. The court could reasonably have wondered about the reliability of a method of visual and tactile inspection sufficiently precise to ascertain with some certainty the abuse-related significance of minute shoulder/center relative tread wear differences, but insufficiently precise to tell "with any certainty" from the tread wear whether a tire had traveled less than 10,000 or more than 50,000 miles. And these concerns might have been augmented by Carlson's repeated reliance on the "subjectiveness" of his mode of analysis in response to questions seeking specific information regarding how he could differentiate between a tire that actually had been overdeflected and a tire that merely looked as though it had been. Id. at 222, 224-225, 285-286. They would have been further augmented by the fact that Carlson said he had inspected the tire itself for the first time the morning of his first deposition, and then only for a few hours. (His initial conclusions were based on photographs.) Id. at 180.

[**1178] Moreover, prior to his first deposition, Carlson had issued a signed report in which he concluded that the tire had "not been . . . overloaded or underinflated," not because of the absence of "two of four" signs of abuse, but simply because "the rim flange impressions . . . were normal." Id. at 335-336. That report also said that the "tread depth remaining was 3/32 inch," id. at 336, though the opposing expert's (apparently undisputed) measurements indicate that the tread depth taken at various positions around the tire actually ranged from .5/32 of an inch to 4/32 of an inch, with the tire apparently showing greater wear along *both* shoulders than along the center, id. at 432-433.

Further, in respect to one sign of [***255] abuse, bead grooving, the expert seemed to deny the sufficiency of his own simple visual-inspection methodology. He testified that most tires have some bead groove pattern, that where there is reason [*156] to suspect an abnormal bead groove he would ideally "look at a lot of [similar] tires" to know the grooving's significance, and that he had not looked at many tires similar to the one at issue. Id. at 212-213, 214, 217.

Finally, the court, after looking for a defense of Carlson's methodology as applied in these circumstances, found no convincing defense. Rather, it found (1) that "none" of the *Daubert* factors, including that of "general acceptance" in the relevant expert community, indicated that Carlson's testimony was reliable, 923 F. Supp. at 1521; (2) that its own analysis "revealed no countervailing factors operating in favor of admissibility which could outweigh those identified in *Daubert*," App. to Pet. for Cert. 4c; and (3) that the "parties identified no such factors in their briefs," *ibid.* For these three reasons *taken together,* it concluded that Carlson's testimony was unreliable.

Respondents now argue to us, as they did to the District Court, that a method of tire failure analysis that employs a visual/tactile inspection is a reliable method, and they point both to its use by other experts and to Carlson's long experience working for Michelin as sufficient indication that that is so. But no one denies that an expert might draw a conclusion from a set of observations based on extensive and specialized experience. Nor does anyone deny that, as a general matter, tire abuse may often be identified by qualified experts through visual or tactile inspection of the tire. See Affidavit of H. R. Baumgardner 1-2, cited in Brief for National Academy of Forensic Engineers as *Amici Curiae* 16 (Tire engineers rely on visual examination and process of elimination to analyze experimental test tires). As we said before, *supra,* at 14, the question before the trial court was specific, not general. The trial court had to decide whether this particular expert had sufficient specialized knowledge to assist the jurors "in deciding the particular issues in the case." 4 J. McLaughlin, Weinstein's Federal Evidence P702.05[1], p. 702-33 (2d ed. 1998); see also Advisory [*157] Committee's Note on Proposed Fed. Rule Evid. 702, Preliminary Draft of Proposed Amendments to the Federal Rules of Civil Procedure and Evidence: Request for Comment 126 (1998) (stressing that district courts must "scrutinize" whether the "principles and methods" employed by an expert "have been properly applied to the facts of the case").

[***LEdHR3C] [3C] [***LEdHR12] [12]The particular issue in this case concerned the use of Carlson's two-factor test and his related use of visual/tactile inspection to draw conclusions on the basis of what seemed small observational differences. We have found no indication in the record that other experts in the industry use Carlson's two-factor test or that tire experts such as Carlson normally make the very fine distinctions about, say, the symmetry of comparatively greater shoulder tread wear that were necessary, on Carlson's own theory, to support his conclusions. Nor, despite the prevalence of tire testing, does anyone refer to any articles or papers that validate Carlson's approach. Compare Bobo, Tire Flaws and Separations, in Mechanics of Pneumatic Tires 636-637 (S. Clark ed. 1981); C. Schnuth et al., Compression Grooving and Rim Flange Abrasion [***256] as Indicators of Over-Deflected Operating Conditions in Tires, presented to Rubber Division of the American Chemical Society, Oct. 21-24, 1997; J. Walter & R. Kiminecz, Bead [**1179] Contact Pressure Measurements at the Tire-Rim Interface, presented to Society of Automotive Engineers, Feb. 24-28, 1975. Indeed, no one has argued that Carlson himself, were he still working for Michelin, would have concluded in a report to his employer that a similar tire was similarly defective on grounds identical to those upon which he rested his conclusion here. Of course, Carlson himself claimed that his method was accurate, but, as we pointed out in *Joiner*, "nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." 522 U.S. at 146.

[*158] [***LEdHR3D] [3D]Respondents additionally argue that the District Court too rigidly applied *Daubert*'s criteria. They read its opinion to hold that a failure to satisfy any one of those criteria automatically renders expert testimony inadmissible. The District Court's initial opinion might have been vulnerable to a form of this argument. There, the court, after rejecting respondents' claim that Carlson's testimony was "exempted from *Daubert*-style scrutiny" because it was "technical analysis" rather than "scientific evidence," simply added that "none of the four admissibility criteria outlined by the *Daubert* court are satisfied." 923 F. Supp. at 1522. Subsequently, however, the court granted respondents' motion for reconsideration. It then explicitly recognized that the relevant reliability inquiry "should be 'flexible,'" that its "'overarching subject [should be] . . . validity' and reliability," and that "*Daubert* was intended neither to be exhaustive nor to apply in every case." App. to Pet. for Cert. 4c (quoting *Daubert*, 509 U.S. at 594-595). And the court ultimately based its decision upon Carlson's failure to satisfy either *Daubert*'s factors *or any other* set of reasonable reliability criteria. In light of the record as developed by the parties, that conclusion was within the District Court's lawful discretion.

[***LEdHR3E] [3E] [***LEdHR11B] [11B]In sum, Rule 702 grants the district judge the discretionary authority, reviewable for its abuse, to determine reliability in light of the particular facts and circumstances of the particular case. The District Court did not abuse its discretionary authority in this case. Hence, the judgment of the Court of Appeals is

Reversed.

CONCURBY: SCALIA

CONCUR: JUSTICE SCALIA, with whom JUSTICE O'CONNOR and JUSTICE THOMAS join, concurring.

I join the opinion of the Court, which makes clear that the discretion it endorses- trial-court discretion in choosing the manner of testing expert reliability- is not discretion to [*159] abandon the gatekeeping function. I think it worth adding that it is not discretion to perform the function inadequately. Rather, it is discretion to choose among *reasonable* means of excluding expertise that is *fausse* and science that is junky. Though, as the Court makes clear today, the *Daubert* factors are not holy writ, in a particular case the [***257] failure to apply one or another of them may be unreasonable, and hence an abuse of discretion.

DISSENTBY: STEVENS (In Part)

DISSENT: JUSTICE STEVENS, concurring in part and dissenting in part.

The only question that we granted certiorari to decide is whether a trial judge "may . . . consider the four factors set out by this Court in *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993), in a Rule 702 analysis of admissibility of an engineering expert's testimony." Pet. for Cert. i. That question is fully and correctly answered in Parts I and II of the Court's opinion, which I join.

Part III answers the quite different question whether the trial judge abused his discretion when he excluded the testimony of Dennis Carlson. Because a proper answer to that question requires a study of the record that can be performed more efficiently by the Court of Appeals than by the nine Members of this Court, I would remand the case to the Eleventh Circuit to perform that task. There are, of course, exceptions to most rules, but I firmly believe that it is neither fair to litigants nor good practice for this Court to reach out to decide questions not raised by the certiorari petition. See *General Electric Co.* v. *Joiner*, 522 U.S. 136, 150-151, 139 L. Ed. 2d 508, 118 S. Ct. 512 (1997) [**1180] (STEVENS, J., concurring in part and dissenting in part).

Accordingly, while I do not feel qualified to disagree with the well-reasoned factual analysis in Part III of the Court's opinion, I do not join that Part, and I respectfully dissent from the Court's disposition of the case.

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31A Am Jur 2d, Expert and Opinion Evidence 342; 63B Am Jur 2d, Products Liability 1852, 1871, 1873

USCS Court Rules, Federal Rules of Evidence, Rule 702

L Ed Digest, Evidence 641, 643

L Ed Index, Expert and Opinion Evidence; Products Liability; Rules of Evidence; Tires and Wheels

Annotation References:

Reliability of scientific technique and its acceptance within scientific community as affecting admissibility, at federal trial, of expert testimony as to result of test or study based on such technique--modern cases. 105 ALR Fed 299.

When will expert testimony "assist trier of fact" so as to be admissible at federal trial under Rule 702 of Federal Rules of Evidence. 75 ALR Fed 461.

Products liability: admissibility of expert or opinion evidence that product is or is not defective, dangerous, or unreasonably dangerous. 4 ALR4th 651.

APPENDIX II

IRS Pronouncements
FAS Statement Summaries

IRS PRONOUNCEMENTS

Section 5 Quotation of A.R.M. 34.

The Committee has considered the question of providing some practical formula for determining value as of March 1, 1913, or of any other date, which might be considered as applying to intangible assets, but finds itself unable to lay down any specific rule of guidance for determining the value of intangibles which would be applicable in all cases and under all circumstances. Where there is no established market to serve as a guide the question of value, even of tangible assets, is one largely of judgment and opinion, and the same thing is even more true of intangible assets such as good will, trade-marks, trade brands, etc. However, there are several methods of reaching a conclusion as to the value of intangibles which the Committee suggests may be utilized broadly in passing upon questions of valuation, not to be regarded as controlling, however, if better evidence is presented in any specific case.

Where deduction is claimed for obsolescence or loss of good will or trade-marks, the burden of proof is primarily upon the taxpayer to show the value of such good will or trade-marks on March 1, 1913. Of course, if good will or trademarks have been acquired for cash or other valuable considerations subsequent to March 1, 1913, the measure of loss will be determined by the amount of cash or value of other considerations paid therefor, and no deduction will be allowed for the value of good will or trade-marks built up by the taxpayer since March 1, 1913. The following suggestions are made, therefore, merely as suggestions for checks upon the soundness and validity of the taxpayers' claims. No obsolescence or loss with respect to good will should be allowed except in cases of actual disposition of the asset or abandonment of the business.

In the first place, it is recognized that in numerous instances it has been the practice of distillers and wholesale liquor dealers to put out under well-known and popular brands only so much goods as could be marketed without affecting the established market price therefor and to sell other goods of the same identical manufacture, age, and character under other brands, or under no brand at all, at figures very much below those which the well-known brands commanded. In such cases the difference between the price at which whisky was sold under a given brand name and also under another brand name, or under no brand, multiplied by the number of units sold during a given year gives an accurate determination of the amount of profit attributable to that brand during that year, and where this practice is continued for a long enough period to show that this amount was fairly constant and regular and might be expected to yield annually that average profit, by capitalizing this earning at the rate, say of 20 per cent, the value of the brand is fairly well established.

Another method is to compare the volume of business done under the trademark or brand under consideration and profits made, or by the business whose good will is under consideration, with the similar volume of business and profit made in other cases where good will or trade-marks have been actually sold for cash, recognizing as the value of the first the same proportion of the selling price of the second, as the profits of the first attributable to brands or good will, is of the similar profits of the second.

The third method and possibly the one which will most frequently have to be applied as a check in the absence of data necessary for the application of the preceding ones, is to allow out of average earnings over a period of years prior to March 1, 1913, preferably not less than five years, a return of 10 per cent upon the average tangible assets for the period. The surplus earnings will then be the average amount available for return upon the value of the intangible assets, and it is the opinion of the Committee that this return should be capitalized upon the basis of not more than five years' purchase - that is to say, five times the amount available as return from intangibles should be the value of the intangibles.

In view of the hazards of the business, the changes in popular tastes, and the difficulties in preventing imitation or counterfeiting of popular brands affecting the sales of the genuine goods, the Committee is of the opinion that the figure given of 20 percent return on intangibles is not unreasonable, and it recommends that no higher figure than that be attached in any case to intangibles without a very clear and adequate showing that the value of the intangibles was in fact greater than would be reached by applying this formula.

The foregoing is intended to apply particularly to businesses put out of existence by the prohibition law, but will be equally applicable so far as the third formula is concerned, to other businesses of a more or less hazardous nature. In the case, however, of valuation of good will of a business which consists of the manufacture or sale of standard articles of every-day necessity not subject to violent fluctuations and where the hazard is not so great, the Committee is of the opinion that the figure for determination of the return on tangible assets might be reduced from 10 to 8 or 9 percent, and that the percentage for capitalization of the return upon intangibles might be reduced from 20 to 15 percent.

In any or all of the cases the effort should be to determine what net earnings a purchaser of a business on March 1, 1913, might reasonably have expected to receive from it, and therefore a representative period should be used for averaging actual earnings, eliminating any year in which there were extraordinary factors affecting earnings either way. Also, in the case of the sale of good will of a going business the percentage rate of capitalization of earnings applicable to good will shown by the amount actually paid for the business should be used as a check against the determination of good will value as of March 1, 1913, and if the good will is sold upon the basis of capitalization of earnings less than the figures above indicated as the ones ordinarily to be adopted, the same percentage should be used in figuring value as of March 1, 1913.

REVENUE RULING 59-60
SECTION 2031 DEFINITION OF GROSS ESTATE

26 CFR 20.2031-2: Valuation of stocks and bonds.

(Also Section 2512.)
(Also Part II, Sections 811 (k), 1005, Regulations 105, Section 81.10.)

In valuing the stock of closely held corporations, or the stock of corporations where market quotations are not available, all other available financial data, as well as all relevant factors affecting the fair market value must be considered for estate tax and gift tax purposes. No general formula may be given that is applicable to the many different valuation situations arising in the valuation of such stock. However, the general approach, methods, and factors which must be considered in valuing such securities are outlined.

Revenue Ruling 54-77, 1954-1,187, superseded.

SECTION 1. PURPOSE.

The purpose of this Revenue Ruling is to outline and review in general the approach, methods and factors to be considered in valuing shares of the capital stock of closely held corporations for estate tax and gift tax purposes. The methods discussed herein will apply likewise to the valuation of corporate stocks on which market quotations are either unavailable or are of such scarcity that they do not reflect the fair market value.

SECTION 2. BACKGROUND AND DEFINITIONS.

.01 All valuations must be made in accordance with the applicable provisions of the Internal Revenue Code of 1954 and the Federal Estate Tax and Gift Tax Regulations. Sections 2031 (a). 2032 and 2512 (a) of the 1954 Code (sections 811 and 1005 of the 1939 Code) require that the property to be included in the gross estate, or made the subject of a gift, shall be taxed on the basis of the value of the property at the time of death of the decedent, the alternate date if so elected, or the date of gift.

.02 Section 20.2031-1(b) of the Estate Tax Regulations (section 81.10 of the Estate Tax Regulations 105) and section 25.2512-1 of the Gift Tax Regulations (section 86.19 of Gift Tax Regulations 108) define fair market value, in effect, as the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts. Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and to be well informed about the property and concerning the market for such property.

.03 Closely held corporations are those corporations the shares of which are owned by a relatively limited number of stockholders. Often the entire stock issue is held by one family. The result of this situation is that little, if any, trading in the shares takes place. There is, therefore, no established market for the stock and such sales as occur at irregular intervals seldom reflect all of the elements of a representative transaction as defined by the term "fair market value."

SECTION 3. APPROACH TO VALUATION

.01 A determination of fair market value, being a question of fact, will depend upon the circumstances in each case. No formula can be devised that will be generally applicable to the multitude of different valuation issues arising in estate and gift tax cases. Often, an appraiser will find wide differences of opinion as to the fair market value of a particular stock. In resolving such differences, he should maintain a reasonable attitude in recognition of the fact that valuation is not an exact science. A sound valuation will be based upon all the relevant facts, but the elements of common sense, informed judgment and reasonableness must enter into the process of weighing those facts and determining their aggregate significance.

.02 The fair market value of specific shares of stock will vary as general economic conditions change from "normal" to "boom" or "depression," that is, according to the degree of optimism or pessimism with which the investing public regards the future at the required date of appraisal. Uncertainty as to the stability or continuity of the future income from a property decreases its value by increasing the risk of loss of earnings and value in the future. The value of shares of stock of a company with very uncertain future prospects is highly speculative. The appraiser must exercise his judgment as to the degree of risk attaching to the business of the corporation which issued the stock, but that judgment must be related to all of the other factors affecting value.

.03 Valuation of securities is, in essence, a prophesy as to the future and must be based on facts available at the required date of appraisal. As a generalization, the prices of stocks which are traded in volume in a free and active market by informed persons best reflect the consensus of the investing public as to what the future holds for the corporations and industries represented. When a stock is closely held, is traded infrequently, or is traded in an erratic market, some other measure of value must be used. In many instances, the next best measure may be found in the prices at which the stocks of companies engaged in the same or a similar line of business are selling in a free and open market.

SECTION 4. FACTORS TO CONSIDER

.01 It is advisable to emphasize that in the valuation of the stock of closely held corporations or the stock of corporations where market quotations are either lacking or too scarce to be recognized, all available financial data, as well as all relevant factors affecting the fair market value, should be considered. The following factors, although not all-inclusive are fundamental and require careful analysis in each case:

- (a) The nature of the business and the history of the enterprise from its inception.
- (b) The economic outlook in general and the condition and outlook of the specific industry in particular.
- (c) The book value of the stock and the financial condition of the business.
- (d) The earning capacity of the company.
- (e) The dividend-paying capacity.
- (f) Whether or not the enterprise has goodwill or other intangible value.
- (g) Sales of the stock and the size of the block of stock to be valued.
- (h) The market price of stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a free and open market, either on an exchange or over-the-counter.

.02 The following is a brief discussion of each of the foregoing factors:

(a) The history of a corporate enterprise will show its past stability or instability, its growth or lack of growth, the diversity or lack of diversity of its operations, and other facts needed to form an opinion of the degree of risk involved in the business. For an enterprise which changed its form of organization but carried on the same or closely similar operations of its predecessor, the history of the former enterprise should be considered. The detail to be considered should increase with approach to the required date of appraisal, since recent events are of greatest help in predicting the future; but a study of gross and net income, and of dividends covering a long prior period, is highly desirable. The history to be studied should include, but need not be limited to, the nature of the business, its products or services, its operating and investment assets, capital structure, plant facilities, sales records, and management, all of which should be considered as of the date of the appraisal, with due regard for recent significant changes. Events of the past that are unlikely to recur in the future should be discounted, since value has a close relation to future expectancy.

(b) A sound appraisal of a closely held stock must consider current and prospective economic conditions as of the date of appraisal, both in the national economy and in the industry or industries with which the corporation is allied. It is important to know that the company is more or less successful than its competitors in the same industry, or that it is maintaining a stable position with respect to competitors. Equal or even greater significance may attach to the ability of the industry with which the company is allied to compete with other industries. Prospective competition which has not been a factor in prior years should be given careful attention. For example, high profits due to the novelty of its product and the lack of competition often leads to increasing competition. The public's appraisal of the future prospects of competitive industries or of competitors within an industry may be indicated by price trends in the markets for commodities and for securities. The loss of the manager of a so-called "one-man" business may have a depressing effect upon the value of the stock of such business, particularly if there is a lack of trained personnel capable of succeeding to the management of the enterprise. In valuing the stock of this type of business, therefore, the effect of the loss of the manager on the future expectancy of the business, and the absence of management-succession potentialities are pertinent factors to be taken into consideration. On the other hand, there may be factors, which offset, in whole or in part, the loss of the manager's services. For instance, the nature of the business and of its assets may be such that they will not be impaired by the loss of the manager. Furthermore, the loss may be adequately covered by life insurance, or competent management might be employed on the basis of the consideration paid for the former manager's services. These, or other offsetting factors, if found to exist, should be carefully weighed against the loss of the manager's services in valuing the stock of the enterprise.

(c) Balance sheets should be obtained, preferably in the form of comparative annual statements for two or more years immediately preceding the date of appraisal, together with a balance sheet at the end of the month preceding that date, if corporate accounting will permit. Any balance sheet descriptions that are not self explanatory, and balance sheet items comprehending diverse assets or liabilities, should be clarified in essential detail by supporting supplemental schedules. These statements usually will disclose to the appraiser (1) liquid position (ratio of current assets to current liabilities); (2) gross and net book value of principal classes of fixed assets; (3) working capital; (4) long-term indebtedness; (5) capital structure; and (6) net worth. Consideration also should be given to any assets not essential to the operation of the business, such as investments in securities, real estate, etc. In general, such nonoperating assets will command a lower rate of return than do the operating assets, although in exceptional cases the reverse may be true. In computing the book value per share of stock, assets of the investment type should be revalued on the basis of their market price and the book value adjusted accordingly. Comparison of the company's balance sheets over several years may reveal, among other facts, such developments as the acquisition of additional production facilities or subsidiary companies, improvement in financial position, and details as to recapitalizations and other changes in the capital structure of the corporation. If the corporation has more than one class of stock outstanding, the charter or certificate of incorporation should be examined to ascertain the explicit rights and privileges of the various stock issues including: (1) voting powers; (2) preference as to dividends; and (3) preference as to assets in the event of liquidation.

(d) Detailed profit-and-loss statements should be obtained and considered for a representative period immediately prior to the required date of appraisal, preferably five or more years. Such statements should show (1) gross income by principal items; (2) principal deductions from gross income including major prior items of operating expenses, interest and other expense on each item of long-term debt, depreciation and depletion if such deductions are made, officers' salaries, in total if they appear to be reasonable or in detail if they seem to be excessive, contributions (whether or not deductible for tax purposes) that the nature of its business and its community position require the corporation to make, and taxes by principal items, including income and excess profits taxes; (3) net income available for dividends; (4) rates and amounts of dividends paid on each class of stock; (5) remaining amount carried to surplus; and (6) adjustments to, and reconciliation with, surplus as stated on the balance sheet. With profit and loss statements of this character available, the appraiser should be able to separate recurrent from non-recurrent items of income and expense, to distinguish between operating income and investment income, and to ascertain whether or not any line of business in which the company is engaged is operated consistently at a loss and might be abandoned with benefit to the company. The percentage of earnings retained for business expansion should be noted when dividend-paying capacity is considered. Potential future income is a major factor in many valuations of closely-held stocks, and all information concerning past income which will be helpful in predicting the future should be secured. Prior earnings records usually are the most reliable guide as to the future expectancy, but reporting arbitrary five-or-ten-year averages without regard to current trends or future prospects will not produce a realistic valuation. If, for instance, a record of progressively increasing or decreasing net income is found, then greater weight may be accorded the most recent years' profits in estimating earning power. It will be helpful, in judging risk and the extent to which a business is a marginal operator, to consider deductions from income and net income in terms of percentage of sales. Major categories of cost and expense to be so analyzed include the consumption of raw materials and supplies in the case of manufacturers, processors and fabricators: the cost of purchased merchandise in the case of merchants; utility services; insurance; taxes; depletion or depreciation; and interest.

(e) Primary consideration should be given to the dividend-paying capacity of the company rather than to dividends actually paid in the past. Recognition must be given to the necessity of retaining a reasonable portion of profits in a company to meet competition. Dividend-paying capacity is a factor that must be considered in an appraisal, but dividends actually paid in the past may not have any relation to dividend-paying capacity. Specifically, the dividends paid by a closely held family company may be measured by the income needs of the stockholders or by their desire to avoid taxes on dividend receipts, instead of by the ability of the company to pay dividends. Where an actual or effective controlling interest in a corporation is to be valued, the dividend factor is not a material element, since the payment of such dividends is discretionary with the controlling stockholders. The individual or group in control can substitute salaries and bonuses for dividends, thus reducing net income and understating the dividend-paying capacity of the company. It follows, therefore, that dividends are less reliable criteria of fair market value than other applicable factors.

(f) In the final analysis, goodwill is based upon earning capacity. The presence of goodwill and its value, therefore, rests upon the excess of net earnings over and above a fair return on the net tangible assets. While the element of goodwill may be based primarily on earnings, such factors as the prestige and renown of the business, the ownership of a trade or brand name, and a record of successful operation over a prolonged period in a particular locality, also may furnish support for the inclusion of intangible value. In some instances it may not be possible to make a separate appraisal of the tangible and intangible assets of the business. The enterprise has a value as an entity. Whatever intangible value there is, which is supportable by the facts may be measured by the amount by which the appraised value of the tangible assets exceeds the net book value of such assets.

(g) Sales of stock of a closely held corporation should be carefully investigated to determine whether they represent transactions at arm's length. Forced or distress sales do not ordinarily reflect fair market value nor do isolated sales in small amounts necessarily control as the measure of value. This is especially true in the valuation of a controlling interest in a corporation. Since, in the case of closely held stocks, no prevailing market prices are available, there is no basis for making an adjustment for blockage. It follows, therefore, that such stocks should be valued upon a consideration of all the evidence affecting the fair market value. The size of the block of stock itself is a relevant factor to be considered. Although it is true that a minority interest in an unlisted corporation's stock is more difficult to sell than a similar block of listed stock, it is equally true that control of a corporation, either actual or in effect, representing as it does an added element of value, may justify a higher value for a specific block of stock.

(h) Section 2031(b) of the Code states, in effect, that in valuing unlisted securities the value of stock or securities of corporations engaged in the same or a similar line of business - which are listed on an exchange - should be taken into consideration along with all other factors. An important consideration is that the corporations to be used for comparisons have capital stocks which are actively traded by the public. In accordance with section 2031(b) of the Code, stocks listed on an exchange are to be considered first. However, if sufficient comparable companies whose stocks are listed on an exchange cannot be found, other comparable companies which have stocks actively traded in on the over-the-counter market also may be used. The essential factor is that whether the stocks are sold on an exchange or over-the-counter there is evidence of an active, free public market for the stock as of the valuation date. In selecting corporations for comparative purposes, care should be taken to use only comparable companies. Although the only restrictive requirement as to comparable corporations specified in the statute is that their lines of business be the same or similar, yet it is obvious that consideration must be given to other relevant factors in order that the most valid comparison possible will be obtained. For illustration, a corporation having one or more issues of preferred stock, bonds or debentures in addition to its common stock should not be considered to be directly comparable to one having only common stock outstanding. In like manner, a company with a declining business and decreasing markets is not comparable to one with a record of current progress and market expansion.

SECTION 5. WEIGHT TO BE ACCORDED VARIOUS FACTORS

The valuation of closely held corporate stock entails the consideration of all relevant factors as stated in section 4. Depending upon the circumstances in each case, certain factors may carry more weight than others because of the nature of the company's business. To illustrate:

(a) Earnings may be the most important criterion of value in some cases whereas asset value will receive primary consideration in others. In general, the appraiser will accord primary consideration to earnings when valuing stocks of companies which sell products or services to the public; conversely, in the investment or holding type of company, the appraiser may accord the greatest weight to the assets underlying the security to be valued.

(b) The value of the stock of a closely held investment or real estate holding company, whether or not family owned, is closely related to the value of the assets underlying the stock. For companies of this type the appraiser should determine the fair market values of the assets of the company. Operating expenses of such a company and the cost of liquidating it, if any, merit consideration when appraising the relative values of the stock and the underlying assets. The market values of the underlying assets give due weight to potential earnings and dividends of the particular items of property underlying the stock, capitalized at rates deemed proper by the investing public at the date of appraisal. A current appraisal by the investing public should be superior to the retrospective opinion of an individual. For these reasons, adjusted net worth should be accorded greater weight in valuing the stock of a closely held investment or real estate holding company, whether or not family owned, than any of the other customary yardsticks of appraisal, such as earnings and dividend paying capacity.

SECTION 6. CAPITALIZATION RATES

In the application of certain fundamental valuation factors, such as earnings and dividends, it is necessary to capitalize the average or current results at some appropriate rate. A determination of the proper capitalization rate presents one of the most difficult problems in valuation. That there is no ready or simple solution will become apparent by a cursory check of the rates of return and dividend yields in terms of the selling prices of corporate shares listed on the major exchanges of the country. Wide variations will be found even for companies in the same industry. Moreover, the ratio will fluctuate from year to year depending upon economic conditions. Thus, no standard tables of capitalization rates applicable to closely held corporations can be formulated. Among the more important factors to be taken into consideration in deciding upon a capitalization rate in a particular case are; (1) the nature of the business; (2) the risk involved; and (3) the stability or irregularity of earnings.

SECTION 7. AVERAGE OF FACTORS

Because valuations cannot be made on the basis of a prescribed formula, there is no means whereby the various applicable factors in a particular case can be assigned mathematical weights in deriving the fair market value. For this reason, no useful purpose is served by taking an average of several factors (for example, book value, capitalized earnings and capitalized dividends) and basing the valuation on the result. Such a process excludes active consideration of other pertinent factors, and the end result cannot be supported by a realistic application of the significant fact in the case except by mere chance.

SECTION 8. RESTRICTIVE AGREEMENTS

Frequently, in the valuation of closely held stock for estate and gift tax purposes, it will be found that the stock is subject to an agreement restricting its sale or transfer. Where shares of stock were acquired by a decedent subject to an option reserved by the issuing corporation to repurchase at a certain price, the option price is usually accepted as the fair market value for estate tax purposes. See Rev. Rul. 54-76,C.B. 1954-1, 194. However, in such case the option price is not determinative of fair market value for gift tax purposes. Where the option, or buy and sell agreement, is the result of voluntary action by the stockholders and is binding during the life as well as at the death of the stockholders, such agreement may or may not, depending upon the circumstances of each case, fix the value for estate tax purposes. However, such agreement is a factor to be considered, with other relevant factors, in determining fair market value. Where the stockholder is free to dispose of his shares during life and the option is to become effective only upon his death, the fair market value is not limited to the option price. It is always necessary to consider the relationship of the parties, the relative number of shares held by the decedent, and other material facts, to determine whether the agreement represents a bona fide business arrangement or is a device to pass the decedent's shares to the natural objects of his bounty for less than an adequate and full consideration in money or money's worth. In this connection see Rev. Rul. 157 C.B. 1953-2, 255, and Rev. Rul 189, C.B. 1953-2,294.

SECTION 9. EFFECT ON OTHER DOCUMENTS

Revenue Ruling 54-77,C.B. 1954-1,187, is hereby superseded.

REVENUE RULING 65-193

Revenue Ruling 59-60 C.B. 1959-1, 237, is hereby modified to delete the statements contained therein at section 4.02(f), that "in some instances it may not be possible to make a separate appraisal of the tangible and intangible assets of the business. The enterprise has a value as an entity. Whatever intangible value there is, which is supportable by the facts, may be measured by the amount by which the appraised value of the tangible assets exceeds the net book value of such assets."

The instances where it is not possible to make a separate appraisal of the tangible assets of a business are rare and each case varies from the other. No rule can be devised which will be generally applicable to such cases.

Other than this modification, Revenue Ruling 59-60 continues in full force and effect.

REVENUE RULING 68-609

SUBCHAPTER O. GAIN OR LOSS ON DISPOSITION OF PROPERTY

DETERMINATION OF AMOUNT OF AND RECOGNITION OF GAIN OR LOSS

The "formula" approach may be used in determining the fair market value of intangible assets of a business only if there is no better basis available for making the determination; A.R.M. 34, A.R.M. 68, O.D. 937, and Revenue Ruling 65-192 superseded.

SECTION 1001. DETERMINATION OF AMOUNT OF AND RECOGNITION OF GAIN OR LOSS

26 CFR 1.1001-1: Computation of gain or loss. Rev. Rul. 68-6091
(Also Section 167; 1.167(a)-3.)

The purpose of this Revenue Ruling is to update and restate, under the current statute and regulations, the currently outstanding portions of A.R.M. 34, C.B. 2, 31 (1920), A.R.M. 68, C.B. 3,43 (1920), and O.D. 937, C.B. 4,43 (1921).

The question presented is whether the "formula" approach, the capitalization of earnings in excess of a fair rate of return on net tangible assets, may be used to determine the fair market value of the intangible assets of a business.

The "formula" approach may be stated as follows:

> A percentage return on the average annual value of the tangible assets used in a business is determined, using a period of years (preferably not less than five) immediately prior to the valuation date. The amount of the percentage return on tangible assets, thus determined, is deducted from the average earnings of the business for such period and the remainder, if any, is considered to be the amount of the average annual earnings from the intangible assets of the business for the period. This amount (considered as the average annual earnings from intangibles), capitalized at a percentage of, say 15 to 20 percent, is the value of the intangible assets of the business determined under the "formula" approach.
>
> The percentage of return on the average annual value of the tangible assets used should be the percentage prevailing in the industry involved at the date of valuation, or (when the industry percentage is not available) a percentage of 8 to 10 percent may be used.
>
> The 8 percent rate of return and the 15 percent rate of capitalization are applied to tangibles and intangibles, respectively, of businesses with a small risk factor and stable and regular earnings, the 10 percent rate of return and 20 percent rate of capitalization are applied to businesses in which the hazards of business are relatively high.

The above rates are used as examples and are not appropriate in all cases. In applying the "formula" approach, the average earnings period and the capitalization rates are dependent upon the facts pertinent thereto in each case.

The past earnings to which the formula is applied should fairly reflect the probable future earnings. Ordinarily, the period should not be less than five years, and abnormal years, whether above or below the average, should be eliminated. If the business is a sole proprietorship or partnership, there should be deducted from the earnings of the business a reasonable amount for services performed by the owner or partners engaged in the business. See Lloyd B. Sanderson Estate v. Commissioner, 42 F. 2d 160 (1930). Further, only the tangible assets entering into net worth, including accounts and bills receivable in excess of accounts and bills payable, are used for determining earnings on the tangible assets. Factors that influence the capitalization rate include (1) the nature of the business, (2) the risk involved, and (3) the stability or irregularity of earnings.

The "formula" approach should not be used if there is better evidence available from which the value of intangibles can be determined. If the assets of a going business are sold upon the basis of a rate of capitalization that can be substantiated as being realistic, though it is not within the range of figures indicated here as the one ordinarily to be adopted, the same rate of capitalization should be used in determining the value of intangibles.

Accordingly, the "formula" approach may be used for determining the fair market value of intangible assets of a business only if there is no better basis therefore available.

See also Revenue Ruling 59-60, C.B. 1959-1, 237, as modified by Revenue Ruling 65-193, C.B. 1965-2, 370, which sets forth the proper approach to use in the valuation of closely-held corporate stocks for estate and gift tax purposes. The general approach, methods, and factors, outlined in Revenue Ruling 59-60, as modified, are equally applicable to valuations of corporate stocks for income and other tax purposes as well as for estate and gift tax purposes. They apply also to problems involving the determination of the fair market value of business interests of any type, including partnerships and proprietorships, and of intangible assets for all tax purposes.

A.R.M. 34, A.R.M. 68, and O.D. 937 are superseded, since the positions set forth therein are restated to the extent applicable under current law in this Revenue Ruling. Revenue Ruling 65-192, C.B. 1965-2, 259, which contained restatements of A.R.M. 34 and A.R.M.68, is also superseded.

REVENUE RULING 77-287

Valuation of securities restricted from immediate resale. Guidelines are set forth for the valuation for Federal tax purposes of securities that cannot be immediately resold because they are restricted from resale pursuant to Federal securities laws: Rev. Rul. 59-60 amplified. (1977-2 C.B. 319).

SECTION 1. PURPOSE

The purpose of this Revenue ruling is to amplify Rev. Rul. 59-60, 1959-1 C.B. 237, as modified by Rev. Rul. 65-193, 1965-2 C.B. 370, and to provide information and guidance to taxpayers. Internal Revenue Service personnel, and others concerned with the valuation, for Federal tax purposes, of securities that cannot be immediately resold because they are restricted from resale pursuant to Federal securities laws. This guidance is applicable only in cases where it is not inconsistent with valuation requirements of the Internal Revenue Code of 1954 or the regulations thereunder. Further, this ruling does not establish the time at which property shall be valued.

SECTION 2. NATURE OF THE PROBLEM

It frequently becomes necessary to establish the fair market value of stock that has not been registered for public trading when the issuing company has stock of the same class that is actively traded in one or more securities markets. The problem is to determine the difference in fair market value between the registered shares that are actively traded and the unregistered shares. This problem is often encountered in estate and gift tax cases. However, it is sometimes encountered when unregistered shares are issued in exchange for assets or the stock of an acquired company.

SECTION 3. BACKGROUND AND DEFINITIONS

.01 The Service outlined and reviewed in general the approach, methods, and factors to be considered in valuing shares of closely-held corporate stock for estate and gift tax purposes in Rev. Rul. 59-60, as modified by Rev. Rul. 65-193. The provisions of Rev. Rul. 59-60, as modified, were extended to the valuation of corporate securities for income and other tax purposes by Rev. Rul. 68-609, 1968-2 C.B. 327.

.02 There are several terms currently in use in the securities industry that denote restrictions imposed on the resale and transfer of certain securities. The term frequently used to describe these securities is "restricted securities," but they are sometimes referred to as "unregistered securities," "investment letter stock" "control stock" or "private placement stock". Frequently these terms are used interchangeably. They all indicate that these particular securities cannot lawfully be distributed to the general public until a registration statement relating to the corporation underlying the securities has been filed, and has also become effective under the rules promulgated and enforced by the United States Securities & Exchange Commission (SEC) pursuant to the Federal securities laws. The following represents a more refined definition of each of the following terms along with two other terms - "exempted securities and "exempted transactions."

(a) The term "restricted securities" is defined in Rule 144 adopted by the SEC as "securities acquired directly or indirectly from the issuer thereof, or from an affiliate of such issuer, in a transaction or chain of transactions not involving any public offering."

(b) The term "unregistered securities" refers to those securities with respect to which a registration statement, providing full disclosure by the issuing corporation, has not been filed with the SEC pursuant to the Securities Act of 1933. The registration statement is a condition precedent to a public distribution of securities in interstate commerce and is aimed at providing the prospective investor with a factual basis for sound judgment in making investment decisions.

(c) The terms "investment letter stock" and "letter stock" denote shares of stock that have been issued by a corporation without the benefit of filing a registration statement with the SEC. Such stock is subject to resale and transfer restrictions set forth in a letter agreement requested by the issuer and signed by the buyer of the stock when the stock is delivered. Such stock may be found in the hands of either individual investors or institutional investors.

(d) The term "control stock" indicates that the shares of stock have been held or are being held by an officer, director, or other person close to the management of the corporation. These persons are subject to certain requirements pursuant to SEC rules upon resale of shares they own in such corporations.

(e) The term "private placement stock" indicates that the stock has been placed with an institution or other investor who will presumably hold it for a long period and ultimately arrange to have the stock registered if it is to be offered to the general public. Such stock may or may not be subject to a letter agreement. Private placements of stock are exempted from the registration and prospectus provisions of the Securities Act of 1933.

(f) The term "exempted securities" refers to those classes of securities that are expressly excluded from the registration provisions of the Securities Act of 1933 and the distribution provisions of the Securities Exchange Act of 1934.

(g) The term "exempted transactions" refers to certain sales or distributions of securities that do not involve a public offering and are excluded from the registration and prospectus provisions of the Securities Act of 1933 and distribution provisions of the Securities Exchange Act of

1934. The exempted status makes it unnecessary for issuers of securities to go through the registration process.

SECTION 4: SECURITIES INDUSTRY PRACTICE IN VALUING RESTRICTED SECURITIES

.01 Investment Company Valuation Practices. The Investment Company Act of 1940 requires open-end investment companies to publish the valuation of their portfolio securities daily. Some of these companies have portfolios containing restricted securities, but also have restricted securities of the same class traded on a securities exchange. In recent years the number of restricted securities in such portfolios has increased. The following methods have been used by investment companies in the valuation of such restricted securities:

(a) Current market price of the unrestricted stock less a constant percentage discount based on purchase discount
(b) Current market price of unrestricted stock less a constant percentage discount different from purchase discount
(c) Current market price of the unrestricted stock less a discount amortized over a fixed period
(d) Current market price of the unrestricted stock
(e) Cost of the restricted stock until it is registered

The SEC ruled in its Investment Company Act Release No. 5847, dated October 21, 1969, that there can be no automatic formula by which an investment company can value the restricted securities in its portfolios. Rather, the SEC has determined that it is the responsibility of the board of directors of the particular investment company to determine the "fair value" of each issue of restricted securities in good faith.

.02 Institutional Investors Study. Pursuant to Congressional direction, the SEC undertook an analysis of the purchases, sales, and holding of securities by financial institutions, in order to determine the effect of institutional activity upon the securities market. The study report was published in eight volumes in March 1971. The fifth volume provides an analysis of restricted securities and deals with such items as the characteristics of the restricted securities purchasers and issuers, the size of transactions (dollars and shares), the marketability discounts on different trading markets, and the resale provisions. This research project provides some guidance for measuring the discount in that it contains information, based on the actual experience of the marketplace, showing that during the period surveyed (January 1, 1966, through June 30, 1969), the amount of discount allowed for restricted securities from the trading price of the unrestricted securities was generally related to the following four factors:

(a) Earnings. Earnings and sales consistently have a significant influence on the size of restricted securities discounts according to the study. Earnings played the major part in establishing the ultimate discounts at which these stocks were sold from the current market price. Apparently earnings patterns, rather than sales patterns, determine the risk of an investment.
(b) Sales. The dollar amount of sales of issuers' securities also has a major influence on the amount of discount at which restricted securities sell from the current market price. The results of the study generally indicate that the companies with the lowest dollar amount of sales during the test period accounted for most of the transactions involving the highest discount rates, while they accounted for only a small portion of all transactions involving the lowest discount rates.
(c) Trading market. The market in which publicly-held securities are traded also reflects variances in the amount of discount that is applied to restricted securities purchases. According to the study, discount rates were greatest on restricted stocks with unrestricted

counterparts traded over-the-counter, followed by those with unrestricted counterparts listed on the American Stock Exchange, while the discount rates for those stocks with unrestricted counterparts listed on the New York Stock Exchange were the smallest.

(d) Resale Agreement Provisions. Resale agreement provisions often affect the size of the discount. The discount from the market price provides the main incentive for a potential buyer to acquire restricted securities. In judging the opportunity cost of freezing funds, the purchase is analyzing two separate factors. The first factor is the risk that underlying value of the stock will change in a way that, absent the restrictive provisions, would have prompted a decision to set. The second factor is the risk that the contemplated means of legally disposing of the stock may not materialize. From the seller's point of view, a discount is justified where the seller is relieved of the expenses of registration and public distribution, as well as of the risk that the market will adversely change before the offering is completed. The ultimate agreement between buyer and seller is a reflection of these and other considerations. Relative bargaining strengths of the parties to the agreement are major considerations that influence the resale terms and consequently the size of discounts in restricted securities transactions. Certain provisions are often found in agreements between buyers and sellers that affect the size of discounts at which restricted stocks are sold. Several such provisions follow, all of which, other than number (3), would tend to reduce the size of the discount:

(1) A provision giving the buyer an option to "piggyback," that is, to register restricted stock with the next registration statement, if any, filed by the issuer with the SEC
(2) A provision giving the buyer an option to require registration at the seller's expense
(3) A provision giving the buyer an option to require registration, but only at the buyer's own expense
(4) A provision giving the buyer a right to receive continuous disclosure of information about the issuer from the seller
(5) A provision giving the buyer an right to select one or more directors of the issuer
(6) A provision giving the buyer an option to purchase additional shares of the issuer's stock
(7) A provision giving the buyer the right to have a greater voice in operations of the issuer, if the issuer does not meet previously agreed upon operating standards

Institutional buyers can and often do obtain many of these rights and options from the sellers of restricted securities, and naturally, the more rights the buyer can acquire, the lower the buyer's risk is going to be, thereby reducing the buyer's discount as well. Smaller buyers may not be able to negotiate the large discounts or the rights and options that volume buyers are able to negotiate.

.03 Summary. A variety of methods have been used by the securities industry to value restricted securities. The SEC rejects all automatic or mechanical solutions to the valuation of restricted securities, and prefers, in the case of the valuation of investment company portfolio stocks, to rely upon good faith valuations by the board of directors of each company. The study made by the SEC found that restricted securities generally are issued at a discount from the market value of freely tradable securities.

SECTION 5. FACTS AND CIRCUMSTANCES MATERIAL TO VALUATION OF RESTRICTED SECURITIES

.01 Frequently, a company has a class of stock that cannot be traded publicly. The reason such stock cannot be traded may arise from the securities statutes, as in the case of an "investment letter" restriction; it may arise from a corporate charter restriction or perhaps from a trust agreement restriction. In such cases, certain documents and facts should be obtained for analysis.

.02 The following documents and facts, when used in conjunction with those discussed in Section 4 of Rev. Rul. 59-60, will be useful in the valuation of restricted securities:

(a) A copy of any declaration of trust, trust agreement, and any other agreements relating to the shares of restricted stock
(b) A copy of any document showing any offers to buy or sell or indications of interest in buying or selling the restricted shares
(c) The latest prospectus of the company
(d) Annual reports of the company for 3 to 5 years preceding the valuation date
(e) The trading prices and trading volume of the related class of traded securities 1 month preceding the valuation date, if they are traded on a stock exchange (if traded over-the-counter, prices may be obtained from the National Quotations Bureau, the National Association of Securities Dealers Automated Quotations (NASDAQ), or sometimes from broker-dealers making markets in the shares)
(f) The relationship of the parties to the agreements concerning the restricted stock, such as whether they are members of the immediate family or perhaps whether they are officers or directors of the company
(g) Whether the interest being valued represents a majority or minority ownership

SECTION 6. WEIGHING FACTS AND CIRCUMSTANCES MATERIAL TO RESTRICTED STOCK VALUATION

All relevant facts and circumstances that bear upon the worth of restricted stock, including those set forth above in the preceding Sections 4 and 5, and those set forth in Section 4 of Rev. Rul. 59-60, must be taken into account in arriving at the fair market value of such securities. Depending on the circumstances of each case, certain factors may carry more weight than others. To illustrate:

.01 Earnings, net assets, and net sales must be given primary consideration in arriving at an appropriate discount for restricted securities from the freely traded shares. These are the elements of value that are always used by investors in making investment decisions. In some cases, one element may be more important than in other cases. In the case of manufacturing, producing, or distributing companies, primary weight must be accorded earnings and net sales; but in the case of investment or holding companies, primary weight must be given to the net assets of the company underlying the stock. In the former type of companies, value is more closely linked to past, present, and future earnings while in the latter type of companies, value is more closely linked to the existing net assets of the company. See the discussion in Section 5 of Rev. Rul. 59-60.

.02 Resale provisions found in the restriction agreements must be scrutinized and weighed to determine the amount of discount to apply to the preliminary fair market value of the company. The two elements of time and expense bear upon this discount: the longer the buyer of the shares must wait to liquidate the shares, the greater the discount. Moreover, if the provisions make it necessary for the buyer to bear the expense of registration, the greater the discount. However, if the provisions of the restricted stock agreement make it possible for the buyer to "piggyback" shares at the next offering, the discount would be smaller.

.03 The relative negotiation strengths of the buyer and seller of restricted stock may have a profound effect on the amount of discount. For example, a tight money situation may cause the buyer to have the greater balance of negotiation strength in a transaction. However, in some cases the relative strengths may tend to cancel each other out.

.04 The market experience of freely tradable securities of the same class as the restricted securities is also significant in determining the amount of discount. Whether the shares are privately held or publicly traded affects the worth of the shares to the holders. Securities traded on a public market generally are worth more to investors than those that are not traded on a public market. Moreover, the type of public market in which the unrestricted securities are traded is to be given consideration.

SECTION 7. EFFECT ON OTHER DOCUMENTS.

(Rev. Rul. 59-60, as modified by Rev. Rul. 65-193 is amplified.)

REVENUE RULING 81-253

ISSUE

Whether minority discounts should be allowed in valuing for federal gift tax purposes three simultaneous transfers of all of all of the stock in a closely held family corporation to the donor's three children

FACTS

The donor, A, owned all of the 90 outstanding shares of stock in corporation X, the sole asset of which is a parcel of real estate. On December 30, 1978, A made simultaneous gifts of one-third (30 shares) of the stock in X to each of A's three children. On that date, the established fair market value of each share of X stock, if all the stock were sold together, was 10,000x per share.

At the time the gifts were made, there were no corporate bylaws or other instruments restricting the voting or disposition of corporate shares by any shareholder, and there were no negotiations underway for the disposition of the corporation's assets or the disposition of the shares in question before or subsequent to the date of the gifts. In addition there is no evidence of the kind of family discord or other factor that would indicate that the family would not act as a unit in controlling the corporation. The corporation still owns the parcel of real estate and A's children still own the corporate shares.

SECTION 2512 LAW AND ANALYSIS

Section 2501 (a)(1) of the Internal Revenue Code provides that a tax is imposed for each calendar quarter on the transfer of property by gift during such calendar quarter. Section 2512(a) provides that the value of the property at the date of the gift shall be considered the amount of the gift.

Section 25.2512-1 of the Gift Tax Regulations defines the value of property as the price at which such property would change hands between a willing buyer and willing seller, neither being under compulsion to buy or sell, and both having reasonable knowledge of relevant facts. The regulations provide that the value of a particular kind of property is not the price that a forced sale of the property would produce, and that all relevant facts and elements of value as of the time of the gift shall be considered.

Section 25.2512-2(a) of the regulations provides that the value of stocks and bonds is the fair market value per share or bond on the date of the gift. Section 25.2512-2(f) provides that the degree of control of the business represented by the block of stock to be valued is among the factors to be considered in valuing stock where there are not sales prices or bona fide bid and asked prices. See also Rev. Rul. 59-60, sections 4.01(g), 4.02(g). 1959-1 C.B. 237.

The fair market value of a piece of property depends on the facts and circumstances, Section 3.01. Rev. Rul 59-60, 1959-1 C.B. 237, Messing v. Commissioner, 48 T.C. 505, 512 (1967), acq. 1968-1 C.B. 2. Thus questions of valuation cannot be resolved by mechanical application of formulae and cases involving valuation can often be distinguished. Nonetheless, certain overriding legal principles to which each set of facts is applied govern valuation. Powers v. Commissioner, 312 U.S. 259 (1941); Maytag v. Commissioner, 187 F. 2d 962 (10th Cir. 1951).

Judicial authority is inconsistent regarding the correct legal principle governing the availability of a minority discount in the instant case. Therefore, this ruling is intended to state the Service's position.

Several cases have held or implied that no minority discount is available when the transferred stock is part of a family controlling interest. Driver v. United States. No. 73C 260 (W.D. Wis., Sept 13, 1976); Blanchard v. United States, 291 F. Supp. 248 (S.D. Iowa, 1968); Richardson v. Commissioner, No. 95770 (T.C.M. 1943), aff'd 151 F. 2d 102 (2d Cir. 1945). cert. denied. 326 U.S. 796 (1946); Hamm v. Commissioner, T.C.M. 1961-347, aff'd 325 F. 2d 934 (8th Cir.1963). cert. denied, 377 U.S. 993 (1964). The Service will follow these decisions. Other cases have allowed a minority discount on similar facts. Whittemore v. Fitzpatrick, 127 F. Supp.710 (D. Conn., 1954); Obermer v. United States, 238 F. Supp. 29,34 (D. Hawaii, 1964); Estate of Piper v. Commissioner, 72 T.C. 1062 (1979); Clark v. United States, Civil Nos. 1308, 1309 (E.D.N.C., May 16, 1975); Bartram v. Graham, 157 F. Supp. 757 (D. Conn. 1957); Estate of Lee v. Commissioner, 69 T.C. 860 (1978), nonacq. 1980-2 C.B. 2; Estate of Bright v. United States. No. 78-2221 (5th Cir., Oct. 1, 1981). The Service will not follow these and similar cases.

It is the position of the Service that ordinarily no minority discount will be allowed with respect to transfers of shares of stock among family members where, at the time of the transfer, control (either majority voting control or de facto control) of the corporation exists in the family, Dattel v. United States, No. D.C. 73-107-S (N.D. Miss., Oct. 29, 1975), Cutbirth v. United States, Civil No. CA-6-75-1 (N.D. Tex., June 16, 1976). However, when there is evidence of family discord or other factors indicating that the family would not act as a unit in controlling the corporation, a minority discount may be allowed. Although courts have recognized that where a shareholder is unrelated to other shareholders a minority discount may be available because of absence of control. Estate of Schroeder v. Commissioner, 13 T.C. 259 (1949), acq. 1949-2 C.B. 3, where a controlling interest in stock is owned by family members, there is a unity of ownership and interest, and the shares owned by family members should be valued as part of that controlling interest. This conclusion is based on an evaluation of the facts and circumstances that would affect the price received for the shares in a hypothetical sale. It is unlikely that under circumstances such as exist in the instant case, shares that are part of a controlling interest would be sold other than as a unit except to a family member in whose hands the shares would retain their control value because of the family relationship. Thus, where a controlling interest in stock is owned by a family, the value per share of stock owned by one family member is the same as stock owned by any other family member and is the same value that would exist if all the stock were held by one person.

HOLDING

No minority discount is allowable and the value of each share of stock for federal gift tax purposes is 10,000x.

REVENUE RULING 83-120

SECTION 1. PURPOSE

The purpose of this Revenue Ruling is to amplify Rev. Rul. 59-60, 1959-1, C.B. 237, by specifying additional factors to be considered in valuing common and preferred stock of a closely held corporation for gift tax and other purposes in a recapitalization of closely held businesses. This type of valuation problem frequently arises with respect to estate planning transactions wherein an individual receives preferred stock with a stated par value equal to all or a large portion of the fair market value of the individual's former stock interest in a corporation. The individual also receives common stock which is then transferred, usually as a gift, to a relative.

SECTION 2. BACKGROUND

.01 One of the frequent objectives of the type of transaction mentioned above is the transfer of the potential appreciation of an individual's stock interest in a corporation to relatives at a nominal or small gift tax cost. Achievement of this objective requires preferred stock having a fair market value equal to a large part of the fair market value of the individual's former stock interest and common stock having a nominal or small fair market value. The approach and factors described in this Revenue Ruling are directed toward ascertaining the true fair market value of the common and preferred stock and will usually result in the determination of a substantial fair market value for the common stock and a fair market value for the preferred stock which is substantially less than its par value.

.02 The type of transaction referred to above can arise in many different contexts. Some examples are:

(a) A owns 100% of the common stock (the only outstanding stock) of Z Corporation which has fair market value of 10,500x. In a recapitalization described in Section 368 (a)(1)(E), A receives preferred stock with a par value of 10,000x and new common stock, which A then transfers to A's son B.

(b) A owns some of the common stock of Z Corporation (or the stock of several corporations) the fair market value of which stock is 10,500x. A transfers this stock to a new corporation X in exchange for preferred stock of X corporation with a par value of 10,000x and common stock of corporation, which A then transfers to A's son B.

(c) A owns 80 shares and his son B owns 20 shares of the common stock (the only stock outstanding) of Z Corporation in a recapitalization described in section 368(a)(1)(E). A exchanges his 80 shares of common stock for 80 shares of new preferred stock of Z Corporation with a par value of 10,000x. A's common stock had a fair market value of 10,000x.

SECTION 3. GENERAL APPROACH TO VALUATION

Under section 25.2512-2(f)(2) of the Gift Tax Regulations, the fair market value of stock in a closely held corporation depends upon numerous factors, including the corporation's net worth, its prospective earning power, and its capacity to pay dividends. In addition, other relevant factors must be taken into account. See Rev. Rul. 59-60. The weight to be accorded any evidentiary factor depends on the circumstances of each case. See section 25.2512-2(f) of the Gift Tax Regulations.

SECTION 4. APPROACH TO VALUATION-PREFERRED STOCK

.01 in general the most important factors to be considered in determining the value of preferred stock are its yield, dividend coverage and protection of its liquidation preference.

.02. Whether the yield of the preferred stock supports a valuation of the stock at par value depends in part on the adequacy of the divided rate. The adequacy of the dividend rate should be determined by comparing its dividend rate with the dividend rate of high-grade publicly traded preferred stock. A lower yield than that of high-grade preferred stock indicates a preferred stock value of less than par. If the rate of interest charged by independent creditors to the corporation on loans is higher than the rate such independent creditors charge their most credit worthy borrowers, then the yield on the preferred stock should be correspondingly higher than the yield on high quality preferred stock. A yield which is not correspondingly higher reduces the value of the preferred stock. In addition, whether the preferred stock has a fixed dividend rate and is nonparticipating, influences the value of the preferred stock. A publicly traded preferred stock for a company having a similar business and similar assets with similar liquidation preferences, voting rights and other similar terms would be the ideal comparable for determining yield required in arms length transactions for closely held stock. Such ideal comparables will frequently not exist. In such circumstances, the most comparable publicly traded issues should be selected for comparison and appropriate adjustments made for differing factors.

.03. The actual dividend rate on a preferred stock can be assumed to be its stated rate if the issuing corporation will be able to pay its stated dividends in a timely manner and will, in fact, pay such dividends. The risk that the corporation may be unable to timely pay the stated dividends on the preferred stock can be measured by the coverage of such stated dividends by the corporation's earnings. Coverage of the dividend is measured by the ratio of the sum of pre-tax and pre-interest earnings to the sum of the total interest to be paid and the pre-tax earnings needed to pay the after-tax dividends. Standard & Poor's Ratings Guide, 58(1979). Inadequate coverage exists where a decline in corporate profits would be likely to jeopardize the corporation's ability to pay dividends on the preferred stock. The ratio for the preferred stock in question should be compared with the ratios for high quality preferred stock to determine whether the preferred stock has adequate coverage. Prior earnings history is important in this determination. Inadequate coverage indicates that the value of preferred stock is lower than its par value. Moreover, the absence of a provision that preferred dividends are cumulative raises substantial questions concerning whether the stated dividend rate will, in fact, be paid. Accordingly preferred stock with noncumulative dividend features will normally have a value substantially lower than a cumulative preferred stock with the same yield, liquidation preference and dividend coverage.

.04 Whether the issuing corporation will be able to pay the full liquidation preference at liquidation must by taken into account in determining fair market value. This risk can be measured by the protection afforded by the corporation's net assets. Such protection can be measured by the ratio of the excess of the current market value of the corporation's assets over its liabilities to the aggregate liquidation preference. The protection ratio should be compared with the ratios for high quality preferred stock to determine adequacy of coverage. Inadequate asset/protection exists where any unforeseen business reverses would be likely to jeopardize the corporation's ability to pay the full liquidation preference to the holders of the preferred stock.

.05 Another factor to be considered in valuing the preferred stock is whether it has voting rights and, if so, whether the preferred stock has voting control. See, however, Section 5.02 below.

.06 Peculiar covenants or provisions of the preferred stock of a type not ordinarily found in publicly traded preferred stock should be carefully evaluated to determine the effects of such covenants on the value of the preferred stock in general, if covenants would inhibit the marketability of the stock or the power of the holder to enforce dividend or liquidation rights, such provisions will reduce the value of the preferred stock by comparison to the value of preferred stock not containing such covenants or provisions.

.07 Whether the preferred stock contains a redemption privilege is another factor to be considered in determining the value of the preferred stock. The value of a redemption privilege triggered by death of the preferred shareholder will not exceed the present value of the redemption premium payable at the preferred shareholder's death (i.e. the present value of the excess of the redemption price over the fair market value of the preferred stock upon its issuance). The value of the redemption privilege should be reduced to reflect any risk that the corporation may not possess sufficient assets to redeem its preferred stock at the stated redemption price. See .03 above.

SECTION 5. APPROACH TO VALUATION-COMMON STOCK

.01 If the preferred stock has a fixed rate of dividend and is nonparticipating, the common stock has the exclusive right to the benefits of future appreciation of the value of the corporation. This right is valuable and usually warrants a determination that the common stock has substantial value. The actual value of this right depends upon the corporation's past growth experience, the economic condition of the industry in which the corporation operates, and general economic conditions. The factor to be used in capitalizing the corporation's perspective earnings must be determined after an analysis of numerous factors concerning the corporation and the economy as a whole. See Rev. Rul. 59-60. In addition, after-tax earnings of the corporation at the time the preferred stock is issued in excess of the stated dividends on the preferred stock will increase the value of the common stock. Furthermore, a corporate policy of reinvesting earnings will also increase the value of the common stock.

.02 A factor to be considered in determining the value of the common stock is whether the preferred stock also has voting rights. Voting rights of the preferred stock, especially if the preferred stock has voting control, could under certain circumstances increase the value of the preferred stock and reduce the value of the common stock. This factor may be reduced in significance where the rights of common stockholders as a class are protected under state law from actions by another class of shareholders, see Singer v. Magnavox Co., 380 A2d 969 (Del. 1977), particularly where the common shareholders, as a class, are given the power to disapprove a proposal to allow preferred stock to be converted into common stock. See ABA-ALI Model Bus. Corp. Act, Section 60 (1969).

SECTION 6. EFFECT ON OTHER REVENUE RULINGS

Rev. Rul. 59-60, as modified by Rev. Rul. 65-193, 1965-2 C.B. 370 and as amplified by Rev. Rul. 77-287, 1977-2 C.B. 319, and Rev. Rul. 80-213, 1980-2 C.B. 101, is further amplified.

REVENUE RULING 93-12

SECTION 1. ISSUE

If a donor transfers shares in a corporation to each of the donor's children, is the factor of corporate control in the family to be considered in valuing each transferred interest, for purposes of section 2512 of the Internal Revenue Code?

SECTION 2. FACTS

P owned all of the single outstanding class of stock of X corporation. P transferred all of P's shares by making simultaneous gifts of 20 percent of the shares to each of P's five children, A, B, C, D, and E.

SECTION 3. LAW AND ANALYSIS

Section 2512(a) of the Code provides that the value of the property at the date of the gift shall be considered the amount of the gift.

Section 25.2512-1 of the Gift Tax Regulations provides that, if a gift is made in property, its value at the date of the gift shall be considered the amount of the gift. The value of the property is the price at which the [*2] property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of relevant facts.

Section 25,2512-2 (a) of the regulations provides that the value of stocks and bonds is the fair market value per share or bond on the date of the gift. Section 25.2512-2 (f) provides that the degree of control of the business represented by the block of stock to be valued is among the factors to be considered in valuing stock where there are no sales prices or bona fide bid or asked prices.

Rev. Rul. 81-253, 1981-1 C.B. 187, holds that, ordinarily, no minority shareholder discount is allowed with respect to transfers to shares of stock between family members if, based upon a composite of the family members' interests at the time of the transfer, control (either majority voting control or de facto control through family relationships) of the corporation exists in the family unit. The ruling also states that the Service will not follow the decision of the Fifth Circuit in Estate of Bright v. United States, 658 F.2d 999 (5th Cir. 1981).

In Bright, the decedent's undivided community property [*3] interest in shares of stock, together with the corresponding undivided community property interest of the decedent's surviving spouse, constituted a control block of 55 percent of the shares of a corporation. The court held that, because the community-held shares were subject to a right of partition, the decedent's own interest was equivalent to 27.5 percent of the outstanding shares and, therefore, should be valued as a minority interest, even though the shares were to be held by the decedent's surviving spouse as trustee of a testamentary trust. See also, Propstra v. United States, 680 F.2d 1248 (9th Cir. 1982). In addition, Estate of Andrews v. Commissioner, 79 T.C. 938 (1982), and Estate of Lee v. Commissioner, 69 T.C. 860 (1978), nonacq., 1980-2 C.B. 2, held that the corporation shares owned by other family members cannot be attributed to an individual family member for determining whether the individual family member's shares should be valued as the controlling interest of the corporation.

After further consideration of the position taken in Rev. Rul. 81-253, and in light of the cases noted above, the Service has concluded that, in the case of a corporation [*4] with a single class of stock, notwithstanding the family relationship of the donor, the donee, and other shareholders, the shares of other family members will not be aggregated with the transferred shares to determine whether the transferred shares should be valued as part of a controlling interest.

In the present case, the minority interests transferred to A, B, C, D, and E should be valued for gift tax purposes without regard to the family relationship of the parties.

SECTION 4. HOLDING

If a donor transfers shares in a corporation to each of the donor's children, the factor of corporate control in the family is not considered in valuing each transferred interest for purposes of section 2512 of the Code. For estate and gift tax valuation purposes, the Service will follow Bright, Propstra, Andrews, and Lee in not assuming that all voting power held by family members may be aggregated for purposes of determining whether the transferred shares should be valued as part of a controlling interest. Consequently, a minority discount will not be disallowed solely because a transferred interest, when aggregated with interests held by family members, would [*5] be a part of a controlling interest. This would be the case whether the donor held 100 percent or some lesser percentage of the stock immediately before the gift.

SECTION 5. EFFECT ON OTHER DOCUMENTS

Rev. Rul. 81-253 is revoked. Acquiescence is substituted for the non-acquiescence in issue one of Lee, 1980-2 C.B. 2.

REV-PROC, FINH &30,054, Estate, gift and generation-skipping transfer taxes; Valuation: compensatory stock options: Methodology and factors to be considered. Revenue Procedure 98-34, IRB 1998-18, 15 (May 04, 1998)
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Revenue Procedure 98-34, I.R.B. 1998-18, 15, May 4, 1998.

[*Code Secs. 2031, 2512 and 2624*]

Estate, gift and generation-skipping transfer taxes; Valuation; Compensatory stock options; Methodology and factors to be considered. Procedures setting forth the methodology for valuing certain compensatory stock options for estate, gift, and generation-skipping transfer tax purposes have been issued by the IRS. The procedure applies only to the valuation on non-publicly traded compensatory stock options on stock that is publicly traded on an established securities market on the valuation date. In valuing such options, a taxpayer may use an option pricing model that takes into account, on the valuation date, specific factors that are similar to those established by the Financial Accounting Standards Board in Accounting for Stock-Based Compensation, Statement of Financial Accounting Standards No. 123 (Fin. Accounting Standards Bd. 1995). Provided the requirements of the procedure are met, the IRS will treat the value of a compensatory stock option as properly determined for transfer tax purposes. BACK REFERENCES: &3125.01, &3220.08, &10,663.05 AND &12,565.01.

SECTION 1. PURPOSE

This revenue procedure sets fort a methodology to value for gift, estate, and generation-skipping transfer tax (“transfer tax”) purposes certain compensatory stock options described in Section 3 of this revenue procedure. Taxpayers relying on this revenue procedure may use an option pricing model that takes into account on the valuation date specific factors that are similar to those established by the Financial Accounting Standards Board in Accounting for Stock-Based Compensation, Statement of Financial Accounting Standards No. 123, (Fin. Accounting Standards Bd. 1995), (FAS 123). The Internal Revenue Service will treat the value of a compensatory stock option as properly determined for transfer tax purposes, provided that the requirements of this revenue procedure are met.

SECTION 2. BACKGROUND

Section 2512(a) of the Internal Revenue Code provides that, if a gift is made in property, the value of the property at the date of the gift is the amount of the gift.

Section 25.2512-1 of the Gift Tax Regulations provides that for gift tax purposes the value of property is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.

Section 2031)a) provides that the value of the gross estate is determined by including the value at the time of the decedent's death of all property, real or personal, tangible or intangible, wherever situated.

Section 20.2031-1(b) of the Estate Tax Regulations provides that the value of every item of property includible in a decedent's gross estate is its fair market value at the time of the decedent's death.

Section 2032(a) provides that the executor may elect to use an alternative valuation date. Under this election, the value of all property included in the gross estate generally is determined as of 6 months after the decedent's death. However, property distributed, sold, exchanged, or otherwise disposed of within 6 months after death must be valued as of the date of sale, exchange, or other disposition.

Section 2642(1) provides that, except as otherwise provided in Chapter 13, property is valued at the time of the generation-skipping transfer.

FAS 123 establishes financial accounting and reporting standards for stock-based employee compensation plans. Under FAS 123, the fair value of a stock option granted by a public entity is estimated using an option pricing model (for example, the Black-Scholes model or a binomial model) that takes into account as of the option grant date; (1) the exercise price of the option; (2) the expected life of the option; (3) the current price of the underlying stock; (4) the expected volatility of the underlying stock; (5) the expected dividends on the underlying stock; and (6) the risk-free interest rate for the expected term of the option.

FAS 123 generally requires a public entity to disclose in its financial statements for each year beginning after December 15, 1994, a description of the method and significant assumptions used during the year to estimate the fair value of stock options granted during the year, including the following weighted-average information: (1) expected life of the options; (2) expected volatility; (3) expected dividends; and (4) risk-free interest rate. (The foregoing is not a complete list of the disclosures required by FAS 123. For example, FAS 123 also requires financial statement disclosure of the weighted-average exercise prices of options granted during the year.)

SECTION 3. SCOPE

This revenue procedure applies only to the valuation for transfer tax purposes of non-publicly traded compensatory stock options (that is, stock options that are granted in connection with the performance of services, including stock options that are subject to the provisions of э421), on stock that, on the valuation date, is publicly traded on an established securities market. The options to which this revenue procedure applies are referred to herein as "Compensatory Stock Options."

SECTION 4. APPLICATION

.01 Taxpayers may determine the value of Compensatory Stock Options for transfer tax purposes by using a generally recognized option pricing model (for example, the Black-Scholes model or an accepted version of the binomial model) that takes into account as of the valuation date the following factors: (1) the exercise price of the option; (2) the expected life of the option; (3) the current trading price of the underlying stock; (4) the expected volatility of the underlying stock; (5) the expected dividends on the underlying stock; and (6) the risk-free interest rate over the remaining option term.

.02 In order to rely on this revenue procedure: (1) the taxpayer must use the factors determined in section 4.03 through 4.07 of this revenue procedure; (2) each of the factors used in applying the option pricing model must be reasonable (for this purpose, the use of the factors in section 4.03 through 4.07 of this revenue procedure will be deemed reasonable); (3) the option pricing model must be properly applied; (4) the company that granted the option must be subject to FAS 123 in preparing its financial statements for the fiscal year of the company that includes the valuation date; (5) the underlying stock must be common stock and must be the same stock for which the expected volatility and expected dividends were estimated by the company for purposes of FAS 123; and (6) no discount can be applied to the valuation produced by the option pricing model (for example, no discount can be taken due to lack of transferability or due to the termination of the option within a specified number of days following termination of employment).

.03 Except as provided in section 4.04 of this revenue procedure, in determining the factor for the expected life of the option, taxpayers must use either (1) the maximum remaining term of the option on the valuation date (Maximum Remaining Term), or (2) the expected life of the option on the valuation date computed in accordance with this section (Computed Expected Life). The Maximum Remaining Term is the number of years rounded down to the nearest 1/10th of a year from the valuation date until the option's expiration date (assuming no condition or event occurs that would shorten the life of the option).

The Computed Expected Life is determined in the following manner:

Step one: Obtain the weighted-average expected life of options granted by the publicly traded company that, for purposes of complying with FAS 123, is disclosed in its financial statements for the fiscal year that includes the valuation date. (If, instead of disclosing a weighted-average expected life for options granted during the fiscal year, the company disclosed a method for computing the expected life of the options granted during the fiscal year, the taxpayer must compute the weighted-average expected life for the taxpayer's option using the method disclosed by the company.)

Step two: Divide the weighted-average expected life determined in step one by the number of years, rounded up to the nearest 1/10th of a year, from the date the option was granted (without regard to the application of ϶424(h)(1)) until the option's expiration date (assuming no condition or event occurs that would shorten the life of the option).

Step three: Multiply the quotient obtained in step two by the Maximum Remaining Term. The resulting number rounded down to the nearest 1/10th is the Computed Expected Life expressed in years.

This calculation can be demonstrated by the following example: Assume that on September 1, 1998, A is granted a stock option from company that will terminate on the earlier of the date 10 years from the date of grant or the date 90 days after the termination of A's employment with Company. The option becomes fully exercisable 3 years from the date of grant. For the fiscal year that includes September 1, 2001, Company discloses in a footnote to its financial statements, in accordance with FAS 123, that the weighted-average expected life of stock options granted by the Company during the fiscal year is 6 years. On September 1, 2001, when A's option becomes fully exercisable, A makes a gift of a portion of the option. On September 1, 2001, A's option qualifies as a Compensatory Stock Option. For purposes of step one, the weighted-average expected life is 6 years, as disclosed by Company for purposes of complying with FAS 123 for the fiscal year that includes the valuation date. For purposes of step two, the weighted-average expected life of 6 years is divided by 10 years, the maximum term of A's option on the date the option was granted by Company. The resulting quotient is 0.6 (6 years divided by 10 years equals 0.6). For purposes of step three, the quotient in step two is multiplied by the Maximum Remaining Term to determine the Computed Expected Life. The result is 4.2 years (0.6 times 7 years equals 4.2 years).

.04 Taxpayers must used the Maximum Remaining Term (and may not use the Computed Expected Life) as the expected life of the option on the valuation date if one (or more) of the following conditions is present:

(1) the transferor of the option (or the decedent, in the case of a transfer at death) is not the person to whom the option being valued was granted by the company

(2) except in the case of a transfer at death, the transferor is not an employee or director of the company on the valuation date

(3) except in the case of the death or disability (within the meaning of э22(e)(3)) of the transferor, the option being valued does not terminate within 6 months of termination of employment (or service as a director) of the transferor with the company

(4) the terms of the option being valued permit the option to be transferred to, or for the benefit of, one or more persons other than either persons who are the natural objects of the transferor's bounty or a charitable organization

(5) except in the case of the death of the transferor, the option being valued has an exercise price that is not fixed on the valuation date. The option does not have a fixed exercise price if, for example, the exercise price is determined by a formula the results of which might change after the valuation date. In addition, an option will be deemed not to have a fixed exercise price if the company issuing the option has repriced options (that is directly or indirectly lowered the exercise price of outstanding compensatory stock options) within the 3-year period ending on the valuation date

(6) except in the case of the death of the transferor, the option being valued has terms and conditions such that if all the options granted in the fiscal year of the company that includes the valuation date had the same terms and conditions, the weighted-average expected life for the year would have been more than 120% of the weighted-average expected life actually reported for the year

(7) the company is not required by FAS 123 to disclose an expected life of the options granted in the fiscal year of the company that includes the valuation date

0.5 In determining the factor for the expected volatility of the underlying stock, taxpayers must use the expected volatility of the underlying stock that, for purposes of complying with FAS 123, is disclosed in the financial statements of the publicly traded company for the fiscal year of the company that includes the valuation date.

.06 In determining the factor for the expected dividends on the underlying stock, taxpayers must use the expected dividends on the underlying stock that, for purposes of complying with FAS 123, is disclosed in the financial statements of the publicly traded company for the fiscal year of he company that includes the valuation date.

.07 In determining the factor for the risk-free interest rate, taxpayers must use the yield to maturity on the valuation date of zero-coupon U.S. Treasury Bonds with a remaining term (as of the valuation date) nearest to the expected life of the option on the valuation dates as determined in section 4.03 of this revenue procedure.

.08 Taxpayers utilizing this revenue procedure to value a Compensatory Stock Option for transfer tax purposes should indicate on the applicable gift, estate, or generation-skipping transfer tax return: "FILED PURSUANT TO REV. PROC. 98-34."

DRAFTING INFORMATION

The principals author of this revenue procedure is Robert B. Hanson of the Office of Assistant Chief Counsel (Passthroughs and Special Industries). For further information regarding this revenue procedure, contact Mr. Hanson on (202) 622-3050 or Melissa C. Liquerman on (202) 622-3120 (not toll-free calls).

Sec. 338. Certain stock purchases treated as asset acquisitions

STATUTE

(a) General rule

For purposes of this subtitle, if a purchasing corporation makes an election under this section (or is treated under subsection (e) as having made such an election), then, in the case of any qualified stock purchase, the target corporation –

(1) shall be treated as having sold all of its assets at the close of the acquisition date at fair market value in a single transaction, and
(2) shall be treated as a new corporation which purchased all of the assets referred to in paragraph (1) as of the beginning of the day after the acquisition date.

(b) Basis of assets after deemed purchase

(b) (1) In general

For purposes of subsection (a), the assets of the target corporation shall be treated as purchased for an amount equal to the sum of –

(A) the grossed-up basis of the purchasing corporation's recently purchased stock, and
(B) the basis of the purchasing corporation's nonrecently purchased stock.

(b) (2) Adjustment for liabilities and other relevant items

The amount described in paragraph (1) shall be adjusted under regulations prescribed by the Secretary for liabilities of the target corporation and other relevant items.

(b) (3) Election to step-up the basis of certain target stock

(b)(3)(A) in General

Under regulations prescribed by the Secretary, the basis of the purchasing corporation's non-recently purchased stock shall be the basis amount determined under subparagraph (B) of the paragraph if the purchasing corporation makes an election to recognize gain as if such stock were sold on the acquisition date for an amount equal to the basis amount determined under subparagraph (B).

(b)(3)(B) Determination of basis amount

For purposes of subparagraph (A), the basis amount determined under this subparagraph shall be an amount equal to the grossed-up basis determined under subparagraph (A) of paragraph (1) multiplied by a fraction –

(i) the numerator of which is the percentage of stock (by value) in the target corporation attributable to the purchasing corporation's non-recently purchased stock, and
(ii) the denominator of which is 100 percent minus the percentage referred to in clause (i).

(b)(4) Grossed-up basis

For purposes of paragraph (1), the grossed-up basis shall be an amount equal to the basis of the corporation's recently purchased stock, multiplied by a fraction –

(A) the numerator of which is 100 percent, minus the percentage of stock (by value) in the target corporation attributable to the purchasing corporation's nonrecently purchased stock, and
(B) the denominator of which is the percentage of stock (by value) in the target corporation attributable to the purchasing corporation's recently purchased stock.

(b)(5) Allocation among assets

The amount determined under paragraphs (1) and (2) shall be allocated among the assets of the target corporation under regulations prescribed by the Secretary.

(b)(6) Definitions of recently purchased stock and nonrecently purchased stock

For purposes of this subsection –

(b)(6)(A) Recently purchased stock

The term 'recently purchased stock' means any stock in the target corporation which is held by the purchasing corporation on the acquisition date and which was purchased by such corporation during the 12-month acquisition period.

(b)(6)(B) Non-recently purchased stock

The term 'non-recently purchased stock' means any stock in the target corporation which is held by the purchasing corporation on the acquisition date and which is not recently purchased stock.

(c)((c) Repealed. Pub.L.99-514, title VI, Sec. 631(b)(2), Oct. 22, 1986, 100 Stat. 2272)

(d) Purchasing corporation; target corporation; qualified stock purchase

For purposes of this section –

(d)(1) Purchasing corporation

The term 'purchasing corporation' means any corporation which makes a qualified stock purchase of stock of another corporation.

(**d)(2) Target corporation**

The term 'target corporation' means any corporation the stock of which is acquired by another corporation in a qualified stock purchase.

(d)(3) Qualified stock purchase

The term 'qualified stock purchase' means any transaction or series of transactions in which stock (meeting the requirements of section 1504(a)(2)) of 1 corporation is acquired by another corporation by purchase during the 12-month acquisition period.

(e) Deemed election where purchasing corporation acquires asset of target corporation

(e)(1) In general

A purchasing corporation shall be treated as having made an election under this section with respect to any target corporation if, at any time during the consistency period, it acquires any asset of the target corporation (or a target affiliate).

(e)(2) Exceptions

Paragraph (1) shall not apply with respect to any acquisition by the purchasing corporation if –

(A) such acquisition is pursuant to a sale by the target corporation (or the target affiliate) in the ordinary course of its trade or business,

(B) the basis of the property acquired is determined wholly by reference to the adjusted basis of such property in the hands of the person from who acquired,

(C) such acquisition was before September 1, 1982, or

(D) such acquisition is described in regulations prescribed by the Secretary and meets such conditions as such regulations may provide.

(e)(3) Anti-avoidance rule

Whenever necessary to carry out the purpose of this subsection and subsection (f), the Secretary may treat stock acquisitions which are pursuant to a plan and which meet the requirements of section 1504(a)(2) as qualified stock purchases.

(f) Consistency required for all stock acquisitions from same affiliate group

If a purchasing corporation makes qualified stock purchases with respect to the target corporation and 1 or more target affiliates during any consistency period, then (except as otherwise provided in subsection (e)),

(1) any election under this section with respect to the first such purchase shall apply to each other such purchase, and
(2) no election may be made under this section with respect to the second or subsequent such purchase if such an election was not made with respect to the first such purchase.

(g) Election

(g)(1) When made

Except as otherwise provided in regulations, an election under this section shall be made not later than the 15^{th} day of the 9^{th} month beginning after the month in which the acquisition date occurs.

(g)(2) Manner

An election by the purchasing corporation under this section shall be made in such manner as the Secretary shall by regulations prescribe.

(g)(3) Election irrevocable

An election by a purchasing corporation under this section, once made, shall be irrevocable.

(h) Definitions and special rules

For purposes of this section –

(h)(1) 12-month acquisition period

The term '12-month acquisition period' means the 12-month period beginning with the date of the first acquisition by purchase of stock included in a qualified stock purchase (or, if any of such stock was acquired in an acquisition which is a purchase by reason of subparagraph (C) of paragraph (3), the date on which the acquiring corporation is first considered under section 318(a) (other than paragraph (4) thereof) as owning stock owned by the corporation from which such acquisition was made).

(h)(2) Acquisition date

The term 'acquisition date' means, with respect to any corporation, the first day on which there is a qualified stock purchase with respect to the stock of such corporation.

(h)(3) Purchase

(h)(3)(A) In general

The term 'purchase' means any acquisition of stock, but only if –

(i) the basis of the stock in the hands of the purchasing corporation is not determined (I) in whole or in part by reference to the adjusted basis of such stock in the hands of the person from whom acquired, or (II) under section 1014(a) (relating to property acquired from a decedent).
(ii) the stock is not acquired in an exchange to which section 351, 254, 355, or 356 applies and is not acquired in any other transaction described in regulations in which the transferor does not recognize the entire amount of the gain or loss realized on the transaction, and
(iii) the stock is not acquired from a person the ownership of whose stock would, under section 318(a) (other than paragraph (FOOTNOTE 1) (4) thereof), be attributed to the person acquiring such stock.
(FOOTNOTE 1) So in original.

(h)(3)(B) Deemed purchase under section (a)

The term 'purchase' includes any deemed purchase under subsection (a)(2). The acquisition date for a corporation which is deemed purchased under regulations prescribed by the Secretary.

(h)(3)(C) Certain stock acquisitions from related corporations

(h)(3)(C)(i) In general

Clause (iii) of subparagraph (A) shall not apply to an acquisition of stock from a related corporation if at least 50 percent in value of the stock of such related corporation was acquired by purchase (within the meaning of subparagraphs (A) and (B)).

(h)(3)(C)(ii) Certain distributions

Clause (i) of subparagraph (A) shall not apply to an acquisition of stock described in Clause (i) of this subparagraph if the corporation acquiring such stock –

(I) made a qualified stock purchase of stock of the related corporation, and
(II) made an election under this section (or is treated under subsection (e) as having made such an election) with respect to such qualified stock purchase.

(h)(3)(C)(iii) Related corporation defined

For purposes of this subparagraph, a corporation is a related corporation if stock owned by such corporation is treated (under section 318(a) other than paragraph (4) thereof) as owned by the corporation acquiring the stock.

(h)(4) Consistency period

(h)(4)(A) In general

Except as provided in subparagraph (B), the term 'consistency period' means the period consisting of –

(i) the 1-year period before the beginning of the 12-month acquisition period for the target corporation,
(ii) such acquisition period (up to and including the acquisition date), and
(iii) the 1-year period beginning on the day after the acquisition date.

(h)(4)(B) Extension where there is plan
The period referred to in subparagraph (A) shall also include any period during which the Secretary determines that there was in effect a plan to make a qualified stock purchase plus 1 or more other qualified stock purchases (or asset acquisitions described in subsection (e)) with respect to the target corporation or any target affiliate.

(h)(5) Affiliated group

The term 'affiliated group' has the meaning given to such term by section 1054(a) (determined without regard to the exceptions contained in section 1504(b)).

(**h)(6) Target affiliate**

(h)(6)(A) In general

A corporation shall be treated as a target affiliate of the target corporation if each of such corporations was, at any time during so much of the consistency period as ends on the acquisition date of the target corporation, a member of an affiliated group which had the same common parent.

(h)(6)(B) Certain foreign corporations, etc.

Except as otherwise provided in regulations (and subject to such conditions as may be provided in regulations) –

> (i) the term 'target affiliate' does not include a foreign corporation, a DISC, or a corporation to which an election under section 936 applies, and
> (ii) stock held by a target affiliate in a foreign corporation or a domestic corporation which is a DISC or described in section 1248(e) shall be excluded from the operation of this section.

(h)(7)((7) Repealed. Pub. L. 100-647, title I, Sec. 1006(e)(20), Nov. 10, 1988, 102 Stat. 3403)

(h)(8) Acquisitions by affiliated group treated as made by 1 corporation

Except as provided in regulations prescribed by the Secretary, stock and asset acquisitions made by members of the same affiliated group shall be treated as made by 1 corporation.

(h)(9) Target not treated as member of affiliated group

Except as otherwise provided in paragraph (10) or in regulations prescribed under this paragraph, the target corporation shall not be treated as a member of an affiliated group with respect to the sale described in subsection (a)(1).

(h)(10)Elective recognition of gain or loss by target corporation, together with nonrecognition of gain or loss on stock sold by selling consolidated group

(h)(10)(A) In general

Under regulations prescribed by the Secretary, an election may be made under which if –

> (i) the target corporation was, before the transaction, a member of the selling consolidated group, and

(ii) the target corporation recognizes gain or loss with respect to the transaction as if it sold all of its assets in a single transaction.

then the target corporation shall be treated as a member of the selling consolidated group with respect to such sale, and (to the extent provided in regulations) no gain or loss will be recognized on stock sold or exchanged in the transaction by members of the selling consolidate group.

(h)(10)(B) Selling consolidate group

For purposes of subparagraph (A), the term 'selling consolidated group' means any group of corporations which (for the taxable period which includes the transaction) –

(i) includes the target corporation, and
(ii) files a consolidate return.

To the extent provided in regulations, such term also includes any affiliated group of corporations which includes the target corporation (whether or not such group files a consolidated return).

(h)(10)(C) Information required to be furnished to the Secretary

Under regulations, where an election is made under subparagraph (A), the purchasing corporation and the common parent of the selling consolidated group shall, at such times and in such manner as may be provided in regulations, furnish to the Secretary the following information:

(i) The amount allocated under subsection (b)(5) to goodwill or going concern value.
(ii) Any modification of the amount described in clause (i).
(iii) Any other information as the Secretary deems necessary to carry out the provisions of this paragraph.

(h)(11) Elective formula for determining fair market value

For purposes of subsection (a)(1), fair market value may be determined on the basis of a formula provided in regulations prescribed by the Secretary which takes into account liabilities and other relevant items.

(h)(12)((12) Repealed. Pub. L, 99-514, title VI, Sec. 631(e)(5), Oct. 22, 1986, 100 Stat. 2273)

(h)(13) Tax on deemed sale not taken into account for estimated tax purposes

For purposes of section 6655, tax attributable to the sale described in subsection (a)(1) shall not be taken into account.

(h)(14) Coordination with section 341

For purposes of determining whether section 341 applies to a disposition within 1 year after the acquisition date of stock by a shareholder (other than the acquiring corporation) who held stock in the target corporation on the acquisition date, section 341 shall be applied without regard to this section.

(h)(15) Combined deemed sale return

Under regulations prescribed by the Secretary, a combined deemed sale return may be filed by all target corporations acquired by a purchasing corporation on the same acquisition date if such target corporations were members of the same selling consolidated group (as defined in subparagraph (B) of paragraph (10)).

(h)(16) Coordination with foreign tax credit provisions

Except as provided in regulations, this section shall not apply for purposes of determining the source or character of any item for purposes of subpart A of part III of subchapter N of this chapter (relating to foreign tax credit). The preceding sentence shall not apply to any gain to the extent such gain in includible in gross income as a dividend under section 1248 (determined without regard to any deemed sale under this section by a foreign corporation).

(i) Regulations

The Secretary shall prescribe such regulations as may be necessary or appropriate to carry out the purposes of this section, including –

(1) regulations to ensure that the purpose of this section to require consistency of treatment of stock and asset sales and purchases may not be circumvented through the use of any provision of law or regulations (including the consolidated return regulations) and

(2) regulations providing for the coordination of the provisions of this section with the provision of this title relating to foreign corporations and their shareholders.

SOURCE

(Added Pub. L. 97-248, title II, Sec. 224(a), Sept. 3, 1982, 96 Stat. 485, and amended Publ. L. 97-448, title III, Sec. 306(a)(8)(A)(i), Jan. 12, 1983, 96 Stat. 2402; Pub. L. 98-369, div. A, title VII, Sec. 712(k)(1)-(5)(D), (6), (7), July 18, 1984, 98 Stat. 948-952; Pub. L. 99-514, title VI, Sec. 631(b), (e)(5), title XII, Sec. 1275(c)(6), title XVIII, Sec. 1804(e)(8)(A), 1899A(7), Oct. 22, 1986, 100 Stat. 2272, 2273, 2599, 2804, 2958; Pub. L. 100-647, title I, Sec. 1006(e)(20), 1012(bb)(5)(A), 1018(d)(9), Nov. 10, 1988, 102 Stat. 3403, 3535, 3581,; Pub. L. 101-508, title XI, Sec. 11323(c)(1), Nov. 5, 1990, 104 Stat. 1288-465).

MISC1

A prior section 338, act Aug. 16, 1954, ch. 736, 68A Stat. 107, which made reference to a special rule relating to the effect on earnings and profits of certain distributions in partial liquidation in section 312(e), was repealed by Pub. L. 97-248, title II, Sec. 222(e)(4), Sept. 3, 1982, 96 Stat. 480.

Amendments

1990 – Subsec. (h)(10)(C). Pub. L. 101-508 added subpar. (C).

1988 – Subsec. (e)(3). Pub. L. 100-647, Sec. 1018(d)(9), substituted ‘which meet the requirements of section 1504(a)(2)’ for ‘which meet the 80 percent requirements of subparagraphs (A) and (B) of subsection (d)(3)’

Subsec. (h)(7). Pub. L. 100-647, Sec. 1006(e)(20), struck out par. (7) which read as follows: ‘Additional percentage must be attributable to purchase, etc. – For purposes of subsection (c)(1), any increase in the maximum percentage of stock taken into account over the percentage of stock (by value) of the target corporation held by the purchasing corporation on the acquisition date shall be taken into account only to the extent such increase is attributable to –

‘(A) purchase, or

‘(B) a redemption of stock of the target corporation –

‘(i) to which section 302(a) applies, or

‘(ii) in the case of a shareholder who is not a corporation, to which section 301 applies.’

Subsec. (h)(16). Pub. L. 100-647, Sec. 1012(bb)(5)(A), added par. 16.

1986 – Subsec. (a)(1). Pub. L. 99-514, Sec. 631(b)(1), struck out ‘to which section 337 applies’ after ‘in a single transaction’.

Subsec. (c). Pub. L. 99-514, Sec. 631(b)(2), struck out subsec. (c) relating to special rules for coordination with section 337 where purchasing corporation holds less than 100 percent of stock, and in case of certain redemptions where an election is made under this section.

Subsec. (d)(3). Pub. L. 99-514, Sec. 1804(e)(8)(A), amended par. (3) generally. Prior to amendment, par. (3) read as follows: 'The term 'qualified stock purchase' means any transaction or series of transactions in which stock of 1 corporation possessing –

'(A) at least 80 percent of the total combined voting power of all classes of stock entitled to vote, and

'(B) at least 80 percent of the total number of shares of all other classes of stock (except nonvoting stock which is limited and preferred as to dividends),

is acquired by another corporation by purchase during the 12-month acquisition period.'

Subsec. (h)(3)(C)(i). Pub. L. 99-514, Sec. 1899A(7), substituted 'subparagraphs' for 'subparagraph'.

Subsec. (h)(5)(B)(i). Pub. L. 99-514, Sec. 1275(c)(6), struck out 'a corporation described in section 934(b),' after 'DISC'.

Subsec. (h)(10)(B). Pub. L. 99-514, Sec. 631(b)(3), inserted provision that to the extent provided in regulations, term 'selling consolidated group' also includes an affiliated group of corporations which includes the target corporation (whether or not such group files a consolidated return).

Subsec. (h)(12). Pub. L. 99-514, Sec. 631(e)(5), struck out par. (12) relating to applicability of section 337 where target had adopted plan for complete liquidation.

1984 – Subsec. (a)(1). Pub. L. 98-369, Sect. 712(k)(1)(A), inserted 'at fair market value' after 'acquisition date'.

Subsec. (b). Pub. L. 98-369, Sec. 712(k)(1)(B), substituted 'Basis of assets after deemed purchase' for 'Price at which deemed sale made' in heading.

Subsec. (b)(1). Pub. L. 98-369, Sec. 712(k)(1)(B), amended par. (1) generally, substituting 'as purchased for an amount equal to the sum of' for 'as sold (and purchased) at an amount equal to' in introductory text, 'purchasing corporation's recently purchase stock, and' for 'purchasing corporation's stock in the target corporation on the acquisition date' in subpar. (A), and 'the basis of the purchasing corporation's non-recently purchased stock' in subpar. (3) in lieu of provision relating to adjustment for liabilities and other relevant items, now covered in par. (2).

Subsec. (b)(2). Pub. L. 98-369, Sec. 712(k)(1)(B), amended par. (2) generally, incorporating former par. (1)(B), provision, inserting heading "Adjustment for liabilities and other relevant items' and substituting 'adjusted under regulations' for 'properly adjusted under regulations'. Former par. (2) redesignated (4).

Subsec. (b)(3). Pub. L. 98-369, Sec. 712(k)(1)(B), added par. (3). Former par. (3) redesignated (5).

Subsec. (b)(4). Publ L. 98-369, Sec. 712(k)(1)(B), redesignated for par. (2) as (4), substituted in introductory text 'corporation's recently purchased stock,' for 'purchasing corporation's stock in the target corporation on the acquisition date', inserted in subpar. (A) 'minus the percentage of stock (by value) in the target corporation attributable to the purchasing corporation's non-recently purchased stock', and substituted in subpar. (B) 'in the target corporation attributable to the purchasing corporation's recently purchased stock' for 'of the tare corporation held by the purchasing corporation on the acquisition date'.

Subsec. (b)(5). Pub. L. 98-369, Sec. 712(k)(1)(B), redesignated former par. (3) as (5) and inserted reference to par. (2).

Subsec. (b)(6). Pub. L. 98-369, Sec. 712(k)(1)(3), added par. (6).

Subsec. (c)(1). Pub. L. 98-369, Sec. 712(k)(2), inserted in last sentence 'and section 333 does not apply to such liquidation'.

Subsec. (e)(2). Pub. L. 98-369, Sec. 712(K)(3), substituted 'wholly' for '(in whole or in part)' in subpar. (B), struck out acquisition by the purchasing corporation if, to the extent provided in regulations, the property acquired is located outside the United States, designated subpar. (E) as (D), and in subpar. (D) as redesignated, inserted 'and meets such conditions as such regulations may provide'.

Subsec. (g)(1). Pub. L. 98-369, Sec. 712(k)(4), substituted 'the 15th day of the 0th month beginning after the month in which the acquisition date occurs' for '75 days after the acquisition date'.

Subsec. (h)(1). Pub. L. 98-369, Sec. 712(k)(5)(C), included within 12-month acquisition period the period beginning with the date on which the acquiring corporation is first considered as owning stock owned by corporation from which acquisition was made.

Subsec. (h)(3)(A)(ii). Pub. L. 98-369, Sec. 712(k)5(D), included references to sections 354, 355, and 356 and in defining 'purchase' provided that the stock not be acquired in any other transaction described in regulations in which the transferor does not recognize the entire amount of the gain or loss realized on the transaction.

Subsec. (h)(3)(B). Pub. L. 98-369, Sec. 712(k)(5)(A), substituted in heading 'under subsection (a)' for 'of stock of subsidiaries' and in text 'The term 'purchase' includes and deemed purchase under subsection (a)(2). The acquisition date for a corporation which is deemed purchased under subsection (a)(2) shall be determined under regulations prescribed by the Secretary' for 'If stock in a corporation is acquired by purchase (within the meaning of subparagraph (A)) and, as a result of such acquisition, the corporation making such purchase is treated (by reason of section 318 (a)) as owning stock in a 3rd corporation, the corporation making such purchase shall be treated as having purchased such stock in such 3rd corporation. The corporation making such purchase shall be treated as purchasing stock in the 3rd corporation by reason of the preceding sentence on the first day on which the purchasing corporation is considered under section 318(a) as owning such stock'.

Subsec. (h)(3)(C). Pub. L. 98-369, Sec. 712(k)(5)(B), added subpar. (C).

Subsec. (h)(7). Pub. L. 98-369, Sec. 712(k)(6)(A), added par. (7) and struck out former par. (7) which had provided that acquisitions by purchasing corporation include acquisitions by corporations affiliated with purchasing corporation. See subsec. (h)(8).

Subsec. (h)(8). Pub. L. 98-369, Sec. 712(k)(6)(A), added par. (8) incorporating former par. (7) provision stating that 'Except as otherwise provided in regulations, an acquisition of stock or assets by any member of an affiliated group which includes a purchasing corporation shall be treated as made by the purchasing corporation.' Former par. (8) redesignated (9).

Subsec. (h)(9). Pub. L. 98-369, Sec. 712(k)(6)(A), (B) redesignated former par. (8) as (9) and substituted therein 'paragraph (10)' for 'paragraph (9)'. Former par. (9) redesignated former par. (9) as (10).

Subsec. (h)(11) to (15). Pub. L. 98-369, Sec. 712(k)(6)(C), added pars. (11) to (15).

Subsec. Sussec. (i). Pub. L. 98-369, Sec. 712(k)(7), provided in introductory text that the regulations be appropriate to carry out the purposes of this section; designated existing provisions as par. (1) and substituted therein 'treatment of stock and asset sales and purchases' for 'treatment of stock and asset purchases with respect to a target corporation and its target affiliates (whether by treating all of them as stock purchases or as asset purchases' before 'may not be circumvented', and added par. (2).

1983 – Subsec. (h)(8), (9). Pub. L. 97-448 added pars. (8) and (9).

Effective Date of 1990 Amendment

Section 11323(d) of Pub. L. 101-508 provided that:

'(1) In general. – Except as provided in paragraph (2), the amendments made by this section (amending this section and sections 1060 and 6724 of this title) shall apply to acquisitions after October 9, 199.

'(2) Binding contract exception. – The amendments made by this section shall not apply to any acquisition pursuant to a written binding contract in effect October 9, 1990, and at all times thereafter before such acquisition.'

Effective Date of 1988 Amendment

Section 1012(bb)(5)(B) of Pub. L. 100-647 provided that: 'The amendment made by subparagraph (A) (amending this section) shall apply to qualified stock purchases (as defined in section 338(d)(3) of the 1986 Code) after March 31, 1988, except that, in the case of an election under section 338(h)(10) of the 1986 Code, such amendment shall apply to qualified stock purchases (as so defined) after June 10, 1987.'

Amendment by sections 1006(e)(20) and 1018(d)(9) of Pub. L. 100-647 effective, except as otherwise provided, as if included in the provision of the Tax Reform Act of 1986, Pub. L. 99-514, to which such amendment relates, see section 1019(a) of Pub. L. 100-647, set out as a not under section 1 of this title.

Effective Date of 1986 Amendment

Amendment by section 631(b), (e)(5) of Pub. L 99-514 applicable to any distribution in complete liquidation, and any sale or exchange, made by a corporation after July 31, 1986, unless such corporation is completely liquidated before Jan. 1, 1987, any transaction described in section 338 of this title for which the acquisition date occurs after Dec. 31, 1986, and any distribution, not in complete liquidation, made after Dec. 31, 1986, with exceptions and special and transitional rules, see section 633 of Pub. L. 99-514, set out as an Effective Date note under section 336 of this title.

Amendment by section 1275(c)(6) of Pub. L. 99-514 applicable to taxable years beginning after Dec. 31, 1986, with certain exceptions and qualifications, see section 1277 of Pub. L. 99-514, set out as a note under section 931 of this title.

Section 1804(e)(8)(B) of Pub. L. 99-514 provided that: 'The amendment made by subparagraph (A) (amending this section) shall apply in cases where the 12-month acquisition period (as defined in section 338(h)(1) of the Internal Revenue Code of 1954 (now 1986) begins after December 31, 1985.'

Effective Date of 1984 Amendment

Section 712(k)(9) of Pub. L. 98-369, as amended by Pub. L. 99-514, Sec. 2, Oct. 22, 1986, 100 Stat. 2095, provided that:

'(A) In general – The amendments made by this subsection (amending this section and sections 269 and 318 of this title) shall not apply to any qualified stock purchase (as defined in section 338(d)(3) of the Internal Revenue Code of 1986 (formerly I.R.C. 1954)) where the acquisition date (as defined in section 338(h)(2) of such Code) is before September 1, 1982.

'(B) Extension of time for making election. – In the case of any qualified stock purchase described in subparagraph (A), the time for making an election under section 338 of such Code shall not expire before the close of the 60th day after the date of the enactment of this Act (July 18, 1984).'

Amendment by section 712(k) of Pub. L. 98=369 effective as if included in the provision of the Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. 97-248, to which such amendment relates, see section 715 of Pub. L. 98-369, setout as a note under section 31 of this title.

Effective Date of 1983 Amendment

Amendment by Pub. L. 97-448 effective as if included in the provisions of the Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. 97-248, to which such amendment relates, see section 311(d) of Pub. L. 97-448m set out as a note under section 31 of this title.

Effective Date

Section 224(d) of Pub. L. 97-248, as amended by Pub. L. 97-448, title III, Sec. 306(a)(8)(B), Jan. 12, 1983, 96 Stat. 2403; Pub. L. 99-514, Sec. 2. Oct. 22, 1986, 100 Stat. 2095, provided that:

> '(1) In general. – The amendments made by this section (enacting this section and amending sections 168, 318, 334, 335, 337, 381, and 617 of this title, shall apply to any target corporation within the meaning of section 338 of the Internal Revenue Code of 1986 (formerly I.R.C. 1954) as added by this section) with respect to which the acquisition date (within the meaning of such section) occurs after August 31, 1982.

'(2) Certain acquisitions before September 1, 1983. – If –

'(A) an acquisition date (within the meaning of section 338 of such Code without regard to paragraph (5) of this subsection) occurred after August 31, 1980, and before September 1, 1982,

'(B) the target corporation (within the meaning of section 338 of such Code) is not liquidated before September 1, 1982, and

'(C) the purchasing corporation (within the meaning of section 338 of such Code makes, not later than November 15, 1982, an election under section 338 of such Code,

then the amendments made by this section shall apply to the acquisition of such target corporation.

'(3) Certain acquisitions of financial institutions. – In any case, in which –

'(A) there is, on July 22, 1982, a binding contract to acquire control (within the meaning of section 368(c) of such Code of any financial institution,

'(B) the approval of one or more regulatory authorizes is required in order to complete such acquisitions, and,

'(C) within 90 days after the date of the final approval of the last such regulatory authority granting final approval, a plan of complete liquidation of such financial institution is adopted, then the purchasing corporation may elect not to have the amendments made by this section apply to the acquisition pursuant to such contract.

'(4) Extension of time for making elections; revocation of elections. –

'(A) Extension. – The time for making an election under section 338 of such Code shall not expire before the close of February 28, 1983.

'(B) Revocation. – Any election made under section 338 of such Code may be revoked by the purchasing corporation if revoked before March 1, 1983.

'(5) Rules for acquisitions described in paragraph (2). –

'(A) In general. – For purposes of applying section 338 of such Code with respect to any acquisition described in paragraph (2) –

'(i) the date selected under subparagraph (3) of this paragraph shall be treated as the acquisition date,

'(ii) a rule similar to the last sentence of section 334(b)(2) of such Code (as in effect on August 31, 1983) shall apply, and

'(iii) subsections (e), (f), and (i) of such section 338, and paragraphs (4), (6), (8), and (9) of subsection (h) of such section 338, shall not apply.

'(B) Selection of acquisition date by purchasing corporation. – The purchasing corporation may select any date for purposes of subparagraph (A) (i) if such date –

'(i) is after the later of June 30, 1982, or the acquisition date (within the meaning of section 338 of such Code without regard to this paragraph), and

'(ii) is on or before the date on which the election described in paragraph (2)(C) is made.'

Treatment of Certain Corporation Organized on February 22, 1983

Section 1804 (e)(9) of Pub. L. 99-514 provided that" 'In the case of a Rhode Island corporation which was organized on February 22, 1983, and which on February 25, 1983 –

'(A) purchased the stock of another corporation,

'(B) filed an election under section 338(g) of the Internal Revenue Code of 1986 with respect to such purchase, and

'(C) merged into the acquired corporation,

such purchase of stock shall be considered as made by the acquiring corporation, such election shall be valid, and the acquiring corporation shall be considered a purchasing corporation for purposes of section 338 of such Code without regard to the duration of the existence of the acquiring corporation.'

Special Rules For Deemed Purchases Under Prior Law

Section 712(k)(10) of Pub. L. 98-369, as amended by Pub. L. 99-514, Sec. 2, Oct. 22, 1986, 100 Stat. 2095, provided that: 'If, before October 20, 1983, a corporation was treated as making a qualified stock purchase (as defined in section 338(d)(3) of the Internal Revenue Code of 1986 (formerly I.R.C. 1954)), but would not be so treated under the amendments made by paragraphs (5) and (6) (amending subsec. (h) and section 318(b)(4) of this title) of this subsection, the amendments made by such paragraphs shall not apply to such purchase unless such corporation elects (at such time and in such manner as the Secretary of the Treasury or his delegate may by regulations prescribe) to have the amendments made by such paragraphs apply.

Exception for Stock Purchases in Contemplation of Target Corporation as Member of Affiliated Group

Section 306(a)(8)(A)(ii) of Pub. L. 97-448, as amended by Pub. L. 98-369, div. A., title VII, Sec. 722(a)(3), July 18, 1984, 98 Stat. 973; Pub. L. 99-514, Sec. 2, Oct. 22, 1986, 100 Stat. 2095, provided that: 'If –

'(I) any portion of a qualified stock purchase is pursuant to a binding contract entered into on or after September 1, 1982, and on or before the date of the enactment of this Act (Jan. 12, 1983), and

'(II) the purchasing corporation establishes by clear and convincing evidence that such contract was negotiated on the contemplation that, with respect to the deemed sale under section 338 of the Internal Revenue Code of 1986 (formerly I.R.C. 1954), the target corporation would be treated as a member of the affiliated group which includes the selling corporation,

then the amendment made by clause (i) (amending subsec. (h)) shall not apply to such qualified stock purchase.'

SECREF

Section Referred to in Other Sections

This section is referred to in section 172, 269, 318, 1060, 1362, 6724 of this title; title 45 section 1347.

SEC. 2702. SPECIAL VALUATION RULES IN CASE OF TRANSFERS OF INTERESTS IN TRUSTS

TITLE 26, Subtitle B, CHAPTER 14, Sec. 2702

(a) Valuation rules

(1) In general

Solely for purposes of determining whether a transfer of an interest in trust to (or for the benefit of) a member of the transferor's family is a gift (and the value of such transfer), the value of any interest in such trust retained by the transferor or any applicable family member (as defined in section 2701(e)(2)) shall be determined as provided in paragraph (2).

(2) Valuation of retained interests

(A) In general

The value of any retained interest which is not a qualified interest shall be treated as being zero.

(B) Valuation of qualified interest

The value of any retained interest which is a qualified interest shall be determined under section 7520.

(3) Exceptions

(A) In general

This subsection shall not apply to any transfer -

(i) to the extent such transfer is an incomplete transfer, or

(ii) if such transfer involves the transfer of an interest in trust all the property in which consists of a residence to be used as a personal residence by persons holding term interests in such trust.

(B) Incomplete transfer

For purposes of subparagraph (A), the term "incomplete transfer" means any transfer which would not be treated as a gift whether or not consideration was received for such transfer.

(b) Qualified interest

For purposes of this section, the term "qualified interest" means -

(1) any interest which consists of the right to receive fixed amounts payable not less frequently than annually,

(2) any interest which consists of the right to receive amounts which are payable not less frequently than annually and are a fixed percentage of the fair market value of the property in the trust (determined annually), and

(3) any non-contingent remainder interest if all of the other interests in the trust consist of interests described in paragraph (1) or (2).

(c) Certain property treated as held in trust

For purposes of this section -

(1) In general

The transfer of an interest in property with respect to which there is 1 or more term interests shall be treated as a transfer of an interest in a trust.

(2) Joint purchases

If 2 or more members of the same family acquire interests in any property described in paragraph (1) in the same transaction (or a series of related transactions), the person (or persons) acquiring the term interests in such property shall be treated as having acquired the entire property and then transferred to the other persons the interests acquired by such other persons in the transaction (or series of transactions). Such transfer shall be treated as made in exchange for the consideration (if any) provided by such other persons for the acquisition of their interests in such property.

(3) Term interest

The term "term interest" means -

(A) a life interest in property, or

(B) an interest in property for a term of years.

(4) Valuation rule for certain term interests

If the non-exercise of rights under a term interest in tangible property would not have a substantial effect on the valuation of the remainder interest in such property -

(A) subparagraph (A) of subsection (a)(2) shall not apply to such term interest, and

(B) the value of such term interest for purposes of applying subsection (a)(1) shall be the amount which the holder of the term interest establishes as the amount for which such interest could be sold to an unrelated third party.

(d) Treatment of transfers of interests in portion of trust

In the case of a transfer of an income or remainder interest with respect to a specified portion of the property in a trust, only such portion shall be taken into account in applying this section to such transfer.

(e) Member of the family

For purposes of this section, the term "member of the family" shall have the meaning given such term by section 2704(c)(2).

SEC. 2703. CERTAIN RIGHTS AND RESTRICTIONS DISREGARDED

TITLE 26, Subtitle B, CHAPTER 14, Sec. 2703

(a) General rule

For purposes of this subtitle, the value of any property shall be determined without regard to -

(1) any option, agreement, or other right to acquire or use the property at a price less than the fair market value of the property (without regard to such option, agreement, or right), or

(2) any restriction on the right to sell or use such property.

(b) Exceptions

Subsection (a) shall not apply to any option, agreement, right, or restriction which meets each of the following requirements:

(1) It is a bona fide business arrangement.

(2) It is not a device to transfer such property to members of the decedent's family for less than full and adequate consideration in money or money's worth.

(3) Its terms are comparable to similar arrangements entered into by persons in an arms' length transaction.

SEC. 2704. TREATMENT OF CERTAIN LAPSING RIGHTS AND RESTRICTIONS

TITLE 26, Subtitle B, CHAPTER 14, Sec. 2704

(a) Treatment of lapsed voting or liquidation rights

(1) In general

For purposes of this subtitle, if -

(A) there is a lapse of any voting or liquidation right in a corporation or partnership, and

(B) the individual holding such right immediately before the lapse and members of such individual's family hold, both before and after the lapse, control of the entity, such lapse shall be treated as a transfer by such individual by gift, or a transfer which is includible in the gross estate of the decedent, whichever is applicable, in the amount determined under paragraph (2).

(2) Amount of transfer

For purposes of paragraph (1), the amount determined under this paragraph is the excess (if any) of

(A) the value of all interests in the entity held by the individual described in paragraph (1) immediately before the lapse (determined as if the voting and liquidation rights were nonlapsing), over

(B) the value of such interests immediately after the lapse.

(3) Similar rights

The Secretary may by regulations apply this subsection to rights similar to voting and liquidation rights.

(b) Certain restrictions on liquidation disregarded

(1) In general

For purposes of this subtitle, if -

(A) there is a transfer of an interest in a corporation or partnership to (or for the benefit of) a member of the transferor's family, and

(B) the transferor and members of the transferor's family hold, immediately before the transfer, control of the entity, any applicable restriction shall be disregarded in determining the value of the transferred interest.

(2) Applicable restriction

For purposes of this subsection, the term "applicable restriction" means any restriction -

(A) which effectively limits the ability of the corporation or partnership to liquidate, and

(B) with respect to which either of the following applies:

(i) The restriction lapses, in whole or in part, after the transfer referred to in paragraph (1).

(ii) The transferor or any member of the transferor's family, either alone or collectively, has the right after such transfer to remove, in whole or in part, the restriction.

(3) Exceptions

The term "applicable restriction" shall not include -

(A) any commercially reasonable restriction which arises as part of any financing by the corporation or partnership with a person who is not related to the transferor or transferee, or a member of the family of either, or

(B) any restriction imposed, or required to be imposed, by any Federal or State law.

(4) Other restrictions

The Secretary may by regulations provide that other restrictions shall be disregarded in determining the value of the transfer of any interest in a corporation or partnership to a member of the transferor's family if such restriction has the effect of reducing the value of the transferred interest for purposes of this subtitle but does not ultimately reduce the value of such interest to the transferee.

(c) Definitions and special rules

For purposes of this section -

(1) Control

The term "control" has the meaning given such term by section 2701(b)(2).

(2) Member of the family

The term "member of the family" means, with respect to any individual -

(A) such individual's spouse,

(B) any ancestor or lineal descendant of such individual or such individual's spouse,

(C) any brother or sister of the individual, and

(D) any spouse of any individual described in subparagraph (B) or (C).

(3) Attribution

The rule of section 2701(e)(3)(A) shall apply for purposes of determining the interests held by any individual.

1966-1 C.B. 36

Sec. 162
Sec. 451
Sec. 461

Amplified by Rev. Rul. 72-366

IRS Headnote

The additional premium prepayments which an insured savings and loan institution is required to pay to the Federal Savings and Loan Insurance Corporation under the provision of section 404 of the National Housing Act, as amended, are not deductible when paid and may be deducted only when any possibility of their return is precluded. With respect to an accrual basis institution, earnings on such premiums are includible in the gross income of that institution until such time as the earnings are no longer available for losses of the FSLIC. With respect to a cash basis institution, earnings on such premiums are includible in the gross income of the institution credited therewith only when such earnings are used to pay its obligations or become available to that institution without substantial restriction or limitation.

Full Text

Rev. Proc. 66-49

SECTION 1. PURPOSE.
The purpose of this procedure is to provide information and guidelines for taxpayers, individual appraisers, and valuation groups relative to appraisals of contributed property for Federal income tax purposes. The procedures outlined are applicable to all types of noncash property for which an appraisal is required such as real property, tangible or intangible personal property, and securities. These procedures are also appropriate for unique properties such as art objects, literary manuscripts, antiques, etc., with respect to which the determination of value often is more difficult.

SECTION. 2. LAW AND REGULATIONS.
.01 Numerous sections of the Internal Revenue Code of 1954, as amended, give rise to a determination of value for Federal tax purposes; however, the significant section for purposes of this Revenue Procedure is section 170, Charitable, Etc., Contributions and Gifts.

.02 Value is defined in section 1.170-1(c) of the Income Tax Regulations as follows:
* * *. The fair market value is the price at which the property would [*2] change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts. * * *

.03 This section further provides that:
* * *. If the contribution is made in property of a type which the taxpayer sells in the course of his business, the fair market value is the price which the taxpayer would have received if he had sold the contributed property in the lowest usual market in which he customarily sells, at the time and place of contribution (and in the case of a contribution of goods in quantity, in the quantity contributed). * * *

.04 As to the measure of proof in determining the fair market value, all factors bearing on value are relevant including, where pertinent, the cost, or selling price of the item, sales of comparable properties, cost of reproduction, opinion evidence and appraisals. Fair market value depends upon value in the market and not on intrinsic worth.

.05 The cost or actual selling price of an item within a reasonable time before or after the valuation date may be the best evidence of its fair market value. Before such information is taken into account, it must be [*3] ascertained that the transaction was at arm's length and that the parties were fully informed as to all relevant facts. Absent 1258 such evidence, even the sales price of the item in question will not be persuasive.

.06 Sales of similar properties are often given probative weight by the courts in establishing fair market value. The weight to be given such evidence will be affected by the degree of similarity to the property under appraisal and the proximity of the date of sale to the valuation date.

.07 With respect to reproductive cost as a measure of fair market value, it must be shown that there is a probative correlation between the cost of reproduction and fair market value. Frequently, reproductive cost will be in excess of the fair market value.

.08 Generally, the weight to be given to opinion evidence depends on its origin and the thoroughness with which it is supported by experience and facts. It is only where expert opinion is supported by facts having strong probative value, that the opinion testimony will in itself be given appropriate weight. The underlying facts must corroborate the opinion; otherwise such opinion will be discounted or disregarded.

.09 [*4] The weight to be accorded any appraisal made either at or after the valuation date will depend largely upon the competence and knowledge of the appraiser with respect to the property and the market for such property.

SECTION. 3. APPRAISAL FORMAT.

.01 When it becomes necessary to secure an appraisal in order to determine the values of items for Federal income tax purposes, such appraisals should be obtained from qualified and reputable sources, and the appraisal report should accompany the return when it is filed. The more complete the information filed with a tax return the more unlikely it will be that the Internal Revenue Service will find it necessary to question items on it. Thus, when reporting a deduction for charitable contributions on an income tax return, it will facilitate the review and the acceptance of the returned values if any appraisals which have been secured are furnished. The above-mentioned regulations prescribe that support of values claimed should be submitted and a properly prepared appraisal by a person qualified to make such an appraisal may well constitute the necessary substantiation. In this respect, it is not intended that all value determinations [*5] be supported by formal written appraisals as outlined m detail below. This is particularly applicable to minor items of property or where the value of the property is easily ascertainable by methods other than appraisal.

.02 In general, an appraisal report should contain at least the following:

(1) A summary of the appraiser's qualifications.
(2) A statement of the value and the appraiser's definition of the value he has obtained.
(3) The bases upon which the appraisal was made, including any restrictions, understandings, or covenants limiting the use or disposition of the property.
(4) The date as of which the property was valued.
(5) The signature of the appraiser and the date the appraisal was made. 1259

.03 An example of the kind of data which should be contained in a typical appraisal is included below. This relates to the valuation of art objects, but a similar detailed breakdown can be outlined for any type of property. Appraisals of art objects, paintings in particular, should include:

(1) A complete description of the object, indicating the size, the subject matter, the medium, the name of the artist, approximate date created, the interest transferred, [*6] etc.
(2) The cost, date, and manner of acquisition.
(3) A history of the item including proof of authenticity such as a certificate of authentication if such exists.
(4) A photograph of a size and quality fully identifying the subject matter, preferably a 10" x 12" or larger print.
(5) A statement of the factors upon which the appraisal was based, such as:
(a) Sales of other works by the same artist particularly on or around the valuation date.
(b) Quoted prices in dealers' catalogs of the artist's works or of other artists of comparable stature.
(c) The economic state of the art market at or around the time of valuation, particularly with respect to the specific property.
(d) A record of any exhibitions at which the particular art object had been displayed.
(e) A statement as to the standing of the artist in his profession and in the particular school or time period.

.04 Although an appraisal report meets these requirements, the Internal Revenue Service is not relieved of the responsibility of reviewing appraisals to the extent deemed necessary.

SECTION. 4. REVIEW OF VALUATION APPRAISALS.
.01 While the Service is responsible for reviewing appraisals, it [*7] is not responsible for making appraisals; the burden of supporting the fair market value listed on a return is the taxpayer's. The Internal Revenue Service cannot accord recognition to any appraiser or group of appraisers from the standpoint of unquestioned acceptance of their appraisals. Furthermore, the Service cannot approve valuations or appraisals prior to the actual filing " of the tax return to which the appraisal pertains and cannot issue advance rulings ~: approving or disapproving such appraisals."

.02 In determining the acceptability of the claimed value of the donated property, the Service may either accept the value claimed based on information or appraisals submitted with the return or make its own determination as to the fair market value. In either instance, the Service may find it necessary to:
(1) contact the taxpayer and ask for additional information,
(2) refer the valuation pro blem to a Service appraiser or valuation specialist,
(3) recommend that an independent appraiser be employed by the Service to appraise the asset in question. (This latter course is frequently used by the Service when objects requiring appraisers of highly specialized experience and [*8] knowledge are involved.)

FINANCIAL ACCOUNTING STATEMENT SUMMARIES

Not all 159 statements issued by the Financial Accounting Statements Board are listed here. Those summarized herein are often considered applicable to valuations, but may not be the only ones applicable. Please see their website for more information: http://www.fasb.org/st/index.shtml#fas1

Statement No. 2 *Accounting for Research and Development Costs*
(Issued 10/74)

This Statement establishes standards of financial accounting and reporting for research and development (R&D) costs. This Statement requires that R&D costs be charged to expense when incurred. It also requires a company to disclose in its financial statements the amount of R&D that it charges to expense.

Statement No. 5 ***Accounting for Contingencies***
(Issued 3/75)

This Statement establishes standards of financial accounting and reporting for loss contingencies. It requires accrual by a charge to income (and disclosure) for an estimated loss from a loss contingency if two conditions are met: (a) information available prior to issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements, and (b) the amount of loss can be reasonably estimated. Accruals for general or unspecified business risks ("reserves for general contingencies") are no longer permitted. Accounting for gain contingencies under Accounting Research Bulletin No. 50, Contingencies, remains unchanged; they are recognized when realized.

Statement No. 13* ***Accounting for Leases***
(Issue Date 11/76)

This Statement establishes standards of financial accounting and reporting for leases by lessees and lessors. For lessees, a lease is a financing transaction called a capital lease if it meets any one of four specified criteria; if not, it is an operating lease. Capital leases are treated as the acquisition of assets and the incurrence of obligations by the lessee. Operating leases are treated as current operating expenses. For lessors, a financing transaction lease is classified as a sales-type, direct financing, or leveraged lease. To be a sales-type, direct financing, or leveraged lease, the lease must meet one of the same criteria used for lessees to classify a lease as a capital lease, in addition to two criteria dealing with future uncertainties. Leveraged leases also have to meet further criteria. These types of leases are recorded as investments under different specifications for each type of lease. Leases not meeting the criteria are considered operating leases and are accounted for like rental property.

Statement No. 15* ***Accounting by Debtors and Creditors for Troubled Debt Restructurings***
(Issued 6/77)

This Statement establishes standards of financial accounting and reporting by the debtor and by the creditor for a troubled debt restructuring. This Statement requires adjustments in payment terms from a troubled debt restructuring generally to be considered adjustments of the yield (effective interest rate) of the loan. So long as the aggregate payments (both principal and interest) to be received by the creditor are not les s than the creditor's carrying amount of the loan, the creditor recognizes no loss, only a lower yield over the term of the restructured debt. Similarly, the debtor recognizes no gain unless the aggregate future payments (including amounts contingently payable) are less than the debtor's recorded liability.

Statement No. 17 ***Accounting for Leases: Initial Direct Costs--an amendment of FASB Statement No. 13*** (Statement Issued 11/77)

This Statement changes the definition of initial direct costs found in paragraph 5(m) of FASB Statement No. 13, *Accounting for Leases*, to be costs incurred by the lessor directly associated with negotiating and consummating a completed lease transaction. Examples of these costs include commissions, legal fees, and processing costs.

Statement No. 24 ***Reporting Segment Information in Financial Statements That Are Presented in Another Enterprise's Financial Report—an amendment of FASB Statement No. 14***
(Issue Date 12/78)

If consolidated or combined financial statements are accompanied by a complete set of separate parent company or investee company (or group of investee companies) financial statements, this Statement eliminates the requirement to disclose segment information in the separate financial statements of:

- The parent company or affiliated companies that have been consolidated or combined in that financial report
- Certain foreign investee companies
- Investee companies accounted for by the cost or equity method if that segment information is not significant in relation to the consolidated or combined financial statements

Statement No. 58 ***Capitalization of Interest Cost in Financial Statements That Include Investments Accounted for by the Equity Method—an Amendment of FASB Statement No. 34***
(Issued 4/82)

This Statement amends FASB Statement No. 34, *Capitalization of Interest Cost*, (1) to limit capitalization of consolidated interest cost to qualifying assets of the parent company and consolidated subsidiaries and (2) to include investments (equity, loans, and advances) accounted for by the equity method as qualifying assets of the investor while the investee has activities in progress necessary to commence its planned principal operations provided that the investee's activities include the use of funds to acquire qualifying assets for its operations. This Statement does not affect the accounting for and reporting of capitalized interest cost in the separate financial statements of investees.

Statement No. 43 ***Accounting for Compensated Absences***
(Issued 11/80)

This Statement requires an employer to accrue a liability for employees' rights to receive compensation for future absences when certain conditions are met. For example, this Statement requires a liability to be accrued for vacation benefits that employees have earned but have not yet taken; however, it generally does not require a liability to be accrued for future sick pay benefits, holidays, and similar compensated absences until employees are actually absent.

Statement No. 48 ***Revenue Recognition When Right of Return Exists***
(Issued 6/81)

This Statement specifies how an enterprise should account for sales of its product in which the buyer has a right to return the product. Revenue from those sales transactions shall be recognized at time of sale only if *all* of the conditions specified by the Statement are met. If those conditions are not met, revenue recognition is postponed; if they are met, sales revenue and cost of sales reported in the income statement shall be reduced to reflect estimated returns and expected costs or losses shall be accrued.

Statement No. 49 ***Accounting for Product Financing Arrangements***
(Issued 6/81)

This Statement specifies criteria for determining when an arrangement involving the sale of inventory is in substance a financing arrangement. A product financing arrangement is a transaction in which an enterprise sells and agrees to repurchase inventory with the repurchase price equal to the original sale price plus carrying and financing costs, or other similar transactions. This Statement requires that a product financing arrangement be accounted for as a borrowing rather than as a sale.

Statement No. 123 ***Share-Based Payment***
(Revised 2004)

This Statement establishes financial accounting and reporting standards for stock-based employee compensation plans. Those plans include all arrangements by which employees receive shares of stock or other equity instruments of the employer or the employer incurs liabilities to employees in amounts based on the price of the employer's stock. Examples are stock purchase plans, stock options, restricted stock, and stock appreciation rights.

This Statement also applies to transactions in which an entity issues its equity instruments to acquire goods or services from nonemployees. Those transactions must be accounted for based on the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable.

Accounting for Awards of Stock-Based Compensation to Employees
This Statement defines a fair value based method of accounting for an employee stock option or similar equity instrument and encourages all entities to adopt that method of accounting for all of their employee stock compensation plans. However, it also allows an entity to continue to measure compensation cost for those plans using the intrinsic value based method of accounting prescribed by APB Opinion No. 25, Accounting for Stock Issued to Employees. The fair value based method is preferable to the Opinion 25 method for purposes of justifying a change in accounting principle under APB Opinion No. 20, Accounting Changes. Entities electing to remain with the accounting in Opinion 25 must make pro forma disclosures of net income and, if presented, earnings per share, as if the fair value based method of accounting defined in this Statement had been applied.

Under the fair value based method, compensation cost is measured at the grant date based on the value of the award and is recognized over the service period, which is usually the vesting period. Under the intrinsic value based method, compensation cost is the excess, if any, of the quoted market price of the stock at grant date or other measurement date over the amount an employee must pay to acquire the stock. Most fixed stock option plans-the most common type of stock compensation plan-have no intrinsic value at grant date, and under Opinion 25 no compensation cost is recognized for them. Compensation cost is recognized for other types of stock-based compensation plans under Opinion 25, including plans with variable, usually performance-based, features.

Stock Compensation Awards Required to Be Settled by Issuing Equity Instruments

Stock Options
For stock options, fair value is determined using an option-pricing model that takes into account the stock price at the grant date, the exercise price, the expected life of the option, the volatility of the underlying stock and the expected dividends on it, and the risk-free interest rate over the expected life of the option. Nonpublic entities are permitted to exclude the volatility factor in estimating the value of their stock options, which results in measurement at minimum value. The fair value of an option estimated at the

grant date is not subsequently adjusted for changes in the price of the underlying stock or its volatility, the life of the option, dividends on the stock, or the risk-free interest rate.

Nonvested Stock
The fair value of a share of nonvested stock (usually referred to as restricted stock) awarded to an employee is measured at the market price of a share of a nonrestricted stock on the grant date unless a restriction will be imposed after the employee has a vested right to it, in which case fair value is estimated taking that restriction into account.

Employee Stock Purchase Plans
An employee stock purchase plan that allows employees to purchase stock at a discount from market price is not compensatory if it satisfies three conditions: (a) the discount is relatively small (5 percent or less satisfies this condition automatically, though in some cases a greater discount also might be justified as noncompensatory), (b) substantially all full-time employees may participate on an equitable basis, and (c) the plan incorporates no option features such as allowing the employee to purchase the stock at a fixed discount from the lesser of the market price at grant date or date of purchase.

Stock Compensation Awards Required to Be Settled by Paying Cash
Some stock-based compensation plans require an employer to pay an employee, either on demand or at a specified date, a cash amount determined by the increase in the employer's stock price from a specified level. The entity must measure compensation cost for that award in the amount of the changes in the stock price in the periods in which the changes occur.

Disclosures
This Statement requires that an employer's financial statements include certain disclosures about stock-based employee compensation arrangements regardless of the method used to account for them.

The pro forma amounts required to be disclosed by an employer that continues to apply the accounting provisions of Opinion 25 will reflect the difference between compensation cost, if any, included in net income and the related cost measured by the fair value based method defined in this Statement, including tax effects, if any, that would have been recognized in the income statement if the fair value based method had been used. The required pro forma amounts will not reflect any other adjustments to reported net income or, if presented, earnings per share.

Statement No. 141* *Business Combinations*
(Issue Date 6/01)

This Statement addresses financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, *Business Combinations*, and FASB Statement No. 38, *Accounting for Pre-acquisition Contingencies of Purchased Enterprises*. All business combinations in the scope of this Statement are to be accounted for using one method, the purchase method.

Statement No. 142* *Goodwill and Other Intangible Assets*
(Issue Date 6/01)

This Statement addresses financial accounting and reporting for acquired goodwill and other intangible assets and supersedes APB Opinion No. 17, *Intangible Assets.* It addresses how intangible assets that are acquired individually or with a group of other assets (but not those acquired in a business combination) should be accounted for in financial statements upon their acquisition. This Statement also addresses how goodwill and other intangible assets should be accounted for after they have been initially recognized in the financial statements.

Statement No. 145 ***Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections***
(Issue Date 4/02)

This Statement rescinds FASB Statement No. 4, *Reporting Gains and Losses from Extinguishment of Debt*, and an amendment of that Statement, FASB Statement No. 64, *and Extinguishments of Debt Made to Satisfy Sinking-Fund Requirements.* This Statement also rescinds FASB Statement No. 44, *Accounting for Intangible Assets of Motor Carriers.* This Statement amends FASB Statement No. 13, *Accounting for Leases,* to eliminate an inconsistency between the required accounting for sale-leaseback transactions and the required accounting for certain lease modifications that have economic effects that are similar to sale-leaseback transactions. This Statement also amends other existing authoritative pronouncements to make various technical corrections, clarify meanings, or describe their applicability under changed conditions.

Statement No. 157 ***Fair Value Measurements***
(Issue Date 09/06)

This Statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. Earlier application is encouraged.

This Statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements. This Statement applies under other accounting pronouncements that require or permit fair value measurements, the Board having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, this Statement does not require any new fair value measurements. However, for some entities, the application of this Statement will change current practice.

Statement No. 158 ***Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans—an amendment of FASB Statements No. 87, 88, 106, and 132(R)***
(Issue Date 09/06)

This Statement improves financial reporting by requiring an employer to recognize the overfunded or underfunded status of a defined benefit postretirement plan (other than a multiemployer plan) as an asset or liability in its statement of financial position and to recognize changes in that funded status in the year in which the changes occur through comprehensive income of a business entity or changes in unrestricted net assets of a not-for-profit organization. This Statement also improves financial reporting by requiring an employer to measure the funded status of a plan as of the date of its year-end statement of financial position, with limited exceptions.

This Statement requires an employer that is a business entity and sponsors one or more single-employer defined benefit plans to:

Recognize the funded status of a benefit plan—measured as the difference between plan assets at fair value (with limited exceptions) and the benefit obligation—in its statement of financial position. For a pension plan, the benefit obligation is the projected benefit obligation; for any other postretirement benefit plan, such as a retiree health care plan, the benefit obligation is the accumulated postretirement benefit obligation.

Recognize as a component of other comprehensive income, net of tax, the gains or losses and prior service costs or credits that arise during the period but are not recognized as components of net periodic benefit cost pursuant to FASB Statement No. 87, Employers' Accounting for Pensions, or No. 106, Employers' Accounting for Postretirement Benefits Other Than Pensions. Amounts recognized in accumulated other comprehensive income, including the gains or losses, prior service costs or credits, and the transition asset or obligation remaining from the initial application of Statements 87 and 106, are adjusted as they are subsequently recognized as components of net periodic benefit cost pursuant to the recognition and amortization provisions of those Statements.

Measure defined benefit plan assets and obligations as of the date of the employer's fiscal year-end statement of financial position (with limited exceptions).

Disclose in the notes to financial statements additional information about certain effects on net periodic benefit cost for the next fiscal year that arise from delayed recognition of the gains or losses, prior service costs or credits, and transition asset or obligation.

This Statement also applies to a not-for-profit organization or other entity that does not report other comprehensive income. This Statement's reporting requirements are tailored for those entities.

This Statement amends Statement 87, FASB Statement No. 88, Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits, Statement 106, and FASB Statement No. 132 (revised 2003), Employers' Disclosures about Pensions and Other Postretirement Benefits, and other related accounting literature. Upon initial application of this Statement and subsequently, an employer should continue to apply the provisions in Statements 87, 88, and 106 in measuring plan assets and benefit obligations as of the date of its statement of financial position and in determining the amount of net periodic benefit cost.

Statement No. 159 *The Fair Value Option for Financial Assets and Financial Liabilities—Including an amendment of FASB Statement No. 115 (Issue Date 02/07)*

This Statement is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. Early adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided the entity also elects to apply the provisions of FASB Statement No. 157, Fair Value Measurements.

This Statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements. This Statement applies under other accounting pronouncements that require or permit fair value measurements, the Board having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, this Statement does not require any new fair value measurements. However, for some entities, the application of this Statement will change current practice.

*FASB pronouncements existing at the date of FASB 157 that refer to fair value. Certain sections of these statements are amended for FASB 157. Refer to Appendix E of the full FASB 157 pronouncement.

APPENDIX III

IRS Business Valuation Guidelines Approved 2006

NOTE:

1. **The IRS prepared these guidelines for their internal valuation analyses and reports; these are not meant for valuation analysts to use in providing reports to the IRS. Do note that the Service is using the International Glossary of Business Valuation Terms, a project in which NACVA was an active participant.**

2. **These guidelines are the sole responsibility of the IRS and have not been altered or edited for grammar, text, format or spelling by NACVA.**

Internal Revenue Service Business Valuation Guidelines

Table of Contents

4.48.4.1
(07-01-2006)
Introduction

(1) The purpose of this document is to provide guidelines applicable to all IRS personnel engaged in valuation practice (herein referred to as "valuators") relating to the development, resolution and reporting of issues involving business valuations and similar valuation issues. Valuators must be able to reasonably justify any departure from these guidelines.

(2) This document incorporates by reference, the ethical and conduct provisions, contained in the Office of Government Ethics (OGE) Standards of Ethical Conduct, applicable to all IRS employees.

(3) Valuations of assets owned and/or transferred by or between controlled taxpayers (within the meaning of Treasury Regulation section 1.482-1(i)(5)) may present substantive issues that are not addressed in these guidelines.

4.48.4.2
(07-01-2006)
Development Guidelines

(1) Successful completion of a valuation assignment includes planning, identifying critical factors, documenting specific information, and analyzing the relevant information. All relevant activities will be documented in the workpapers.

(2) A review appraisal may be the best approach to the assignment.

4.48.4.2.1
(07-01-2006)
Planning

(1) Valuators will adequately plan the valuation assignment. Their managers will supervise the staff involved in the valuation process.

(2) Quality planning is a continual process throughout the valuation assignment.

4.48.4.2.2
(07-01-2006)
Identifying

(1) In developing a valuation conclusion, valuators should define the assignment and determine the scope of work necessary by identifying the following:

a. Property to be valued
b. Interest to be valued
c. Effective valuation date
d. Purpose of valuation
e. Use of valuation
f. Statement of value
g. Standard and definition of value
h. Assumptions
i. Limiting conditions
j. Scope limitations
k. Restrictions, agreements and other factors that may influence value
l. Sources of information

4.48.4.2.3
(07-01-2006)
Analyzing

(1) In developing a valuation conclusion, valuators should analyze the relevant information necessary to accomplish the assignment including:

- The nature of the business and the history of the enterprise from its inception
- The economic outlook in general and the condition and outlook of the specific industry in particular
- The book value of the stock or interest and the financial condition of the business
- The earning capacity of the company
- The dividend-paying capacity
- Existence or non existence of goodwill or other intangible value
- Sales of the stock or interest and the size of the block of stock to be valued

- The market price of stocks or interests of corporations or entities engaged in the same or a similar line of business having their stocks or interests actively traded in a free and open market, either on an exchange or over the counter
- Other relevant information

(2) The three generally accepted valuation approaches are the asset-based approach, the market approach and the income approach. Consideration should be given to all three approaches. Professional judgment should be used to select the approach(es) ultimately used and the method(s) within such approach(es) that best indicate the value of the business interest.

(3) Historical financial statements should be analyzed and, if necessary, adjusted to reflect the appropriate asset value, income, cash flows and/or benefit stream, as applicable, to be consistent with the valuation methodologies selected by the valuator.

(4) The valuator should select the appropriate benefit stream, such as pre-tax or after-tax income and/or cash flows, and select appropriate discount rates, capitalization rates or multiples consistent with the benefit stream selected within the relevant valuation methodology.

(5) The valuator will determine an appropriate discount and/or capitalization rate after taking into consideration all relevant factors such as:

- The nature of the business
- The risk involved
- The stability or irregularity of earnings
- Other relevant factors

(6) As appropriate for the assignment, and if not considered in the process of determining and weighing the indications of value provided by other procedures, the valuator should separately consider the following factors in reaching a final conclusion of value:

a. Marketability, or lack thereof, considering the nature of the business, business ownership interest or security, the effect of relevant contractual and legal restrictions, and the condition of the markets.
b. Ability of the appraised interest to control the operation, sale, or liquidation of the relevant business.
c. Other levels of value considerations (consistent with the standard of value in Section 4.48.4.2.2 (1) list item g) such as the impact of strategic or synergistic contributions to value.
d. Such other factors which, in the opinion of the valuator, that are appropriate for consideration.

4.48.4.2.4
(07-01-2006)
Workpapers

(1) Workpapers should document the steps taken, techniques used, and provide the evidence to support the facts and conclusions in the final report.

(2) Valuators will maintain a detailed case activity record (Form 9984, Examining Officer's Activity Record) which:

- Identifies actions taken and indicates time charged
- Identifies contacts including name, phone number, subject, commitments, etc.
- Documents delays in the examination

(3) The case activity record, along with the supporting workpapers, should justify that the time spent is commensurate with work performed.

4.48.4.2.5
(07-01-2006)
Reviewing

(1) In reviewing a business valuation and reporting the results of that review, a valuator should form an opinion as to the adequacy and appropriateness of the report being reviewed and should clearly disclose the scope of work of the review process undertaken.

(2) In reviewing a business valuation, a valuator should:

a. Identify the taxpayer and intended use of the opinions and conclusions, and the purpose of the review assignment.
b. Identify the report under review, the property interest being valued, the effective date of the valuation, and the date of the review.
c. Identify the scope of the review process conducted.
d. Determine the completeness of the report under review.
e. Determine the apparent adequacy and relevance of the data and the propriety of any adjustments to the data.
f. Determine the appropriateness of the valuation methods and techniques used and develop the reasons for any disagreement.
g. Determine whether the analyses, opinions, and conclusions in the report under review are appropriate and reasonable, and develop the reasons for any disagreement.

(3) In the event of a disagreement with the report's factual representations, underlying assumptions, methodology, or conclusions, a valuator should conduct additional fact-finding, research, and/or analyses necessary to arrive at an appropriate value for the property.

4.48.4.3
(07-01-2006)
Resolution Guidelines

(1) Valuators will make efforts to obtain a resolution of the case after fully considering all relevant facts.

4.48.4.3.1
(07-01-2006)
Objective

(1) The objective is to resolve the issue as early in the examination as possible. Credible and compelling work by the valuator will facilitate resolution of issues without litigation.

(2) The valuator will work in concert with the internal customer and taxpayer to attempt to resolve all outstanding issues.

4.48.4.3.2
(07-01-2006)
Arriving at Conclusions

(1) Once the valuator has all the information to be considered in resolving the issue, the valuator will use his/her professional judgment in considering this information to arrive at a conclusion.

(2) Valuators may not have all of the information they would like to have to definitively resolve an issue. Valuators, therefore, should decide when they have substantially enough information to make a proper determination.

(3) Valuators will employ independent and objective judgment in reaching conclusions and will decide all matters on their merits, free from bias, advocacy, and conflicts of interest.

4.48.4.4
(07-01-2006)
Reporting Guidelines

(1) Valuators should prepare reports of their findings.

(2) This section requires specific information to be included or addressed in each report.

4.48.4.4.1
(07-01-2006)
Overview

(1) The primary objective of a valuation report is to provide convincing and compelling support for the conclusions reached.

(2) Valuation reports should contain all the information necessary to allow a clear understanding of the valuation analyses and demonstrate how the conclusions were reached.

4.48.4.4.2
(07-01-2006)
Report Contents

(1) The extent and content of the report prepared depends on the needs of each case.

(2) Valuation reports should clearly communicate the results and identify the information relied upon in the valuation process. The valuation report should effectively communicate the methodology and reasoning, as well as identify the supporting documentation.

(3) Subject to the type of report being written, valuation reports should generally contain sufficient information relating to the items in Identifying and Analyzing to ensure consistency and quality.

(4) Reports written with respect to Reviewing shall contain, at a minimum, information relating to those items in Identifying and Analyzing necessary to support the revised assumptions, analyses, and/or conclusions of the valuator

4.48.4.4.3
(07-01-2006)
Statement

(1) Each written valuation report should contain a signed statement that is similar in content to the following: To the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved.
- I have no bias with respect to the subject of this report or to the parties involved with this assignment.
- My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.
- My analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the applicable Internal Revenue

INTERNATIONAL GLOSSARY OF BUSINESS VALUATION TERMS
Exhibit BVG-1

To enhance and sustain the quality of business valuations for the benefit of the profession and its clientele, the below identified societies and organizations have adopted the definitions for the terms included in this glossary.

The performance of business valuation services requires a high degree of skill and imposes upon the valuation professional a duty to communicate the valuation process and conclusion, in a manner that is clear and not misleading. This duty is advanced through the use of terms whose meanings are clearly established and consistently applied throughout the profession.

If, in the opinion of the business valuation professional, one or more of these terms needs to be used in a manner that materially departs from the enclosed definitions, it is recommended that the term be defined as used within that valuation engagement.

This glossary has been developed to provide guidance to business valuation practitioners by further memorializing the body of knowledge that constitutes the competent and careful determination of value and, more particularly, the communication of how that value was determined.

Departure from this glossary is not intended to provide a basis for civil liability and should not be presumed to create evidence that any duty has been breached.

American Institute of Certified Public Accountants
American Society of Appraisers
Canadian Institute of Chartered Business Valuators
National Association of Certified Valuators and Analysts
The Institute of Business Appraisers

Adjusted Book Value Method—A method within the asset approach whereby all assets and liabilities (including off-balance sheet, intangible, and contingent) are adjusted to their fair market values (NOTE: In Canada on a going concern basis).

Adjusted Net Asset Method—See Adjusted Book Value Method.

Appraisal—See Valuation.

Appraisal Approach—See Valuation Approach.

Appraisal Date—See Valuation Date.

Appraisal Method—See Valuation Method.

Appraisal Procedure—See Valuation Procedure.

Arbitrage Pricing Theory—A multivariate model for estimating the cost of equity capital, which incorporates several systematic risk factors.

Asset (Asset-Based) Approach—A general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.

Beta—A measure of systematic risk of a stock; the tendency of a stock's price to correlate with changes in a specific index.

Blockage Discount—An amount or percentage deducted from the current market price of a publicly traded stock to reflect the decrease in the per share value of a block of stock that is of a size that could not be sold in a reasonable period of time given normal trading volume.

Book Value—See Net Book Value.

Business—See Business Enterprise.

Business Enterprise—A commercial, industrial, service, or investment entity (or a combination thereof) pursuing an economic activity.

Business Risk—The degree of uncertainty of realizing expected future returns of the business resulting from factors other than financial leverage. See Financial Risk.

Business Valuation—The act or process of determining the value of a business enterprise or ownership interest therein.

Capital Asset Pricing Model (CAPM) —A model in which the cost of capital for any stock or portfolio of stocks equals a risk-free rate plus a risk premium that is proportionate to the systematic risk of the stock or portfolio.

Capitalization—A conversion of a single period of economic benefits into value.

Capitalization Factor—Any multiple or divisor used to convert anticipated economic benefits of a single period into value.

Capitalization of Earnings Method—A method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate.

Capitalization Rate—Any divisor (usually expressed as a percentage) used to convert anticipated economic benefits of a single period into value.

Capital Structure—The composition of the invested capital of a business enterprise, the mix of debt and equity financing.

Cash Flow—Cash that is generated over a period of time by an asset, group of assets, or business enterprise. It may be used in a general sense to encompass various levels of specifically defined cash flows. When the term is used, it should be supplemented by a qualifier (for example, "discretionary" or "operating") and a specific definition in the given valuation context.

Common Size Statements—Financial statements in which each line is expressed as a percentage of the total. On the balance sheet, each line item is shown as a percentage of total assets, and on the income statement, each item is expressed as a percentage of sales.

Control—The power to direct the management and policies of a business enterprise.

Control Premium—An amount or a percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise, to reflect the power of control.

Cost Approach—A general way of determining a value indication of an individual asset by quantifying the amount of money required to replace the future service capability of that asset.

Cost of Capital—The expected rate of return that the market requires in order to attract funds to a particular investment.

Debt-Free—We discourage the use of this term. See Invested Capital.

Discount for Lack of Control—An amount or percentage deducted from the pro rata share of value of 100% of an equity interest in a business to reflect the absence of some or all of the powers of control.

Discount for Lack of Marketability—An amount or percentage deducted from the value of an ownership interest to reflect the relative absence of marketability.

Discount for Lack of Voting Rights—An amount or percentage deducted from the per share value of a minority interest voting share to reflect the absence of voting rights.

Discount Rate—A rate of return used to convert a future monetary sum into present value.

Discounted Cash Flow Method—A method within the income approach whereby the present value of future expected net cash flows is calculated using a discount rate.

Discounted Future Earnings Method—A method within the income approach whereby the present value of future expected economic benefits is calculated using a discount rate.

Economic Benefits—Inflows such as revenues, net income, net cash flows, etc.

Economic Life—The period of time over which property may generate economic benefits.

Effective Date—See Valuation Date.

Enterprise—See Business Enterprise.

Equity—The owner's interest in property after deduction of all liabilities.

Equity Net Cash Flows—Those cash flows available to pay out to equity holders (in the form of dividends) after funding operations of the business enterprise, making necessary capital investments, and increasing or decreasing debt financing.

Equity Risk Premium—A rate of return added to a risk-free rate to reflect the additional risk of equity instruments over risk free instruments (a component of the cost of equity capital or equity discount rate).

Excess Earnings—That amount of anticipated economic benefits that exceeds an appropriate rate of return on the value of a selected asset base (often net tangible assets) used to generate those anticipated economic benefits.

Excess Earnings Method—A specific way of determining a value indication of a business, business ownership interest, or security determined as the sum of a) the value of the assets derived by capitalizing excess earnings and b) the value of the selected asset base. Also frequently used to value intangible assets. See Excess Earnings.

Fair Market Value—The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts. (NOTE: In Canada, the term "price" should be replaced with the term "highest price")

Fairness Opinion—An opinion as to whether or not the consideration in a transaction is fair from a financial point of view.

Financial Risk—The degree of uncertainty of realizing expected future returns of the business resulting from financial leverage. See Business Risk.

Forced Liquidation Value—Liquidation value, at which the asset or assets are sold as quickly as possible, such as at an auction.

Free Cash Flow—We discourage the use of this term. See Net Cash Flow.

Going Concern—An ongoing operating business enterprise.

Going Concern Value—The value of a business enterprise that is expected to continue to operate into the future. The intangible elements of Going Concern Value result from factors such as having a trained work force, an operational plant, and the necessary licenses, systems, and procedures in place.

Goodwill—That intangible asset arising as a result of name, reputation, customer loyalty, location, products, and similar factors not separately identified.
Goodwill Value—The value attributable to goodwill.

Guideline Public Company Method—A method within the market approach whereby market multiples are derived from market prices of stocks of companies that are engaged in the same or similar lines of business, and that are actively traded on a free and open market.

Income (Income-Based) Approach—A general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount.

Intangible Assets—Non-physical assets such as franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities and contracts (as distinguished from physical assets) that grant rights and privileges, and have value for the owner.

Internal Rate of Return—A discount rate at which the present value of the future cash flows of the investment equals the cost of the investment.

Intrinsic Value—The value that an investor considers, on the basis of an evaluation or available facts, to be the "true" or "real" value that will become the market value when other investors reach the same conclusion. When the term applies to options, it is the difference between the exercise price or strike price of an option and the market value of the underlying security.

Invested Capital—The sum of equity and debt in a business enterprise. Debt is typically a) all interest bearing debt or b) long-term interest-bearing debt. When the term is used, it should be supplemented by a specific definition in the given valuation context.

Invested Capital Net Cash Flows—Those cash flows available to pay out to equity holders (in the form of dividends) and debt investors (in the form of principal and interest) after funding operations of the business enterprise and making necessary capital investments.

Investment Risk - the degree of uncertainty as to the realization of expected returns.

Investment Value—The value to a particular investor based on individual investment requirements and expectations. (NOTE: in Canada, the term used is "Value to the Owner").

Key Person Discount—An amount or percentage deducted from the value of an ownership interest to reflect the reduction in value resulting from the actual or potential loss of a key person in a business enterprise.

Levered Beta—The beta reflecting a capital structure that includes debt.

Limited Appraisal—The act or process of determining the value of a business, business ownership interest, security, or intangible asset with limitations in analyses, procedures, or scope.

Liquidity—The ability to quickly convert property to cash or pay a liability.

Liquidation Value—The net amount that would be realized if the business is terminated and the assets are sold piecemeal. Liquidation can be either "orderly" or "forced."

Majority Control—The degree of control provided by a majority position.

Majority Interest—An ownership interest greater than 50% of the voting interest in a business enterprise.

Market (Market-Based) Approach—A general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities, or intangible assets that have been sold.

Market Capitalization of Equity—The share price of a publicly traded stock multiplied by the number of shares outstanding.

Market Capitalization of Invested Capital—The market capitalization of equity plus the market value of the debt component of invested capital.

Market Multiple—The market value of a company's stock or invested capital divided by a company measure (such as economic benefits, number of customers).

Marketability—The ability to quickly convert property to cash at minimal cost.
Marketability Discount - see Discount for Lack of Marketability.

Merger and Acquisition Method—A method within the market approach whereby pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business.

Mid-Year Discounting—A convention used in the Discounted Future Earnings Method that reflects economic benefits being generated at midyear, approximating the effect of economic benefits being generated evenly throughout the year.

Minority Discount—A discount for lack of control applicable to a minority interest.

Minority Interest—An ownership interest less than 50% of the voting interest in a business enterprise.

Multiple—The inverse of the capitalization rate.

Net Book Value—With respect to a business enterprise, the difference between total assets (net of accumulated depreciation, depletion, and amortization) and total liabilities as they appear on the balance sheet (synonymous with Shareholder's Equity). With respect to a specific asset, the capitalized cost less accumulated amortization or depreciation as it appears on the books of account of the business enterprise.

Net Cash Flows—When the term is used, it should be supplemented by a qualifier. See Equity Net Cash Flows and Invested Capital Net Cash Flows.

Net Present Value—The value, as of a specified date, of future cash inflows less all cash outflows (including the cost of investment) calculated using an appropriate discount rate.

Net Tangible Asset Value—The value of the business enterprise's tangible assets (excluding excess assets and non-operating assets) minus the value of its liabilities.

Non-Operating Assets—Assets not necessary to ongoing operations of the business enterprise. (NOTE: In Canada, the term used is "Redundant Assets").

Normalized Earnings—Economic benefits adjusted for nonrecurring, non-economic, or other unusual items to eliminate anomalies and/or facilitate comparisons.

Normalized Financial Statements—Financial statements adjusted for nonoperating assets and liabilities and/or for nonrecurring, non-economic, or other unusual items to eliminate anomalies and/or facilitate comparisons.

Orderly Liquidation Value—Liquidation value at which the asset or assets are sold over a reasonable period of time to maximize proceeds received.

Premise of Value—An assumption regarding the most likely set of transactional circumstances that may be applicable to the subject valuation; e.g. going concern, liquidation.

Present Value—The value, as of a specified date, of future economic benefits and/or proceeds from sale, calculated using an appropriate discount rate.

Portfolio Discount—An amount or percentage deducted from the value of a business enterprise to reflect the fact that it owns dissimilar operations or assets that do not fit well together.

Price/Earnings Multiple—The price of a share of stock divided by its earnings per share.

Rate of Return—An amount of income (loss) and/or change in value realized or anticipated on an investment, expressed as a percentage of that investment.

Redundant Assets—See Non-Operating Assets.

Report Date—The date conclusions are transmitted to the client.

Replacement Cost New—The current cost of a similar new property having the nearest equivalent utility to the property being valued.

Reproduction Cost New—The current cost of an identical new property.

Required Rate of Return—The minimum rate of return acceptable by investors before they will commit money to an investment at a given level of risk.

Residual Value—The value as of the end of the discrete projection period in a discounted future earnings model.

Return on Equity—The amount, expressed as a percentage, earned on a company's common equity for a given period.

Return on Investment—See Return on Invested Capital and Return on Equity.

Return on Invested Capital—The amount, expressed as a percentage, earned on a company's total capital for a given period.

Risk-Free Rate—The rate of return available in the market on an investment free of default risk.

Risk Premium—A rate of return added to a risk-free rate to reflect risk.

Rule of Thumb—A mathematical formula developed from the relationship between price and certain variables based on experience, observation, hearsay, or a combination of these; usually industry specific.

Special Interest Purchasers—Acquirers who believe they can enjoy post-acquisition economies of scale, synergies, or strategic advantages by combining the acquired business interest with their own.

Standard of Value—The identification of the type of value being used in a specific engagement; e.g. fair market value, fair value, investment value.

Sustaining Capital Reinvestment—The periodic capital outlay required to maintain operations at existing levels, net of the tax shield available from such outlays.

Systematic Risk—The risk that is common to all risky securities and cannot be eliminated through diversification. The measure of systematic risk in stocks is the beta coefficient.

Tangible Assets—Physical assets (such as cash, accounts receivable, inventory, property, plant and equipment, etc.).

Terminal Value—See Residual Value.

Transaction Method—See Merger and Acquisition Method.

Unlevered Beta—The beta reflecting a capital structure without debt.

Unsystematic Risk—The risk specific to an individual security that can be avoided through diversification.

Valuation—The act or process of determining the value of a business, business ownership interest, security, or intangible asset.

Valuation Approach—A general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more valuation methods.

Valuation Date—The specific point in time as of which the valuator's conclusion of value applies (also referred to as "Effective Date" or "Appraisal Date").

Valuation Method—Within approaches, a specific way to determine value.

Valuation Procedure—The act, manner, and technique of performing the steps of an appraisal method.

Valuation Ratio—A fraction in which a value or price serves as the numerator and financial, operating, or physical data serves as the denominator.

Value to the Owner—See Investment Value.

Voting Control—De jure control of a business enterprise.

Weighted Average Cost of Capital (WACC) —The cost of capital (discount rate) determined by the weighted average, at market value, of the cost of all financing sources in the business enterprise's capital structure.

PARTICIPANT NOTES

APPENDIX IV

Comprehensive Business Valuation Development Checklist

"An investment in knowledge always pays the best interest."
— Benjamin Franklin

Publication Date: January 31, 2009

Comprehensive Business Valuation Development Checklist

Use of this document in obtaining the necessary information and addressing the specific areas of development to conduct your analysis in the performance of a business valuation in a valuation engagement, and will help in complying with the Development Standards promulgated by the National Association of Certified Valuators and Analysts (NACVA) and the American Institute of Certified Public Accountants (AICPA) in their Statement on Standards for Valuation Services No. 1 (SSVS). Both standards have an effective implementation date of January 1, 2009.

Disclaimers:

1) **Though this document is quite comprehensive, one should not construe it to suggest that every item noted herein is required to be obtained or addressed in the development of a business valuation. Each engagement and each business is different. Thus, some or many items noted herein may not be necessary for consideration in the given circumstances.**

2) By no means is the use of this document intended to replace the User's responsibility for having read and being fully conversant with both NACVA's and the AICPA's standards. The authors of this document are fallible and it is very possible that items have been overlooked. Thereby, we disclaim any and all liability for one's use of this document should it turn out that the valuation report produced while using this Checklist is not in compliance with the aforementioned standards.

3) Provisions under SSVS #46 pertaining to "Calculation of Value" have been omitted.

4) This comprehensive checklist is designed for use in engagement to determine a "Conclusion of Value" to be communicated in either a "Detailed" or Summary" Report. Thus, depending on which type of report the engagement calls for will determine which items on this checklist are applicable or not applicable.

5) SSVS #24 states that the sequence of implementation of the Developmental Standards is at the option of the Valuation Analyst.

6) SSVS #45 provides that the Valuation Analyst should retain the documentation for a period of time sufficient to meet the needs of applicable legal, regulatory, or other professional requirements for records retention.

7) All SSVS references herein, are to paragraph numbers in the SSVS.

8) This document is a work in process and will be updated and improved on an ongoing basis. We appreciate any suggestions you may have. Please e-mail them to nacva1@nacva.com.

Comprehensive Business Valuation Development Checklist

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—— Table of Contents ——
(continued)

I. ANALYSIS OF THE SUBJECT INTEREST OWNERSHIP INFORMATION

Workpapers Page Reference

Company Information

Name: ______________________ Company: ______________________ ________
Street address: ______________________________________ ________
City: ______________________ State: __________ ZIP: ______________ ________
Tel: ______________ Fax: ______________ Email: ______________ ________
DBA (if applicable): ______________________________________ ________

Organizational Information

- Corporation type: ______________ ________
- Date incorporated: ______________ ________
- State of incorporation: ______________ ________
- S election: ______________ ________
- Merger date: ______________ ________
- Recapitalization ______________ ________
- Agreement: ______________ ________

Common Shares

- # of shares authorized: ______________
- # of shares issued and outstanding: ______________
- Restrictions, if any: ______________
- Voting or non-voting: ______________

Treasury Shares

- # of shares held: ______________ ________
- Date of purchase: ______________ ________
- Purchase price: ______________ ________
- Date of cancellation: ______________ ________

Preferred Shares

- # of shares authorized: ______________
- # of shares issued and outstanding: ______________
- Description of preference: ______________
- Dividend %: ______________

Shareholder Information

Name	Common # of Shares	Common %	Preferred # of Shares	Preferred %	Workpapers Page Reference
Totals:					

This page and above addresses: SSVS 13b, 13c

Ownership

- Determine the type of ownership interest being valued and ascertain whether that interest exhibits control characteristics: ______________________________ ________

Workpapers Page Reference

- Analyze the different ownership interests of other owners and assess the potential effect on the value of the subject interest: ____

- Understand the classes of equity ownership interests and rights attached thereto: ____

- Understand the rights included in, or excluded from, each intangible asset: ____

Understand other matters that may affect the value of the subject interest, such as:

- For a business, business ownership interest, or security: shareholder agreements, partnership agreements, operating agreements, voting trust agreements, buy-sell agreements, loan covenants, restrictions, and other contractual obligations or restrictions affecting the owners and the subject interest. ____

- For an intangible asset: legal rights, licensing agreements, sublicense agreements, non-disclosure agreements, development rights, commercialization or exploitation rights, and other contractual obligations: ____

- To the extent any of these agreements are applicable, request for our file: ____

Participation

Name	**Title**	**% of Time Devoted to Business**	**Duties**	

This page and above addresses: SSVS 23, 27, 28

Workpapers Page Reference

Related Party Information

Name	Relationship	Involvement Described	Workpapers Page Reference

Recent Stock Sale Information

- Type of stock sold: ______
- Sold to: ______
- # of shares sold: ______
- Price of shares sold: ______
- Date of sale: ______
- % sold: ______
- Restrictions, if any: ______
- Reason for sale: ______
- How valued: ______
- Stock options: ______
- Terms: ______
- Type: ______

- Type of stock sold: ______
- Sold to: ______
- # of shares sold: ______
- Price of shares sold: ______
- Date of sale: ______
- % sold: ______
- Restrictions, if any: ______
- Reason for sale: ______
- How valued: ______
- Stock options: ______
- Terms: ______
- Type: ______

This page and above addresses: SSVS 13c, 29

II. VALUATION ESSENTIALS

Purpose of Valuation

- Purpose of valuation: ______
- Valuation date: ______
- # of shares to be valued: ______
- % of interest to be valued: ______

Assumptions and limiting conditions: *use Exhibit I*

- Type of report to be issued: ______
- Use of specialists: ______
- Competency issue: ______

Standard / Premise of Valuation

- Define standard of value: ______
- Define premise of value: ______

Workpapers Page Reference

- Are we valuing equity, invested capital or intangible assets? ______ ______
- Is there a jurisdictional exception: ______ ______
- Are there governmental regulations: ______ ______
- AICPA professional standards: ______ ______

Check those that apply:

- ❑ AICPA Code of Professional Conduct: ______ ______
- ❑ Statement on Standards for Consulting Services: ______ ______
- ❑ Consulting services: definitions & standards AICPA professional standards, Vol. 2, CS Sec 100: ______ ______
- ❑ Rule 201-A professional competence of AICPA Code of Professional Conduct: ______ ______

- Is this an attest client? If so, the firm is not able to perform the engagement unless the analyst meets all requirements of Interpretation 101-3: ______ ______

This page and above addresses: SSVS 3, 12d (iii, iv), 12e, 13c, 14, 15, 20, 25

Requesting Party

Name: ______ Title: ______ ______
Street address: ______ ______
City: ______ State: ______ ZIP: ______ ______
Tel: ______ Fax: ______ Email: ______ ______
Relationship: ______ ______

Describe understanding with client:

- Scope limitations: ______ ______
- Restrictions: ______ ______
- Hypothetical conditions: ______ ______
- Obligation to update: ______ ______
- Conflicts of interest: ______ ______
- Independence issues: ______ ______
- Due date: ______ ______
- Client's responsibilities: ______ ______
- Analyst's responsibilities: ______ ______
- Assumptions: ______ ______
- Report type: ______ ______
- Nature, purpose and objective of valuation: ______ ______
  ______ ______

- Document terms of valuation engagement, procedural requirements, objectivity, and independence:
  ______ ______
  ______ ______
  ______ ______

This page and above addresses: SSVS 13a, 14, 16, 17

Workpapers Page Reference

Contact Person

Name: ______________________ Title: ______________________ __________

Street address: ____ __________

City: ______________________ State: __________ ZIP: ______________ __________

Tel: ______________ Fax: ______________ Email: ______________ __________

Relationship: ____ __________

III. NON-FINANCIAL INFORMATION

- History / background: ______________________________________ __________

- Major historical events: ____________________________________ __________

- Annual gross revenues: ______________ • Average # of employees: ______________ __________

Location Information

Location	Date Occupied	Leased/ Owned	Function	

- SIC code: ______________________ • NAICS code: ______________________ __________

- Principle activity: ____ __________

Employee Turnover

- Describe management turnover: ____________________________________ __________

- Describe non-management turnover: ________________________________ __________

This page and above addresses: SSVS 27

Family Involvement — Workpapers Page Reference

- Does the company have family members working for the company? ______
- How many family members work for the company? ______
- What is the amount and basis for each family member's compensation? ______
- Do family members have proper education and experience for position held? ______
- Is there absentee management? ______
- Provide owners and family fringe benefits: ______
- Describe related party transactions: ______

This page and above addresses: SSVS 27

IV. MANAGEMENT

Key Management

Name	Title	Duties	Age / Health	

- Describe key management background, education, longevity, and experience: ______
- Are employment contracts in place? ______ • Are key man policies in place? ______

  Describe: ______

Identify Basis of Officer / Owner Compensation

Name	Title	Basis of Compensation	Workpapers Page Reference

Identify Officer / Owner Prerequisites

Name	Title	Type of Benefit	Annual Cost	

Board of Directors and Level of Involvement

Name	Title	Basis of Compensation	

Staffing

	Total	Full-Time	Part-Time	
• Number of employees:				
• Number of managers:				
• Number of sales staff:				
• Number of service staff:				
• Number of clerical staff:				

This page and above addresses: SSVS 27, 29

V. PRODUCTS / SERVICES AND MARKETS

- Describe products / services *(indicate proprietary nature, if any)*: ____________
- Describe customers: ____________

Workpapers Page Reference

- Describe market area: ____________________

    - Estimated total market: ____________________
    - Estimated market share: ____________________

- Describe cyclical or seasonal: ____________________

- Describe distribution channels: ____________________

- Summary of barriers to market entry: ____________________

Description of Barriers to Entry

- Describe the economies of scale: ____________________

- Describe the product differentiation: ____________________

- Describe the capital requirements: ____________________

- Describe the access to distribution channels: ____________________

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe the cost disadvantages independent of scale: ______________________________
- Describe the proprietary product technology: patents / trademarks: ______________________________
- Describe the favorable access to raw materials: ______________________________
- Describe the favorable locations: ______________________________
- Describe the government subsidies: ______________________________
- Describe the learning or experience curve: ______________________________
- Describe the government policies applicable to the company: ______________________________
- Describe the bargaining power of your suppliers: ______________________________
- Describe the bargaining power of your customers: ______________________________
- Describe the threat of substitute products: ______________________________
- Describe the rivalry between incumbent companies in the industry: ______________________________
- Describe the stability of earnings: ______________________________

This page and above addresses: SSVS 27

Workpapers Page Reference

VI. COMPETITION AND PRODUCT DIFFERENTIATION

Identify Major Competitors

Name	Location	Estimated Market Share	Workpapers Page Reference

- Describe product differentiation from competition:
- List competitive strengths:
- List competitive weaknesses:
- List product lines:
- Describe the method of pricing competition:
- Describe any proprietary content:
- Describe any patents:
- Describe any copyrights:

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe the product mix: ______

Environmental Issues

Describe any environmental issues related to the following:

- Asbestos: ______
- Polychlorinated biphenyl's (PCB's): ______
- Fuel/chemical tanks, drums, and pipelines: ______
- Water discharges: ______
- Air emissions: ______
- Waste disposal: ______
- Soil contamination: ______
- Agricultural property / pesticides, herbicides, or other agricultural chemicals: ______

Market Size and Share

- Describe customer's status in the industry and their estimated market share: ______
- Describe the market area that the company serves: ______

This page and above addresses: SSVS 27

VII. FINANCIAL INFORMATION

Workpapers Page Reference

- Describe financial statement generation (in-house, CPA, etc.): ______
- If CPA involvement, indicate type—GAAP, tax basis or other: ______
- What is the fiscal year-end of company: ______
- How often are financial statements generated: ______
- Describe significant accounting policies: ______
- Describe extent of GAAP compliance: ______
- Identify recent changes in accounting policies: ______
- Describe book to tax adjustments: ______
- Are budgets or forecasts prepared: ______
  - If so, how often: ______
- How has company performed relative to budget: ______
- Describe future planned capital expenditures: ______
- Describe short-term financing arrangements: ______
- Describe long-term financing arrangements: ______

This page and above addresses: SSVS 29

Workpapers Page Reference

- Describe retirement plan: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify pending or threatened litigation: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify major customers: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify major vendors: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify primary discretionary expenses: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify major non-recurring and extraordinary expenses: ______________________ ______

  ______________________ ______

  ______________________ ______

- Identify non-operating assets & liabilities: ______________________ ______

  ______________________ ______

  ______________________ ______

- Are current appraisals of tangible assets available? Describe: ______________________ ______

  ______________________ ______

  ______________________ ______

- Has company been denied credit? Describe: ______________________ ______

  ______________________ ______

  ______________________ ______

- Are there contracts of advantage or disadvantage to company? Describe: ______________________ ______

  ______________________ ______

  ______________________ ______

- Is company carrying assets not in use? Describe: ______________________ ______

  ______________________ ______

- Are there any subsidiaries owned by the company? Describe: ______________________ ______

  ______________________ ______

This page and above addresses: SSVS 27, 29

Workpapers Page Reference

- If yes, describe the subsidiaries (name, date acquired, ownership interest, etc.): ____________________

• Describe leasing activities: ____________________

• Describe government and/or environmental regulations: ____________________

• Is company capital intensive? Describe: ____________________

• Is company labor intensive? Describe: ____________________

• Discuss condition of facilities and equipment: ____________________

• Describe merger authority: ____________________

• Describe any tax issues: ____________________

• Describe recent merger activity: ____________________

• Contingent off balance sheet financing: ____________________

• Describe the regulatory issues that impact the company: ____________________

• Describe other significant matters: ____________________

This page and above addresses: SSVS 27, 29

Workpapers Page Reference

The valuation analyst should obtain, where applicable and available, financial information on the subject entity such as:

- Historical financial information (including annual and interim financial statements and key financial statement ratios and statistics) for an appropriate number of years: ____________ ____
- Prospective financial information (for example, budgets, forecasts, and projections): ____________ ____
- Comparative summaries of financial statements or information covering a relevant time period: ____________ ____
- Comparative common size financial statements for the subject entity for an appropriate number of years: ____
- Comparative common size industry financial information for a relevant time period: ____________ ____
- Income tax returns for an appropriate number of years: ____________ ____
- Describe recent merger activity: ____________ ____

This page and above addresses: SSVS 27, 29

VIII. NATIONAL AND LOCAL ECONOMIC INFORMATION

National

- Valuation date short-term bond yield: ________ Source: ________ ____
- Valuation date intermediate bond yield: ________ Source: ________ ____
- Valuation date long-term bond yield: ________ Source: ________ ____
- Expected inflation rate: ________ Source: ________ ____
- Expected GNP growth: ________ Source: ________ ____
- Current unemployment rate: ________ Source: ________ ____

This section above addresses: SSVS 27

Workpapers Page Reference

- Describe current and/or expected major changes in tax law: ______

  Source: ______

- General description of the economy: ______

  Source: ______

Local and Regional

- Describe local and regional market: ______

  Source: ______

- Describe personal income growth: ______

  Source: ______

IX. NATIONAL AND LOCAL INDUSTRY INFORMATION

National

- Total market: ______ Source: ______
- Short-term industry growth: ______ Source: ______
- Long-term industry growth: ______ Source: ______

- Growth industry stability: ______

  Source: ______

This page and above addresses: SSVS 27

Workpapers Page Reference

- Describe market trends: ________________________________

  Source: ________________________________
- Describe technology advancements: ________________________________

  Source: ________________________________
- Describe effects of government regulation: ________________________________

  Source: ________________________________
- Describe industry outlook: ________________________________

  Source: ________________________________
- Describe industry financial data: ________________________________

  Source: ________________________________
- Describe industry long-term prospects: ________________________________

  Source: ________________________________
- Source of industry financial data: ________________________________
  - Period covered: ________________________________

This page and above addresses: SSVS 27

Local and Regional		Workpapers Page Reference
• Total market: ______	Source: ______	______
• Short-term industry growth: ______	Source: ______	______
• Long-term industry growth: ______	Source: ______	______
• Describe: ______		______
• Growth industry stability: ______		______
______		______
______		______
______		______
______		______
Source: ______		______
Describe: ______		______
• Describe local market trends: ______		______
______		______
______		______
______		______
______		______
Source: ______		______
• Describe effects of local government regulation: ______		______
______		______
______		______
______		______
______		______
Source: ______		______
Describe: ______		______
• Describe local industry outlook: ______		______
______		______
______		______
______		______
Source: ______		______
• Describe local industry long-term prospects: ______		______
______		______
______		______
______		______
______		______
Source: ______		______
• Source of local industry financial data: ______		______
______		______
◆ Period covered: ______		______

This page and above addresses: SSVS 27

X. VALUATION APPROACHES AND METHODS—CONSIDERATIONS

Workpapers Page Reference

Income Approach:

- ❑ Capitalization of earnings / cash flow: ______________________ ________
- ❑ Normalization adjustments: ______________________ ________
- ❑ Non-recurring revenue and expense items: ______________________ ________
- ❑ Taxes: ______________________ ________
- ❑ Capital structure and financing costs: ______________________ ________
- ❑ Appropriate capital investments: ______________________ ________
- ❑ Non-cash items: ______________________ ________
- ❑ Qualitative judgments for risks used to compute discount and capitalization rates: ______________________ ________
- ❑ Expected changes (growth or decline) in future benefits (for example, earnings, or cash flows): ______________________ ________

Discounted future benefits method (for example, earnings, or cash flows). In addition to the items above, the valuation analyst should consider:

- ❑ Forecast/projection assumptions: ______________________ ________
- ❑ Forecast/projected earnings or cash flows: ______________________ ________
- ❑ Terminal value: ______________________ ________

For an intangible asset, the valuation analyst should consider:

- ❑ Remaining useful life: ______________________ ________
- ❑ Current and anticipated future use of the intangible asset: ______________________ ________
- ❑ Rights attributable to the intangible asset: ______________________ ________
- ❑ Position of intangible asset in its life cycle: ______________________ ________
- ❑ Appropriate discount rate for the intangible asset: ______________________ ________
- ❑ Appropriate capital or contributory asset charge, if any: ______________________ ________
- ❑ Research and development or marketing expense needed to support the intangible asset in its existing state: ______________________ ________
- ❑ Allocation of income (for example, incremental income, residual income, or profit split income) to intangible asset: ______________________ ________
- ❑ Whether any tax amortization benefit would be included in the analysis: ______________________ ________
- ❑ Discounted multi-year excess earnings: ______________________ ________
- ❑ Market royalties: ______________________ ________
- ❑ Relief from royalty method: ______________________ ________

This page and above addresses: SSVS 33a, 33b, 33c

Workpapers Page Reference

Asset Approach and Cost Approach:

When using the adjusted net asset method in valuing a business, business ownership interest, or security, the valuation analyst should consider, as appropriate, the following information related to the premise of value:

- ❑ Identification of the assets and liabilities: ____________ ______
- ❑ Value of the assets and liabilities (individually or in the aggregate): ____________ ______
- ❑ Liquidation costs (if applicable): ____________ ______

When using methods under the cost approach to value intangible assets, the valuation analyst should consider the type of cost to be used (for example, reproduction cost or replacement cost), and, where applicable, the appropriate forms of depreciation and obsolescence and the remaining useful life of the intangible asset.

- ❑ Describe: ____________ ______

Market Approach:

Three frequently used market approach valuation methods for intangible assets are:

- ❑ Comparable uncontrolled transactions method (which is based on arm's-length sales or licenses of guideline intangible assets) ______
- ❑ Comparable profit margin method (which is based on comparison of the profit margin earned by the subject entity that owns or operates the intangible asset to profit margins earned guideline companies) ______
- ❑ Relief from royalty method (which is based on the royalty rate, often expressed as a percentage of revenue that the subject entity that owns or operates the intangible asset would be obligated to pay to a hypothetical third-party licensor for the use of that intangible asset) ______

For the methods involving guideline intangible assets (for example, the comparable profit margin method), the valuation analyst should consider the subject intangible asset's remaining useful life relative to the remaining useful life of the guideline intangible assets, if available.

In applying the methods listed above or other methods to determine valuation pricing multiples or metrics, the valuation analyst should consider:

- ❑ Qualitative and quantitative comparisons ______
- ❑ Arm's-length transactions and prices ______
- ❑ The dates and, consequently, the relevance of the market data ______

Rules of thumb. Although technically not a valuation method, some valuation analysts use rules of thumb or industry benchmark indicators (hereinafter, collectively referred to as rules of thumb) in a valuation engagement. A rule of thumb is typically a reasonableness check against other methods used and should generally not be used as the only method to estimate the value of the subject interest.

- ❑ Describe: ____________ ______

This page and above addresses: SSVS 34, 35, 36, 37, 39

XI. GUIDELINE PUBLIC COMPANY AND MARKET APPROACH

Guideline Company Search

Name	Customer IP #	Exchanges	Historical Beta	Total Equity	Total Assets	Mil $ Net Sales	5-Year Earnings Growth	5-Year ROE	SIC
1.									
2.									
3.									
4.									
5.									

- Workpapers page reference: ______________________________
- Source: ______________________________
- Comments: ______________________________

____

Sales Transaction Search

SIC	Description	Ask Price	Annual Gross	SDE	Sales Date	Sales Price
1.						
2.						
3.						
4.						
5.						

SDE—Seller's discretionary earnings

% Down	Terms	Sales/Gross	Sales/Net	FF&E	Area
1.					
2.					
3.					
4.					
5.					

FF&E—Furniture, fixtures & equipment

- Workpapers page reference: ______________________________
- Source: ______________________________
- Comments: ______________________________

____

____

  - Are they comparable? Describe: ______________________________

This page and above addresses: SSVS 36

Workpapers Page Reference

XII. VALUATION ADJUSTMENTS

Examples of valuation adjustments for valuation of a business, business ownership interest, or security include a discount for lack of marketability or liquidity and a discount for lack of control. An example of a valuation adjustment for valuation of an intangible asset is obsolescence.

- ❑ Lack of control: ____________________

- ❑ Voting / non-voting: ____________________

- ❑ Lack of marketability or liquidity: ____________________

XIII. NON-OPERATING/EXCESS ASSETS

When valuing a controlling ownership interest under the income approach, the value of any non-operating assets, non-operating liabilities, or excess or deficient operating assets should be excluded from the computation of the value based on the operating assets and should be added to or deleted from the value of the operating entity. When valuing a non-controlling ownership interest under the income approach, the value of any non-operating assets, non-operating liabilities, or excess or deficient operating assets may or may not be used to adjust the value of the operating entity depending on the valuation analyst's assessment of the influence exercisable by the non-controlling interest. In the asset-based or cost approach, it may not be necessary to separately consider non-operating assets, non-operating liabilities, or excess or deficient operating assets.

- ❑ Comments: ____________________

This page and above addresses: SSVS 40, 41

XIV. SUBSEQUENT EVENTS

The valuation date is the specific date at which the valuation analyst estimates the value of the subject interest and concludes on his or her estimation of value. Generally, the valuation analyst should consider only circum-stances existing at the valuation date and events occurring up to the valuation date. An event that could affect the value may occur subsequent to the valuation date; such an occurrence is referred to as a *subsequent event.* Subsequent events are indicative of conditions that were not known or knowable at the valuation date, including conditions that arose subsequent to the valuation date. The valuation would not be updated to reflect those events or conditions. Moreover, the valuation report would typically not include a discussion of those events or conditions because a valuation is performed as of a point in time-the valuation date-and the events described in this subparagraph, occurring subsequent to that date, are not relevant to the value determined as of that date.

- ❑ Comments: ____________________

	Workpapers Page Reference

XV. DOCUMENTATION

Documentation is the principal record of information obtained and analyzed, procedures performed, valuation approaches and methods considered and used, and the conclusion of value. The quantity, type, and content of documentation are matters of the valuation analyst's professional judgment. Documentation may include:

- ❑ Document understanding with client ________
- ❑ Information gathered and analyzed to obtain an understanding of matters that may affect the value of the subject interest ________
- ❑ Assumptions and limiting conditions ________
- ❑ Any restriction or limitation on the scope of the valuation analyst's work or the data available for analysis ________
- ❑ Basis for using any valuation assumption during the valuation engagement ________
- ❑ Valuation approaches and methods considered ________
- ❑ Valuation approaches and methods used including the rationale and support for their use ________
- ❑ If applicable, information relating to subsequent events considered by the valuation analyst ________
- ❑ For any rule of thumb used in the valuation, source(s) of data used, and how the rule of thumb was applied to the engagement by the valuation analyst ________
- ❑ Other documentation considered relevant to the engagement by the valuation analyst ________
- ❑ The analyst should read and evaluate information to determine that it is reasonable for the purposes of the engagement ________

This page and above addresses: SSVS 16, 17, 43, 44

XVI. OTHER

- ❑ Management representation letter: ________________________ ________

Copyright Clearance

- ❑ RMA: ________________________ ________
  ________________________ ________
  ________________________ ________
- ❑ Other: ________________________ ________
  ________________________ ________
  ________________________ ________

This page and above addresses: SSVS 44

XVII. DOCUMENT AND DATA REQUEST CONTROL FORM

Workpapers Page Reference

Request from: ______________________ Title: ______________________ __________

Requested by: ______________________ Title: ______________________ __________

Subject Company Financial Data

Description	Date Requested	Date Received	Comments	Workpapers Page Reference
Engagement letter:				
Financial statements for 5 years:				
Federal & state income tax returns for 5 years:				
Historical budget vs. actual report for ____ years:				
Prospective budget report for year:				
Accounts receivable aging report:				
Inventory summary reports and costing method summaries:				
Detailed schedule of fixed assets:				
Schedule of investments:				
Accounts payable aging report:				
Schedule of accrued liabilities:				
Schedule of notes payable, equipment, or real property leases & other term debt:				
Appraisal reports: • Real Estate				
• Equipment				
• Other (trademarks & patents)				
Key-man life policies:				
Other:				

This page and above addresses: SSVS 16, 44

Operational and Legal Documentation

Description	Date Requested	Date Received	Comments	Workpapers Page Reference
Organizational chart:				______
Buy / Sell agreements:				______
Stockholders agreements:				______
Stock subscription agreements:				______
Public or private offering memoranda:				______
Employment contracts:				______
Pension / profits sharing plans:				______
Other Benefit Plans:				______
Schedule of pension / profit sharing funding for ____ Years:				______
Significant contracts:				______
Property tax returns for ____ years:				______
Client representation letter:				______
Legal representation letter:				______
Other: • a) ______________________				______
• b) ______________________				______
• c) ______________________				______
• d) ______________________				______
• e) ______________________				______
• f) ______________________				______
• g) ______________________				______
• h) ______________________				______
• i) ______________________				______
• j) ______________________				______
• k) ______________________				______

This page and above addresses: SSVS 13d, 13e, 18 (Appendix A), 25

Workpapers Page Reference

EXHIBIT I

List of Assumptions and Limiting Conditions

- Comments: ______

	Initials	Date
Prepared By		
Approved By		

APPENDIX V

Comprehensive Business Valuation Reporting Checklist for Valuation Engagements

"The principal goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done."
— Jean Piaget

Publication Date: January 31, 2009

Comprehensive Business Valuation
—— Reporting Checklist for Valuation Engagements ——

This document is intended to provide guidance for the communication of information to be included in a valuation report to effectively communicate the results of your analysis. The purpose is to help assure you are in compliance with the Reporting Standards of the National Association of Certified Valuators and Analysts (NACVA) and the American Institute of Certified Public Accountants (AICPA) in their Statement on Standards for Valuation Services No. 1 (SSVS). Both standards have an effective date of January 1, 2009.

Disclaimers:

1) **Though this document is quite comprehensive, one should not construe it to suggest that every item noted herein is required to be reported in a business valuation report. Each engagement and each business is different. Thus, some or many items noted herein may not be necessary for consideration in the given circumstances.**

2) This document is not intended to replace a User's responsibility for having read and being fully conversant with both NACVA's and the AICPA's standards. The authors are fallible and items may have been overlooked. Thereby, we disclaim any and all liability for one's use of this document should it turn out that a valuation report produced while using this Checklist is not in compliance with the aforementioned standards.

3) This comprehensive checklist is designed for use in a valuation engagement to prepare either a Detailed or Summary Report determining a "Conclusion of Value." Thus, depending on which type of report the engagement calls for, will determine which items in this checklist are applicable or not applicable.

4) SSVS #22 states that: Hypothetical conditions affecting the subject interest may be required in some circumstances. When a valuation analyst uses hypothetical conditions during a valuation or calculation engagement, he or she should indicate the purpose for including the hypothetical conditions and disclose these conditions in the valuation or calculation report (paragraphs 52(n), 71(o), and 74).

5) SSVS #49 states all reports should indicate any restrictions on its use, which is elaborated on in SSVS #65(d).

6) SSVS #67 states reports should contain information on the analyst's qualifications.

7) SSVS #71 states a Summary Report is an abridged version of a Detailed Report, and lists its minimum requirements.

8) SSVS #73 through SSVS #76 refer to Calculation Reports and lists their minimum requirements.

9) SSVS #78 provides for Detailed or Summary Oral Reports in a valuation engagement as follows: An oral report may be used in a valuation engagement or a calculation engagement. An oral report should include all information the valuation analyst believes necessary to relate the scope, assumptions, limitations, and the results of the engagement so as to limit any misunderstandings between the analyst and the recipient of the oral report. The member should document in the working papers the substance of the oral report communicated to the client.

10) This document is a work in process and will be updated and improved on an ongoing basis. We appreciate any suggestions you may have. Please e-mail them to nacva1@nacva.com.

—— Table of Contents ——

Table of Contents

Continued

—— Critical Elements Summary ——

1. SUMMARY AND DATES:

- ❑ The effective date of the valuation (and alternative valuation date if appropriate)
- ❑ The date and type of report
- ❑ The business, business ownership interest, security, or intangible assets
- ❑ Identity of the subject entity
- ❑ Description of the subject interest
- ❑ An overview of the Company and its Management
- ❑ Analyses of historical operating performance and financial position
- ❑ A conclusion of value stated in total and per share/unit or in ownership interest as appropriate

Comments: ____

____

The above addresses: SSVS 51, 52

2. LIMITING CONDITIONS AND ASSUMPTIONS:

- ❑ A statement of disinterestedness in the Company and the report
- ❑ A statement that the report complies with various organizations applicable standards
- ❑ A statement of the specific purpose for which the report is prepared and that it applies only as at the stated valuation date
- ❑ Any restrictions or limitations in the scope of work or data available for analysis
- ❑ If the work of a specialist was used, a description of how the specialist's work was relied upon
- ❑ Any application of the jurisdictional exception
- ❑ A statement that the data received has been relied on with/without independent verification
- ❑ Limiting conditions (including hypothetical assumptions)
- ❑ Qualifications of the valuation analyst

Comments: ____

____

The above addresses: SSVS 51, 52, 65

3. PURPOSE AND FUNCTION OF THE VALUATION:

- ❑ Statement as to why the asset, liability or security is being valued
- ❑ Purpose of the valuation
- ❑ Intended users of the Valuation Report
- ❑ The type (financial reporting, estate tax, gifting, ESOP, divorce, etc.) of the valuation
- ❑ The premises of value (going concern, in-use, liquidation, etc.)

Comments: ____

____

The above addresses: SSVS 51, 52

4. STANDARD OF VALUE:

- ❑ A definition of the standard of value selected
- ❑ The rationale (e.g., the statute or buy/sell agreement or other reason which may dictate its use) as to why this standard of value is appropriate

Comments: ____

____

The above addresses: SSVS 51, 52

—— Critical Elements Summary ——

Continued

5. METHODS OF VALUATION:

- ❑ Application of the three valuation approaches (asset, market, income) must be considered
- ❑ Reason why one or more were rejected
- ❑ Methods selected and why (for example a capitalization rather than a discounting technique)
- ❑ Analysis of subject entity and related non-financial information
- ❑ Financial statements/projections analysis
- ❑ Financial statement valuation adjustments

Comments: ____

____

____

____

The above addresses: SSVS 59, 60, 67

6. WORKPAPERS:

- ❑ All workpapers must be included but only in final form. (Developmental Standards)

Comments: ____

____

7. REPORT WRITING:

- ❑ Letter of transmittal
- ❑ Table of contents
- ❑ Introduction
- ❑ Sources of information, including whether and to what extent the subject entity's facilities were visited
- ❑ Appendices and exhibits
- ❑ Identity of client
- ❑ Restrictions or limitations
- ❑ Subsequent events
- ❑ Jurisdiction exception
- ❑ Non-operating assets, non-operating liabilities, and excess or deficient operating assets (if any)
- ❑ Representation of the valuation analyst
- ❑ Reconciliation of estimates and Conclusion of Value
- ❑ Industry and economic data
- ❑ Identification of financial statements used

Comments: ____

____

____

____

The above addresses: SSVS 51, 52

REPORT ELEMENTS IN DETAIL

Insert Page Ref. in Report, N/A, or 3

SECTION I—REPORT FUNDAMENTALS

1. Introduction and Sources of Information

___________ a. List all of the sources of information used to value the company.

___________ b. Where information is received from management, provide a list of documents supplied and reviewed.

___________ c. Where information is utilized from other resources, provide the proper footnote or endnotes indication source, date etc.

___________ d. Describe who engaged you and any restrictions in Letter of Engagement.

___________ e. Transmittal letter—addressed to person who engaged valuator, purpose of valuation, description of subject, total and per unit values.

___________ f. Is the report understandable to the anticipated reader?

___________ g. Is there appropriate detail in the table of contents?

___________ h. Has the report been reviewed for any obvious errors?

___________ i. Has the report been reviewed for any obvious omissions?

___________ j. Does the report lead to a logical conclusion?

___________ k. Is the report signed by the valuation analyst or persons responsible for issuing it?

___________ l. Have all calculations been checked for mathematical errors?

___________ m. Has the report been read, rather than computer checked, for spelling errors?

___________ n. Is the Company and its operating units properly identified?

___________ o. Is the purpose and intended user of the report properly identified?

___________ p. Is the subject, asset, liability, security, technology, or entity properly identified?

___________ q. Are the valuation and report dates clearly set out?

___________ r. Identify premise and define standard of value.

___________ s. State sources and nature (audited, reviewed, compiled, tax, etc.) of financial information.

____

___________ t. Ensure descriptions of item being valued are correct.

___________ u. Discuss control characteristics and degree of marketability.

v. Identify type of report issued.

Comments: ____

____

____

____

____

____

The above addresses: SSVS 51, 52, 53

Insert Page Ref. in Report, N/A, or 3

SECTION II—QUALITATIVE FOUNDATIONS

2. Analysis of Subject Entity and Non-Financial Information

__________ a. Provide an overview of the industry in which the Company operates.

__________ b. Description of asset, liability, security or technology to be valued. If security, add number of shares/units and percentage of ownership interest.

__________ c. Discuss the dividend and voting characteristics of the shares/units being valued. If there is more than one class of stock/units issued—discuss the characteristics of each.

__________ d. Discuss all related parties and any identified transactions.

__________ e. Site visits—discuss the circumstances and observations of the site visit, including date(s) and names of persons interviewed.

__________ f. History and background of the entity or company (include such items as legal name, form of organization, tax status, the state of incorporation, etc.).

__________ g. Previous transactions of company assets or stock.

__________ h. Restrictions on the sale or transfer of company stock, and details of any buy/sell agreements in place. Discuss impact of any restrictions on the value of the subject shares/units.

__________ i. Dividend payments, historical and current.

__________ j. Subsidiaries and affiliates.

__________ k. Management and staffing—list number of employees by function. Discuss the succession to existing management.

__________ l. Products and services—discuss the various product and services provided indicating the revenue and gross profit by major function.

__________ m. Sales and marketing—discuss how the entity generates sales and markets its products or services.

__________ n. Discuss issues affecting the industry and geographical area served.

__________ o. Customer concentration—analyze transactions with the largest customers for the past five years.

__________ p. Size and competition—discuss how the absolute and relative size of the entity affects its value, how the company determines pricing, who the competitors are and how they compete.

__________ q. Physical facilities—discuss the adequacy and condition of the property, plant, and equipment, if applicable.

__________ r. Employee benefits—discuss the various employee benefits and the related costs.

__________ s. Proprietary content and technology—discuss any proprietary content, patents, copyrights, trade secrets etc.

__________ t. Discuss favorable access to raw materials, locations, government subsidies, or experience curve.

__________ u. Discuss long-term lease arrangements (including real estate) and their impact on value.

__________ v. Product/Service differentiation—discuss how the company's products and/or services differ from its competitors.

__________ w. Relative product/service quality—discuss the quality of the products and/or services provided by the company.

__________ x. Covenant not to compete—discuss the terms of any covenants not to compete.

__________ y. Contracts—discuss how the company handles its relationships and contracts with customers.

__________ z. Family involvement—discuss the family members and related parties working in the entity, their job functions, compensation, etc.

__________ aa. Quality of books and records—discuss the internal controls that are in place and how their compliance may affect the value of the company.

__________ bb. Employee turnover—discuss the turnover and address how the turnover affects the risk associated with the company.

Insert Page Ref. in Report, N/A, or 3

SECTION II—QUALITATIVE FOUNDATIONS

— Continued —

2. Analysis of Subject Entity and Non-Financial Information—*Continued*

________ cc. Environmental issues—discuss any known environmental issues and how they affect the value of the company.

________ dd. Future prospects—discuss the future prospects of the company.

________ ee. Summary of positive and negative company-specific factors and how they impact the risk associated with the company.

Comments: ____

The above addresses: SSVS 57

3. Economic Condition

________ a. National economy—discuss consumer spending, services, manufacturing, capital spending, real estate and construction, agriculture, natural resource industries, financial services and credit, employment and wages, etc., of the national economy and how they affect the company.

________ b. State/provincial economy—discuss consumer spending, services, manufacturing, capital spending, real estate and construction, agriculture, natural resource industries, financial services and credit, employment and wages, etc., of the state economy and how they affect the company.

________ c. Regional/Local economy—discuss how the company is affected by the regional or local economy.

________ d. Summary and conclusion of economic outlook—provide a recap of how the entity is affected by the national, state, and local economic conditions.

Comments: ____

The above addresses: SSVS 53h

SECTION III—ANALYTICAL FOUNDATIONS

4. Information Analysis

________ a. List the various NAICS or SIC codes for the industry and a brief description of the businesses covered.

________ b. Provide an adequate overview of the industry, explaining trends, current status, and the future prospects in the industry. Also, discuss any regulatory agency that has a voice in the industry the company operates in and how the regulations affect the company.

________ c. Market share—discuss the company's positioning relative to the industry and competition.

________ d. Ease of market entry, threat of market entry, barriers to market entry—discuss the ease, barriers, and obstacles of entering the market. Provide a summary of the barriers to entry and how they affect the company.

________ e. Economies of scale—discuss the economies of scale including product differentiation, capital requirements, switching costs, access to distribution channels, cost disadvantages independent of scale.

Insert Page Ref. in Report, N/A, or 3

SECTION III—ANALYTICAL FOUNDATIONS

— Continued —

4. Information Analysis—*Continued*

__________ f. Threat of new entrants—discuss the bargaining power of suppliers, the bargaining power of customers, the threat of substitute products, and the rivalry between incumbents. Provide a summary of how the threats of new entrants affect the value of the company.

5. Financial Statement Analysis—Entity/Company

__________ a. Financial information provided—discuss how the financial information was prepared, audited, reviewed, compiled, internally prepared, tax returns, who prepared the financial information, etc.

__________ b. results of operations and comparison to the industry—provide a summary description of the financial performance of the company over the years of the analysis.

__________ c. Balance sheet review—provide the company's historical balance sheets in the report or as exhibits with adequate detail to review for possible normalizing entries. Provide adequate support for all balance sheet adjustments.

__________ d. Income statement review—provide the company's income statements in the report or as exhibits with adequate detail to review for possible normalizing entries.

__________ e. Statement of cash flows—provide the company's historical statement of cash flows in the report or as exhibits with adequate detail to review for possible normalizing entries.

__________ f. Years analyzed—provide a discussion of the years used for the valuation analysis. Justify why the beginning years were used and why the number of years of analysis was selected.

__________ g. Inventory—discuss the method of costing the inventory, FIFO, LIFO, etc., and provide analysis and calculations for LIFO adjustment if appropriate.

Comments: ____

____

____

____

____

The above addresses: SSVS 54, 55, 56, 58b, 58c

6. Financial Statement Analysis—Industry Comparison

__________ a. Comparative ratio analysis—provides the company's comparative ratio analysis in the report or as exhibits with adequate detail.

__________ b. Liquidity ratios—provide a discussion and trend comparison of the liquidity ratios. Consider discussing the current ratio, the quick ratio, and the working capital turnover.

__________ c. Turnover ratios—provide a discussion and trend comparison of the turnover ratios. Consider discuss the receivables, inventory, and payables turnover ratios, and the operating cycle.

__________ d. Leverage ratios—provide a discussion and trend comparison. Consider discussing net fixed assets, current and total liabilities to tangible net worth, total assets to equity, total debt to total assets, and long-term debt to equity.

__________ e. Solvency ratios—provide a discussion and trend comparison of the company's ability to meet its debts. Consider discussing the interest coverage ratio, Z-Score, among other measures of solvency.

SECTION III—ANALYTICAL FOUNDATIONS

— Continued —

Insert Page Ref. in Report, N/A, or 3

6. Financial Statement Analysis—Industry Comparison—*Continued*

_________ f. Income statement review—provide a discussion and trend comparison of the turnover ratios. At a minimum, consider discussing the revenues and net operating profit; provide a discussion and comparison of the revenues and operating profit ratios. Consider discussing the sales growth rate, the gross profit, the operating profit, the net income before tax, return on equity, the return on assets, the net sales to net worth, the operating earnings growth rate, the earnings standard deviation, and the Z-score.

_________ g. Peer comparison. Have the Company financial statements been compared to industry data? Was the proper year of industry data used? Are the selected industry ratios the most appropriate for the comparison?

Comments: ____

____

____

____

The above addresses: SSVS 58c

7. Financial Statement Analysis—Ratios

_________ a. Summary of Financial and Industry Comparison Analysis—discuss how the ratios listed above affect the value of the company.

Comments: ____

____

The above addresses: SSVS 58c

8. Financial Statement Analysis—Ratios—Normalizing Adjustments

_________ a. Have the historical earnings been normalized? Have all balance sheet and income statement items been properly adjusted to reflect the standard of value and the entity's earnings capacity?

_________ b. Are the normalizing entries appropriate and reasonable relative to the level of value? (Control vs. lack of control interest.)

_________ c. Leasehold interest—discuss the leasehold arrangements. Consider the net present value of any favorable leases.

_________ d. Officers compensation—discuss and justify adjustment to officer's compensation. Show calculations for tax affecting (payroll) the officer's compensation adjustment.

_________ e. Depreciation—discuss how the future depreciation expense was calculated. Discussion should include section 179, economic useful life of existing assets and projected capital expenditures.

_________ f. Were non-operating or excess assets identified and adjustments made when appropriate?

Comments: ____

____

The above addresses: SSVS 64

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—ASSET

9. Asset Approach

________ a. Are all of the tangible assets and liabilities adjusted that should be adjusted?

________ b. Are intangible assets properly adjusted?

________ c. Are there any off balance sheet items not recorded on the balance sheets?

________ d. Is there adequate support for any built-in capital gains tax?

________ e. If approach is not used, did valuation report address why?

________ f. Rationale and support for valuation methods used.

Comments: ____

The above addresses: SSVS 61b

10. Excess Earnings Method

________ a. Is the earnings capacity supportable? Discuss and provide calculations for ongoing earnings capacity. Specifically discuss the use of the un-weighted average method, the weighted average method, the trend line–static method, the trend line–projected method and the projected growth rate in earnings. Explain each method and discuss how the ongoing earnings capacity was selected.

________ b. Have the net tangible assets been properly determined?

________ c. Have non-operating assets and/or liabilities been excluded? Was the income/expense from the non-operating assets removed from the company's adjusted earnings?

________ d. Is the rate of return on net tangible assets adequately discussed and supported?

________ e. Is the rate of return on intangible assets adequately discussed and supported?

________ f. Is there some type of sanity check performed for reasonableness of the method used?

________ g. Have any non-operating assets been added back and/or non-operating liabilities reduced from total value?

Comments: ____

The above addresses: SSVS 59

METHODS OF VALUATION—MARKET APPROACH

11. Market Data Analysis—Public Companies

________ a. Does the analyst document a reasonable attempt to search for public companies—describing search criteria, number of companies identified, and specific reasons these companies were not considered?

________ b. Is the population from which the comparable companies selected adequately disclosed?

________ c. Is it clear that all qualified companies from the population have been considered?

________ d. Are the public company transactions close enough to the valuation date to be relevant? If the public companies data is somewhat removed from the valuation date: discuss the reason for its use.

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—MARKET APPROACH—*Continued*

11. Market Data Analysis—Public Companies—*Continued*

____ e. Specify the sources of the earnings growth rates for the public companies.

____ f. Are the criteria for selection of public companies adequately discussed? Indicate how the public company transactions were selected for comparability. Specifically address the size, sales, employees, management and business form, geographic location, growth, one year sales growth percentage, three year sales growth percentage, current ratio, quick ratio, average collection period, profitability, return on total assets, return on equity, gross profit, operating profit, net profit, EBITDA percentage, accounts receivable turnover, inventory turnover, fixed asset turn-over, total asset turnover, working capital turnover, total debt to total assets, long-term debt to equity. Provide all sources of information used.

____ g. Does the report clearly discuss which market multiples were used and why they are or are not appropriate? Are the market prices for the public companies appropriate as of the valuation date?

____ h. If adjustments were made to the public companies, were they adequately disclosed and discussed?

Comments: ____

The above addresses: SSVS 60, 61c

12. Direct Market Data Method—Mid Market

____ a. Is the population from which the comparable companies selected adequately disclosed?

____ b. Is it clear that all qualified companies from the population have been considered?

____ c. Are the criteria for selection of mid-market companies adequately discussed? Indicate how the mid-market company transactions were selected for comparability. Specifically address the size, sale, employees, management and business form, geographic location, growth, one-year sales growth percentage, three-year sales growth percentage, current ratio, quick ratio, average collection period, profitability, return on total assets, return on equity, gross profit, operating profit, net profit, EBITDA percentage, accounts receivable turnover, inventory turnover, fixed asset turnover, total asset turnover, working capital turnover, total debt to total assets, long-term debt to equity. Provide all sources of information used.

____ d. Does the report clearly discuss which market multiples were used and why they are or are not appropriate?

____ e. Are the market prices for the public companies appropriate as of the valuation date?

____ f. Are the public company transactions close enough to the valuation date to be relevant?

____ g. If the public companies data is somewhat removed from the valuation date: discuss the reason for its use.

Comments: ____

The above addresses: SSVS 61c

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—MARKET APPROACH—*Continued*

13. Direct Market Data Method—Transaction Databases (BIZCOMPS®, IBA, Pratt's Stats™, etc.)

a. Are the criteria for selection of transactions adequately discussed?
__________ b. Is the population from which the transactions selected adequately disclosed?
__________ c. Is it clear that all qualified companies from the population have been considered?
__________ d. Does the report clearly discuss which market multiples were used and why they are or are not appropriate?
__________ e. Are the transactions appropriate as of the valuation date?
__________ f. Are the transactions close enough to the valuation date to be relevant?
__________ g. If the transaction data is somewhat removed from the valuation date: discuss the reason for its use.
__________ h. Is there an adequate discussion of what type of assets are included in a typical sale, what a typical sale is, how to rank the transactions, and dealing with outliers? (Provide appropriate footnotes.)
__________ i. Is there an adequate discussion of when and how to use the mean multiple?
__________ j. Is there adequate analysis of the sales price to earnings and the sales price to gross sales ratios?
__________ k. Is there an adequate explanation as to why a multiple was or was not selected?
__________ l. Is there a discussion of when to use or not use premium or discounts when using the direct market data method?
____

Comments: ____

The above addresses: SSVS 61c

14. Industry-Specific Multiples

__________ a. Does the report clearly discuss the criteria for selection, which industry-specific multiples were used, and why they are or are not appropriate?
__________ b. Are the transactions appropriate as of the valuation date? If the transaction data is somewhat removed from the valuation date: discuss the reason for its use.
__________ c. Is there an adequate discussion of which multiple was used and why it was used?
__________ d. Is there a discussion of when to use or not use premium or discounts when using the industry-specific multiples?

Comments: ____

The above addresses: SSVS 61c

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—INCOME APPROACH

15. Income Approach

___________ a. Is the type of income clearly defined? (Net income, operating income, net cash flow to equity, net cash flow to invested capital, etc.)

___________ b. Is there adequate support for determining the earnings capacity of the company?

___________ c. Is the discount rate adequately supported?

___________ d. Discuss and provide calculations for ongoing earnings capacity. Specifically, discuss the use of the un-weighted average method, the weighted average method, the trend line—static method, the trend line—projected method and the projected growth rate in earnings. Explain each method and discuss how the ongoing earnings capacity was selected.

___________ e. Is there an adequate discussion of the principles of cost of capital components?

___________ f. Is the selection of a safe rate explained and justified?

___________ g. Is there an adequate discussion of the relationship of discount rate to capitalization rate?

___________ h. If approach was not used, does the report address reasons why?

Comments: ____

____

____

The above addresses: SSVS 60, 61a

16. Capitalization of Earnings Method

___________ a. Is the capitalization rate reasonable for the company?

___________ b. Is the earnings capacity reasonable for the company?

___________ c. Is the final value reasonable for the company?

___________ d. Were the non-operating assets included in the final value?

___________ e. Was the income/expense from the non-operating assets removed from the company's adjusted earnings?

Comments: ____

____

____

The above addresses: SSVS 61a

17. Discounted Cash Flow Method

___________ a. Does the report adequately address the "type" of cash flow used and why?

___________ b. Is there adequate disclosure of who made the cash flow projections? (Who made them, when, what for, what adjustments were made to the projections, etc.)

___________ c. Is there adequate analysis and discussion of the projected depreciation expense?

___________ d. Depreciation—discuss how the future depreciation expense was calculated. Discussion should include section 179, economic useful life of existing assets and estimated capital expenditures.

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—INCOME APPROACH—*Continued*

17. Discounted Cash Flow Method—*Continued*

___________ e. Is there adequate analysis and discussion of the projected capital expenditures, changes in working capital, projected minimum cash balances, and projected changes in long-term debt?

___________ f. Has the report properly addressed the impact of non-operating assets and liabilities in the cash flow projections and the impact on the final value?

___________ g. Was the income/expense from the non-operating assets removed from the company's adjusted earnings?

Comments: ____

____

The above addresses: SSVS 61a

18. Weighted Average Cost of Capital (WACC)

___________ a. Is there adequate discussion of the WACC and when it is used?

___________ b. Is there adequate disclosure of the sources of equity and debt? (Cite publications, online, etc.)

___________ c. Is there adequate support for weighting the debt and equity? Is the basis for the weighting discussed?

___________ d. Is there an adequate discussion of the iterative process?

Comments: ____

____

The above addresses: SSVS 61a

19. Build-Up Methods

___________ a. Is the risk free rate of return effective as of the valuation date?

___________ b. Is the common stock equity risk premium as of the year of the valuation?

___________ c. Is the small capitalization equity risk premium as of the year of the valuation?

___________ d. If the industry risk premium was used, did the report adequately identify the source?

___________ e. Was the proper size premium used?

___________ f. Describe in detail how the company specific risk was determined.

___________ g. Is there an adequate discussion of the expected long-term earnings growth rate and the justification for the long-term growth rate selected?

Comments: ____

____

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The above addresses: SSVS 61a

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—INCOME APPROACH—*Continued*

20. Capital Asset Pricing Model—CAPM

___________ a. Is the risk free rate of return effective as of the valuation date? Are the other components of the rate effective either as of the valuation date or the year of the valuation date?

___________ b. Is the equity risk premium adequate?

___________ c. Is the size premium adequate?

___________ d. Is there adequate support for the beta?

___________ e. Is there a discussion as to the assumptions of the Capital Asset Pricing Model?

___________ f. Is the discount/capitalization rate appropriate for the valuation?

Comments: ____

____

The above addresses: SSVS 61a

21. Risk Rate Component Model—RRCM

___________ a. Does the report demonstrate an understanding of how to use the Risk Rate Component Model?

Comments: ____

____

The above addresses: SSVS 61a

22. Use of Projections

___________ a. Income Statements

___________ i. Are the projected income statements presented with adequate detail? (Nominal, common-sized, trends.)

___________ ii. Are the projected income statements presented in a form comparable to the historical financial statements?

___________ iii. Are the assumptions for the projected income statements adequately disclosed and are they reasonable?

___________ b. Balance Sheet

___________ i. Are the projected balance sheets presented with adequate detail? (Nominal, common-sized, trends.)

___________ ii. Are the projected balance sheets presented in a form comparable to the historical financial statements?

___________ iii. Are the assumptions for the projected balance sheets adequately disclosed and are they reasonable?

___________ c. Statement of Cash Flows

___________ i. Are the projected statements of cash flows presented with adequate detail? (Nominal, common-sized, trends.)

___________ ii. Are the projected statements of cash flows presented in a form comparable to the historical financial statements?

SECTION IV—VALUATION APPROACHES AND METHODS CONSIDERED AND USED

— Continued —

Insert Page Ref. in Report, N/A, or 3

METHODS OF VALUATION—INCOME APPROACH—*Continued*

22. Use of Projections—*Continued*

___________ iii. Are the assumptions for the projected statement of cash flows adequately disclosed and are they reasonable?

___________ d. Ratios

___________ i. Are the projected ratios presented with adequate detail? (Nominal, common-sized, trends.)

___________ ii. Are the projected ratios presented in a form comparable to the historical financial statements?

___________ iii. Are the assumptions for the projected ratios adequately disclosed and are they reasonable?

Comments: ____

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The above addresses: SSVS 61a

23. Intangible Asset Valuation

Were the following considered and explained in the valuation?

___________ a. Remaining useful life.

___________ b. Current and anticipated future use of the intangible asset.

___________ c. Rights attributable to the intangible asset.

___________ d. Position of intangible asset in its life cycle.

___________ e. Appropriate discount rate for the intangible asset.

___________ f. Appropriate capital or contributory asset charge, if any.

___________ g. Research and development or marketing expense needed to support the intangible asset in its existing state.

___________ h. Allocation of income (for example, incremental income, residual income, or profit split income) to intangible asset.

___________ i. Whether any tax amortization benefit would be included in the analysis.

___________ j. Discounted multi-year excess earnings.

___________ k. Market royalties.

___________ l. Relief from royalty.

Comments: ____

____

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____

Insert Page Ref. in Report, N/A, or 3

SECTION V—VALUATION ADJUSTMENTS

24. Discounts and Premiums

__________ a. Discuss the adequacy of including a control premium to the final value.

__________ b. Discuss the adequacy of including a minority interest discount to the final value.

__________ c. Discuss the adequacy of including a marketability discount to the final value. Demonstrate an understanding and the ability to apply the following marketability studies. (Institutional Investors study, Public Offering studies, Security Exchange Commission study, the Gelman study, Trout study, the Moroney study, the Maher study, Standard Research Consultants, Pittock/Stryker) study, Silber study, FMV Opinions, Inc. (Hall/Polleck) study, IPO studies, Emory study.)

__________ d. If a model was used to support a marketability discount, has the report demonstrated adequate understanding and use of that model?

__________ e. Summarize the various marketability discount studies.

__________ f. Discuss the adequacy of including other premiums and/or discounts (e.g., key man, stock restrictions, one-time loss, built-in gains, etc.) to the final value if appropriate.

__________ g. Discuss the application of all discounts or premiums as applied to both a control and minority shareholder.

__________ h. Is there adequate support for the premiums and or discounts applied?

__________ i. Discuss the degree of control or lack of control characteristics.

__________ j. Discuss and provide rationale and calculations for control premium or lack of control discounts.

__________ k. Has the report adequately addressed the impact and applicability of court decisions in arriving at the final discount or premium?

Comments: ____

____

____

____

____

The above addresses: SSVS 63

SECTION VI—REPRESENTATIONS OF THE VALUATION ANALYST

25. Are the Following Attributes Present? (Check those that apply)

__________ a. The analyses, opinions, and conclusion of value included in the valuation report are subject to the specified assumptions and limiting conditions, and they are the personal analyses, opinions, and conclusion of value of the valuation analyst.

__________ b. The economic and industry data included in the valuation report have been obtained from various printed or electronic reference sources that the valuation analyst believes to be reliable (any exceptions should be noted). The valuation analyst has not performed any corroborating procedures to substantiate that data.

__________ c. The valuation engagement was performed in accordance with NACVA's Professional Standards and if applicable, the American Institute of Certified Public Accountants Statement on Standards for Valuation Services No. 1 (SSVS).

__________ d. The parties for which the information and use of the valuation report is restricted are identified; the valuation report is not intended to be and should not be used by anyone other than such parties.

__________ e. The analyst's compensation is fee-based or is contingent on the outcome of the valuation.

SECTION VI—REPRESENTATIONS OF THE VALUATION ANALYST

Insert Page Ref. in Report, N/A, or 3

— Continued —

25. Are the Following Attributes Present? (Check those that apply)—*Continued*

________ f. The valuation analyst used the work of one or more outside specialists to assist during the valuation engagement. (An outside specialist is a specialist other than those employed in the valuation analyst's firm.) If the work of such a specialist was used, the specialist should be identified. The valuation report should include a statement identifying the level of responsibility, if any, the valuation analyst is assuming for the specialist's work.

________ g. The valuation analyst has no obligation to update the report or the conclusion of value for information that comes to his or her attention after the date of the report.

________ h. The valuation analyst and the person(s) assuming responsibility for the valuation should sign the representation in their own name(s). The names of those providing significant professional assistance should be identified.

________ i. Disclose any conflicts of interest.

________ j. Disclose any hypothetical conditions.

________ k. Disclose if did the audit, review or compilation, or prepare the tax returns, or that we assume no responsibility.

Comments: ____

____

____

The above addresses: SSVS 54, 55, 56, 64, 65, 66

SECTION VII—CONCLUSION OF VALUE

26. Conclusion of Value

________ a. Is there an adequate synthesis and reconciliation of the values?

________ b. If necessary, does the report address mathematical versus subjective weighting?

________ c. Is there replicability of all calculations in the report?

________ d. Is there an adequate justification of the methods of valuation selected?

________ e. Is the final determination of value consistent with the analysis performed?

The following information should be included:

________ a. A valuation engagement was performed, including the subject interest and the valuation date.

________ b. The analysis was performed solely for the purpose described in this report, and the resulting conclusion of value should not be used for any other purpose.

________ c. The valuation engagement was conducted in accordance with NACVA's Professional Standards, and if applicable, the American Institute of Certified Public Accountants Statement on Standards for Valuation Services No. 1 (SSVS).

________ d. A statement that the determination of value resulting from a valuation engagement is expressed as a conclusion of value.

________ e. The scope of work or data available for analysis is explained, including any restrictions or limitations (paragraph 19).

________ f. A statement describing the conclusion of value, either a single amount or a range.

________ g. The conclusion of value is subject to the assumptions and limiting conditions (paragraph 18) and to the valuation analysts' representation (paragraph 65).

SECTION VII—CONCLUSION OF VALUE

— Continued —

Insert Page Ref. in Report, N/A, or 3

26. Conclusion of Value—*Continued*

h. The report is signed in the name of the valuation analyst or the valuation analyst's firm.

i. The date of the valuation report is included.

j. The valuation analyst has no obligation to update the report or the conclusion of value for information that comes to his or her attention after the date of the report.

Comments:

The above addresses: SSVS 62, 68

Final Comments that refer to any additional details in your valuation report:

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APPENDIX VI

Economic Studies:
Furniture Industry

Research provided by
KeyValueData
(dba www.keyvaluedata.com)

I. THE FURNITURE/BEDDING INDUSTRY 2000

Research supplied by KeyValueData

A. HOME FURNISHINGS AND FURNITURE INDUSTRY

Analysts agree that the boom that has been felt by the nation's furniture dealers may indeed be slowing and that both sales and shipments of furniture could be lower for the year 2001. Factors leading to the softening of the market are slowdowns in the number of housing starts and home sales and a general slowdown of the national economy. Spending on furniture and home furnishings is also expected to decline from years past. Sales in 2000 were $64.2 billion and in 2001 they are forecast to be $67.4 billion, and $69.5 billion in 2002. The yearly average growth rate is expected to be around three percent, which is the smallest year-on-year increase since 1991.

Sales of furniture and home furnishings, according to the Census Bureau, have increased faster than have retail sales for the 1998 to 1999 time period. For the time period from 1992 to 1999 sales of furniture and household products have grown faster than have retail sales for the time period.

Sales at retail establishments should hold steady, but manufacturer's shipments will lag and inventories will begin to pile up. The 2001 shipments will be about one percent behind shipments in 2000 and shipments in 2002 should be about two percent behind what they were in 2000. This phenomenon is mainly due to a trend of continued growth in imports that has occurred over the last few years. Manufacturer shipments, in the first quarter of 2001 have slowed, and inventories have begun to build up, according to Furniture Today.

New home sales, which play a large role in furniture and home furnishings sales, are expected to slow over the next few years. New home sales in 2000 were about 1.59 million; they were expected to decline to 1.51 million in 2001 and decline further in 2002 to about 1.47 million. Not only are new home sales expected to **decline** in the coming years, but so too are single-family resales. There were about 4.94 single-family resales in 2000 and they are expected to **decline** to 4.86 million units in 2001 and 4.59 million units in 2002, according to *Furniture Today.*

Growth in the Gross Domestic Product will also be slowing down, but still increasing, over the next couple of years, according to analysts. GDP grew about 4.8 percent in 2000 and is expected to grow by about 3.5 percent in 2001 and by 3.3 percent in 2002.

1. Furniture Markets By Region

The decline of the equity markets in the **Northeast** will act to slow the growth of the region's economy, due to the importance of the region's huge financial service industry. The service industry has already begun to contract and consolidate and layoffs loom in the near future. The furniture and home furnishings industry could feel a chill in the near future because individuals in the area tend to be high earners.

Furniture and home furnishings retailers in the **Southern United States** should also feel the contraction in the market, as downturns in other industries ultimately affect the furniture and home furnishings industry. Rapid growth in technology jobs in states such as

Virginia, North Carolina, Maryland and Texas has fueled growth in the region for many years, but high technology jobs are beginning to slow. The region also employs many individuals in the automotive industry, which has been slowing recently. Based on these factors, furniture and home furnishings sales gains in the region should be modest for the period from 2000-2002.

The **Western United States** could feel very little economic slowdown for the time period depending on the fate of the technology sector, which has been a major catalyst in the region in recent years. Other factors that could benefit furniture and home furnishings dealers in the area are strong gains in global trade in aircraft, shipping and agricultural industries.

The **Midwestern United States** has also benefited from global trade and China's entry into the World Trade Organization. The large agricultural sector in the region has benefited global trade. However, the tight labor markets that are prevalent in the region have stopped growth dead in its tracks in many industries. The region is beginning to respond with an influx of capital investment in productivity–enhancing equipment that is a key growth factor for the region.

2. Geographic Trends in the Furniture/Home Furnishings Market

Furniture and bedding sales are expected to increase over all regions of the country through 2005, according to Furniture Today's 2001 Retail Planning Guide. However, growth will not be occurring as fast as it has in years past, mainly due to a general slowing of the economy as a whole. Sales are forecast to increase by at least 10 percent in every region in the U.S. for the 2000 to 2005 time period. Sales for the domestic market, as a whole, are expected to increase by about 15 percent for the time period.

The largest furniture and bedding market in the country is the Chicago Metro market. Sales in the region have topped all other markets since 1997. New York, Los Angeles and many other well-established cities top the charts as the largest furniture and bedding markets in the country. Sales growth within each of the 20 largest markets is expected to increase for the time period from 2000 to 2005 by at least nine percent, with some areas growing more than 25 percent.

The fastest growing furniture and bedding markets are in less traditionally well-established cities, where growth is taking place due to a rapid population influx for reasons that are characteristic to the region. Austin/San Marcos, Texas is the fastest growing region in the country, with over $337 million in sales in 2000 and sales projected at over $464 million in 2005, an increase of almost 40 percent. Furniture and bedding retailers and wholesalers that are serving these "hot markets" will be less likely to feel the chill of a cooling economy than firms that are serving alternative markets within the country. While the 25 fastest growing regions of the country are still growing faster than all other regions of the country, they are not growing as fast as the previous years top 25 fastest growing markets. In the 1999 Retail Planning Guide the percent change in sales volume ranged from 69 percent to about 145 percent, compared to the range of 24 to 38 percent in the current Retail Planning Guide.

3. Imports Within the Furniture Industry

Imports have a dramatic effect on manufacturers of furniture and bedding products. As stated earlier, manufacturers are facing stiff competition from overseas markets that have access to inexpensive means of production, and labor. Imports in the furniture industry have increased over 66 percent since 1997. Looking only at the 1998 to 1999 time period, imports have increased over 20 percent.

Imports from China alone have increased over 46 percent for the 1998 to 1999 time period. Over the past few years, Chinese furniture factories have seen large capacity increases that have allowed them to pick up the production slack that has been felt in the factories in the United States. The product with the highest demand in the United States that is imported from China is a metal outdoor chair with textile-covered seats. Imports of this product alone have increased over 90 percent during the 1998 to 1999 time period.

The United States exported about $1.6 billion of furniture products in 1999, which was a drop of about two percent from the previous year. Exports also dropped to the following countries.

a) Japan – 10 percent decline
b) Saudi Arabia – 17 percent decline
c) Kuwait – 7 percent decline
d) Brazil – 40 percent decline
e) Netherlands – 6 percent decline

4. Top Manufacturers

Collectively the top 25 furniture manufacturers in the United States have had increased sales of over 19 percent for the 1998 to 1999 time period, as compared to sales increases of only seven percent for the top 25 firms analyzed for the 1996 to 1997 time period. When polled, the top manufacturers stated that they expect the large companies within the industry to get larger through strategic processes such as mergers, acquisitions and partnerships.

B. OUTLOOK

The merchant wholesale industry is forecast to achieve annual sales increases averaging five percent from 1998 to decade's end and at a declining pace through 2003, according to the U.S. Department of Commerce's Bureau of Economic Analysts. The primary brakes on sales should be competition from alternative distribution sources and the price-sensitivity of customers toward value-added services. Those alternative channels have increased, luring business that traditionally identified with Wholesale. Among these channels are wholesale clubs, super centers, catalog sales, discount centers and electronic commerce/direct mail. Beginning in the early 1980s, wholesale clubs and super centers provided competition mainly for the durable goods wholesaler. In the mid-1990s growth for the former slowed, as they reached the mature stage of the industry life cycle, while super centers still have significant room for expansion. A 1997 report by Degen & Co. cited by the U.S. Department of Commerce identified super centers as reaching an estimated $34 billion in sales in 1996, and forecast those sales to surpass $80 billion by 2000. By comparison, wholesale club sales should grow at a slower pace, as 1996 levels reached $44 billion, forecast to approach $57 billion by 2000. These two challenging channels pressure distributors in two ways: they directly compete for Wholesale customers, and—when the distributor channel cannot be avoided due to contractual arrangements of certain manufacturers—they all but dictate the terms of sale to the distributor. This is the greatest threat to already tight gross margins.

The outlook for certain segments of the furniture industry also looks strong. Looking ahead to 2001, the infant and juvenile products are in for a year of strong sales, according to Furniture Today's Retail Planning Guide. Sales have been up in this market every year since 1998, partly due to the increased number of births, which increased by over two percent from 1997. The birth rate (number of births per 1,000 of population) is also slightly increased in 1998. Births of twins increased about six percent in 1998 according to the National Center for Health Statistics. Sales within this market in 1999 were $5.39 billion, up from $4.86 billion in 1998.

The upholstery industry has been unsettled for the last couple of years, but executives of upholstery firms are using tactics such as brand power or personalization to stave off the expected slowdown. *Furniture Today* polled several industry executives about how they felt business would be in the upcoming year. Many felt that business would be better, even if consumer spending decreases. They felt that if money were tight consumers would spend their dollars at businesses that they have had good experiences within the past. Other firms are opting to use improved textile designs to "up the game" and appeal to the upper-end of the market.

Fabric makers are looking to 2001 with three issues on their mind: flammability of fabrics, imports, and the general economy. Flammability is an issue because consumers demand fabrics that are extremely soft, but in order to be fireproof fabrics usually feel firm and stiff. Imports, mainly from China, will also be on the mind of many fabric manufacturers in the coming year. Chinese imports are mainly facing only the lower markets now, but in the future, they will have fabrics in all price levels.

Furniture Today reports that five years after China joined the WTO quotas will be a thing of the past and the United States market will be wide open. This will diminish the number of American manufacturing jobs. Manufacturing jobs pay more than service jobs, so the disposable income of all of the former employees will be diminished considerably, ultimately affecting the furniture industry.

Most fabric manufacturers reported that 2000 was a fair to good year, and that the softened retail climate hurt their sales. The retail sector was softened, in part, by gasoline prices, interest rates, and the jumpy stock market. Most firms see business picking up in 2001 because of new product lines; others see business picking up because of new national accounts that they have landed in the past few months.

The bedding market has never been an industry characterized by tremendous growth, but rather it has been characterized by slow steady growth year after year. The International Sleep Products Association estimates that sales increases for the year 2001 will be about four percent. Several factors are to blame for the dismal outlook for the upcoming year. Those being the shifty stock market, sluggish corporate earnings that consistently have failed to meet analysts' earnings, high–energy prices and interest rates.

While analysts are predicting that 2001 will be a roller-coaster year for the bedding industry, some individual producers are expecting their gains to be in double digits. Companies such as

Simmons, saw 20 percent gains in 2000 due to new product introductions that have kept orders rolling in.

The furniture and bedding industry, as well as each of the specialty markets contained within the industry will be in for a mixed year of growth, depending on what the general economy does. Things could pan out very differently if the stock market stabilizes and energy prices lower, rather than if the stock market continues to be jittery and energy prices continue to soar.

February 2001

C. BIBLIOGRAPHY FOR WHOLESALE DISTRIBUTOR STUDY

- Survey of Current Business; U.S. Department of Commerce/Economics & Statistics Administration, Bureau of Economic Analysis; November 1998.
- Survey of Current Business; U.S. Department of Commerce/Economics & Statistics Administration, Bureau of Economic Analysis; June 1996.
- U.S. Industry & Trade Outlook 2000; U.S. Department of Commerce/International Trade Administration and DRI/McGraw–Hill/Standard & Poors; 1999.
- “Furniture Information Market Reports”; Aktrin Furniture Information Center; http://www.aktrin.com.
- “Consumer Market Survey”; *Furniture/Today*; April 28, 1997.
- “Consumer Buying Trends”; *Furniture/Today*; February 16, 1998.
- “Survey of Top 25 U.S. Furniture Manufacturers”; *Furniture/Today*; May 11, 1998.
- “Distributor Survey”; *Furniture/Today*; May 25, 1998.
- “Retail Planning Guide”; *Furniture/Today*; December 28, 1998.
- “Retail Planning Guide”; *Furniture/Today*; December 25, 2000.
- “Import/Export Report”; *Furniture/Today*; June 12, 2000.
- “Overreaching for mass retailers”; The McKinsey Quarterly; 1997 Number 4.
- “Channel Conflict: When is it dangerous?”; The McKinsey Quarterly; 1997 Number 3.
- Mergerstat Review; Houlihan, Lokey, Howard & Zukin; 1997, 1998, 1999.
- “CIT’s Furniture Outlook Forecasts Long-Term Growth”; CIT Group; October 9, 2000.

NATIONAL RETAIL SALES/FURNITURE & HOME FURNISHINGS TRENDS 1992-2000 (Dollars in Billions)

	RETAIL SALES	DURABLE GOODS SALES	FURNITURE & HOME FURNISHINGS
1992	$ 1,951.6	$ 703.6	$ 96.9
1993	2,072.8	776.1	105.4
1994	2,227.3	873.4	118.6
1995	2,324.0	925.0	127.3
1996	2,506.1	1,020.9	135.1
1997	2,615.7	1,066.1	140.8
1998	2,746.0	1,138.3	152.0
1999 (f)	2,912.1	1,207.1	163.6
2000 (e)	3,044.0	1,262.0	168.8
%CHANGE '96–97	4.4	4.4	4.2
%CHANGE '97–98	5.0	6.8	8
%CHANGE '98–99	6.0	6.0	7.6
%CHANGE '99–00	4.5	4.5	3.2

(e)=estimate, (f)=forecast

Source: U.S. Department of Commerce/Bureau of the Census

TOP 25 U.S. FURNITURE MANUFACTURERS 1998–99
(Dollars in Millions)

COMPANY NAME	1998 Sales	1999 Sales	Rank 1 Yr Ago	%ch 98–99
Furniture Brands International	$1,960.2	$2,088.1	1	6.5%
La–Z–Boy	1,244.0	2,063.8	3	65.9%
Lifestyle Furnishings International	1,745.0	1,830.0	2	4.9%
Klaussner	725.0	935.0	4	29.0%
Ashley	651.0	816.0	5	25.3%
Ethan Allen	610.8	688.2	6	12.7%
Sauder Woodworking	530.0	550.0	8	3.8%
Bush Furniture	384.3	411.7	10	7.1%
O'Sullivan Industries	362.2	407.2	11	12.4%
Bassett	397.6	394.4	9	–0.8%
Bernhardt (e)	240.0	302.0	13	25.8%
L&P Consumer Products Unit	278.6	299.4	12	7.5%
The Rowe Companies	191.5	265.2	17	38.5%
Stanley Furniture	247.4	264.7	14	7.0%
Cromcraft Revington	236.7	245.4	15	3.7%
Hooker	205.3	227.9	16	10.9%
Heath Home Furnishings	N/A	225.0	NR	
Pulaski	172.4	198.2	19	15.0%
Vaughan–Bassett	142.0	183.8	NR	29.4%
Flexsteel	168.0	182.0	20	8.3%
Century	175.0	178.0	18	1.7%
Standard Furniture	108.9	174.0	NR	59.8%
The Jackson Companies	160.0	165.0	21	3.1%
Sherrill	153.0	164.0	24	7.2%
WinsLowe	141.4	62.0	NR	14.7%
Group Total	$11,230.3	$13,421.0		19.5%

(e)=estimate NR=Not Ranked

Non-furniture revenues have been excluded; shipments may include exports outside the United States.
Source: *Furniture/Today*

2001 FURNITURE/TODAY ECONOMIC FORECAST **(% change year–on–year)**

	Consumer Spending on Furniture & Bedding		Furniture Store Sales		Furniture Factory Shipments	
	Current $	**Constant $**	**Current $**	**Constant $**	**Current $**	**Constant $**
2000	8.1%	8.1%	8.0%	8.0%	3.3%	2.1%
2001	3.5%	3.4%	3.4%	3.3%	0.8%	0.5%
2002	3.2%	2.5%	3.2%	2.5%	2.0%	1.4%
1999 by Quarter:						
First	4.0%	4.3%	4.2%	4.6%	2.3%	2.2%
Second	2.9%	2.8%	4.1%	4.0%	2.6%	2.2%
Third	3.5%	3.4%	3.1%	3.0%	0.1%	–0.1%
Fourth	2.9%	2.8%	2.4%	2.3%	0.7%	0.4%

Source: *Furniture/Today*

LARGEST FURNITURE & BEDDING MARKETS RANKED BY 2005 SALES

MARKET	ACT. 2000 SALES	PROJ. 2005 SALES	% CHANGE
Chicago	$2,336.6	$2,650.6	13.4%
New York	2,342.9	2,575.4	9.9%
L.A./Long Beach	2,204.5	2,412.4	9.4%
Washington	1,598.1	1,838.8	1.5%
Philadelphia	1,390.7	1,532.1	10.2%
Atlanta	1,133.1	1,464.5	25.6%
Houston	1,113.4	1,361.0	22.2%
Detroit	1,213.4	1,621.9	8.9%
Dallas	993.7	1,259.2	26.7%
Boston	1,060.1	1,186.2	11.9%
Minn./St. Paul	877.7	1,033.5	17.8%
Phoenix/Mesa	792.8	988.0	24.6%
Seattle/Bellevue/Everett	804.6	973.2	20.9%
Nassau/Suffolk	870.0	936.4	7.6%
Orange County	801.7	889.6	11.0%
Oakland	744.5	581.4	14.0%
San Diego, CA	707.7	810.2	14.5%
Denver, CO	644.3	801.6	24.4%
Baltimore, MD	699.8	780.3	11.5%
St. Louis, MO–IL	685.8	778.1	13.5%

(Dollars in Millions)

Source: *Furniture/Today*

LEADING SOURCES OF IMPORTED FURNITURE & PRINCIPAL PRODUCTS

SOURCE/PRODUCT	1998 Sales	1999 Sales	% CHANGE
China	**$1,839.4**	**$2,682.0**	**46.0%**
Misc. Wood Furniture	489.7	656.5	34.0%
Metal Household Furniture	232.3	333.5	44.0%
Metal Outdoor Seats with Cushions	151.2	289.9	91.0%
Metal Outdoor Seats w/o Cushions	148.4	160.6	8.0%
Wood Chairs	94.8	118.9	25.0%
Canada	**1,765.2**	**2,091.5**	**18.0%**
Misc. Wood Furniture	428.3	495.9	16.0%
Wood Bedroom Furniture	253.5	308.6	22.0%
Wood Furniture Parts	118.4	203.6	72.0%
Misc. Furniture Parts	150.8	160.5	6.0%
Upholstered Seats, Metal Frame	140.1	141.3	1.0%
Italy	**847.9**	**1,022.7**	**21.0%**
Upholstered Seats, Wood Frame	276.2	332.8	17.0%
Misc. Wood Furniture	115.7	130.2	13.0%
Wood Bedroom Furniture	74.4	124.6	67.0%
Upholstered Chairs Wood Frame	94.4	95.9	2.0%
Metal Household Furniture	28.5	51.6	81.0%
Mexico	**741.8**	**869.2**	**17.0%**
Misc. Wood Furniture	132.2	138.6	5.0%
Wood Bedroom Furniture	122.2	132	8.0%
Upholstered Seats, Metal Frame	97.6	127.1	30.0%
Metal Household Furniture	112.8	112.9	0.0%
Upholstered Seats, Metal Frame	35.1	57.2	63.0%
Taiwan	**793.1**	**820.1**	**3.0%**
Misc. Wood Furniture	181.9	185.1	2.0%
Metal Household Furniture	130.9	133.8	2.0%
Wood Chairs	71.5	69.4	–3.0%
Upholstered Seats, Metal Frame	43.8	49.1	12.0%
Wood Furniture Parts	37.1	45.7	23.0%
Malaysia	**398.6**	**459.8**	**15.0%**
Wood chairs	117.1	133.1	14.0%
Misc. Wood Furniture	92.2	95.4	3.0%
Wood Dining Tables	59.6	77.2	29.0%
Wood Kitchen Dining Tables	10.3	20.7	100.0%
Upholstered Chairs, Wood Frame	24.2	19.2	–21.0%

SOURCE/PRODUCT	1998 Sales	1999 Sales	% CHANGE
Indonesia	**340.1**	**428.4**	**26.0%**
Misc. Wood Furniture	124.1	153.3	24.0%
Wood Beds	37.5	54.9	46.0%
Wood Bedroom Furniture	30.2	40.7	35.0%
Wood Chairs	17.6	24.9	42.0%
Rattan Seats	14.1	23.2	65.0%
Philippines	**219.7**	**246.7**	**12.0%**
Misc. Wood Furniture	57.6	68.4	19.0%
Metal Household Furniture	35.7	35.9	1.0%
Rattan Furniture	22.6	28.8	27.0%
Furniture, Other Materials	25.7	27.3	6.0%
Rattan Seats	19.6	20.9	6.0%
Thailand	**189.8**	**240.9**	**27.0%**
Misc. Wood Furniture	83.8	102.4	22.0%
Wood Chairs	23.0	33.6	46.0%
Wood Dining Tables	11.2	14.2	27.0%
Other Seat Parts	10.7	12.8	19.0%
Wood Kitchen Furniture	14.2	10.1	–29.0%
United Kingdom	**139.0**	**150.5**	**8.0%**
Misc. Wood Furniture	60.0	59.7	–1.0%
Other Seat Parts	11.8	17.9	52.0%
Misc. Furniture Parts	17.5	15.2	–13.0%
Wood Bedroom Furniture	10.8	10.8	0.0%
Metal Furniture & Parts.	8.7	10.4	20.0%
Total U.S. Imports from the World	**$10,277.6**	**$8,331.5**	**23.0%**

(Dollars in Millions)
Source: *Furniture/Today*

FASTEST GROWING FURNITURE & BEDDING MARKETS RANKED BY INCREASE

MARKET	ACTUAL 2000 SALES	PROJECTED 2005 SALES	% CHANGE
Austin/San Marcos, TX	$337.1	$464.9	37.9%
Las Vegas, NV	384.7	518.5	34.8%
Provo/Orem, UT	67.8	89.2	31.6%
Myrtle Beach, SC	46.1	60.5	31.1%
Fort Collins/Loveland, CO	67.5	88.6	31.1%
Boise, ID	106.4	138.9	30.6%
Panama City, FL	34.5	45.0	30.5%
Naples, FL	68.6	88.6	29.2%
Boulder/Longmont, CO	3.8	119.6	27.5%
Dallas, TX	993.7	1,259.2	26.7%
Raleigh/Durham/Chapel Hill, NC	330.1	415.7	25.9%
Fayetteville, NC	63.7	80.2	25.9%
Atlanta, GA	1,166.1	1,464.5	25.6%
Laredo, TX	27.3	34.3	25.3%
Reno, NV	94.4	118.8	25.2%
Fort Walton Beach, FL	43.5	54.4	25.0%
Portland/Vancouver, OR–WA	545.8	682.3	25.0%
Salt Lake City/Ogden, UT	320.1	399.2	24.7%
Phoenix/Mesa, AZ	792.8	988.0	24.6%
Denver, CO	644.3	801.6	24.4%

(Dollars in Millions)
Source: *Furniture/Today*

FURNITURE SALES BY REGION 2000 – 2005

	(Furniture & Bedding Sales in $millions)		
Regional Market	**2000 Sales**	**2005 Projected**	**Projected % Change**
Northeast	$12,880.3	$14,136.0	9.7%
South	18,687.1	22,056.3	18.0%
Midwest	12,613.7	14,350.1	13.8%
West	13,979.5	16,246.6	16.2%
Total Domestic Markets	**$ 58,160.6**	**$ 66,789.1**	**14.8%**

Source: *Furniture/Today*

HOUSEHOLD FURNITURE MANUFACTURING TRENDS & FORECAST

(Millions of Dollars)

INDICATORS	1992	1993	1994	1995	1996	1997(e)	1998(e)	1999(e)	2000(f)	%ch 97-98	%ch 98-99	%ch 99-00	%ch 96-00
Value of Shipments	20,507	21,906	23,603	24,458	25,426	26,702	28,528	30,495	31,424	6.8	6.9	3.0	5.4
Value of Shipments ($1992)	20,507	21,373	22,363	22,563	23,010	23,863	25,126	26,560	27,017	5.3	5.7	1.7	4.1
Total Employment (thousands)	253	255	267	271	273								
Capital Expenditures	346	393	436	528	481								
Value of Imports	2,995	3,397	3,965	4,448	4,988	5,882	7,009	8,408	9,837	19.2	20.0	17.0	18.5
Value of Exports	1,113	1,183	1,307	1,320	1,326	1,530	1,641	1,594	1,651	7.3	-2.9	3.6	5.6

*compound annual rate

(e) = estimate, (f) = forecast

Source: U.S. Department of Commerce/Bureau of the Census

RETAIL TRADE TRENDS & FORECASTS
(Millions of Dollars)

	1992	1993	1994	1995	1996	1997	1998	1999(f)	2000(f)
Durable Goods	703,604	776,126	873,408	925,017	1,020,861	1,066,087	1,328,286	1,207,117	1,261,984
Bldg Matls & Garden	100,838	109,444	122,342	125,831	141,935	150,482	165,331	185,557	192,051
Automotive Dealers	406,935	456,332	518,492	551,330	608,781	632,885	668,658	732,047	752,269
Furn & Home Furnish	96,947	102,399	118,649	127,270	135,149	140,776	152,044	163,598	168,839
Non-Durables	1,247,985	1,296,662	1,353,917	1,399,021	1,485,280	1,549,582	1,607,725	1,704,944	1,782,439
General Merch Stores	246,420	264,613	283,203	299,169	313,342	330,216	351,436	381,510	389,742
Food Stores	377,099	384,978	398,845	409,617	415,170	425,170	438,212	460,277	485,236
Gasoline Stations	136,950	138,172	141,671	146,080	168,320	171,527	162,095	167,932	172,970
Apparel & Accessory	104,212	107,176	109,862	110,429	116,101	120,575	126,939	135,787	140,513
Eating & Drinking Places	200,164	213,461	223,485	232,060	238,474	253,551	266,544	285,263	295,234
Total Retail Sales	**1,951,589**	**2,072,788**	**2,227,325**	**2,324,038**	**2,506,141**	**2,615,669**	**2,746,011**	**2,912,061**	**3,044,422**

f = forecast

	%ch 96-97	%ch 97-98	%ch 98-99	%ch 99-00
Durable Goods	4.4	6.8	6.0	4.5
Bldg Matls & Garden	6.0	9.9	12.2	3.5
Automotive Dealers	4.0	5.7	9.5	2.8
Furn & Home Furnish	4.2	8.0	7.6	3.2
Non-Durables	4.3	3.8	6.0	4.5
General Merch Stores	5.4	6.4	8.6	2.2
Food Stores	2.4	3.1	5.0	5.4
Gasoline Stations	1.9	-5.5	3.6	3.0
Apparel & Accessory	3.9	5.3	7.0	3.5
Eating & Drinking Places	6.3	5.1	7.0	3.5
Total Retail Sales	**4.4**	**5.0**	**6.0**	**4.5**

Source: U.S. Department of Commerce/Bureau of the Census

MERCHANDISE WHOLESALE SALES TRENDS by Category

(Billions of Dollars)

CONSUMER DURABLES	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Annual %ch 90-94**	**Annual %ch 94-98**
Motor Vehicles & Parts	174	167	171	175	188	189	193	195	203	2.0%	2.0%
Furniture & Home Furnishings	34	32	33	35	37	41	43	46	48	2.2%	7.4%
Lumber & Other Construction Materials	64	58	64	72	79	79	86	90	92	5.9%	4.1%
Professional & Commercial Equip & Supplies	114	124	140	161	171	203	224	240	256	12.5%	12.4%
Metals & Minerals except Petroleum	78	76	77	79	89	95	94	100	96	3.5%	2.0%
Electrical Goods	116	113	115	138	164	193	195	205	212	10.3%	7.3%
Hardware, Plumbing & Heating Equip	53	50	53	55	63	67	70	74	77	4.7%	5.6%
Machinery & Industrial Equip	157	146	149	163	175	191	206	223	241	2.9%	9.4%
Miscellaneous Durables	91	93	107	112	125	138	135	139	135	9.3%	2.0%
Total Wholesale Durables Sales	**881**	**860**	**909**	**990**	**1,091**	**1,196**	**1,246**	**1,312**	**1,360**	**6.0%**	**6.2%**

Source: U.S. Department of Commerce/Bureau of the Census

MERCHANDISE WHOLESALE SALES TRENDS by Category

(Billions of Dollars)

NON-DURABLE GOODS	1990	1991	1992	1993	1994	1995	1996	1997	1998	%ch 90-94	%ch 94-98
Paper & Paper Products	52	52	55	59	66	80	80	84	90	6.7%	9.1%
Drugs & Proprietaries	52	60	67	69	76	84	94	107	124	11.5%	15.8%
Apparel, Piece Goods, Notions	65	64	68	70	72	70	75	85	86	2.7%	4.9%
Groceries & Related Products	273	277	279	288	293	312	320	332	347	1.8%	4.6%
Farm-product Raw Materials	108	105	106	98	99	120	138	125	108	-2.1%	2.3%
Chemicals & Allied products	36	37	39	40	43	50	53	55	55	4.9%	7.0%
Petroleum & Petrol products	149	140	143	132	130	131	149	145	121	-3.2%	-1.7%
Beer, Wine & Distilled Beverage	49	52	50	51	52	53	59	58	62	1.5%	4.8%
Miscellaneous Non-Durables	131	133	133	138	143	160	173	175	183	2.3%	7.0%
Total Wholesale Non-Durables Sales	**913**	**920**	**941**	**944**	**975**	**1,058**	**1,138**	**1,168**	**1,175**	**1.7%**	**5.1%**

Source: U.S. Department of Commerce/Bureau of the Census

Metropolitan Area Study
Atlanta, Georgia

II. METROPOLITAN STATISTICAL AREA (MSA)

Research supplied by KeyValueData

A. INTRODUCTION

A metropolitan/economic study is a straightforward matter-of-fact look at the economy in a specific geographic area. Data from a wide variety of reliable sources is used to ensure a realistic view of the economy. The studies look at the key economic factors of an area, including; population, total personal income, per capita personal income, earnings and employment for the major industries, and unemployment rates. The numerous tables and graphs that accompany this report show how the major industries are doing relative to the overall economy and their respective share of the economy. The graphs provide a good snapshot of the recent trends and offer a well-delineated representation of what is discussed in this report, such as how one industry compares to the other industries, as well as the changes in population, income, earnings and employment. Any economic trends that are taking place can be seen with a quick glance at the graphs and reviewed more closely with the specific data on the tables. The direction and rate of change from year-to-year for each major economic factor is clearly indicated.

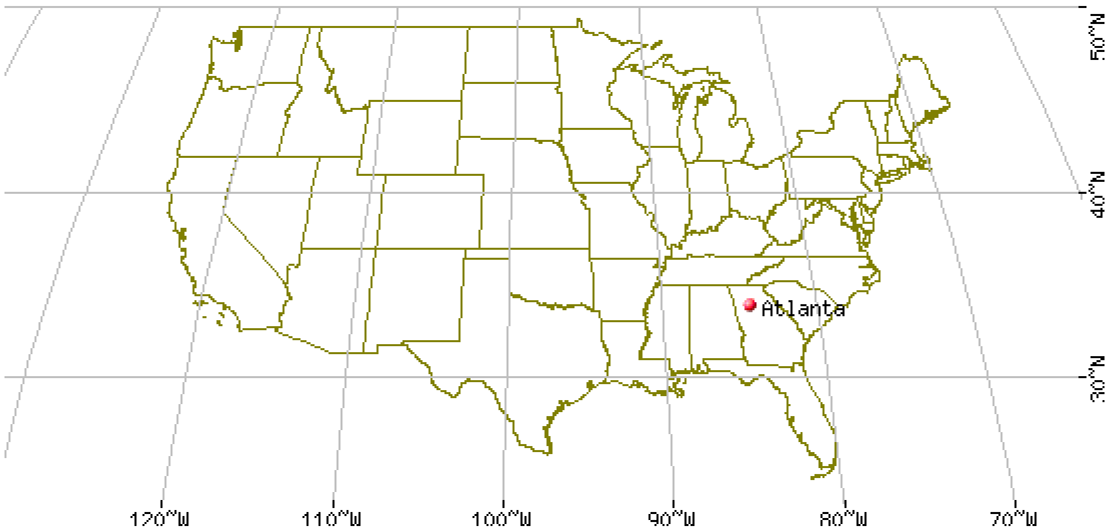
Having good economic information for a geographic area can be useful in a variety of ways. Whether a business has done well or not, a metropolitan/economic study can be used when making a correlation between the performance of the business and the overall state of the economy. A metropolitan study can help to show what type of trend or the amount of growth a business in a particular industry might be expected to have during certain years. Other purposes include being used by local Chambers of Commerce, developers, companies deciding whether to expand or relocate and anyone needing comprehensive economic information on an area.

1. Atlanta, GA MSA

The Atlanta, GA, Metropolitan Statistical Area (MSA) includes the counties of Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, De Kalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Pickens, Rockdale, Spalding and Walton. There are enough economic and social attachments between the city for which the economic area is named and the geographic area covered by the 20 counties for them to be grouped together as one economic unit.

Atlanta is the state capital of Georgia. A mayor and a 15-member city council, which is managed by a council, govern the city of Atlanta. Located in northwestern Georgia, the area is well-served by abundance of major roadways, including interstates and state and national highways. This allows for good access to other areas of the state and nation, making it easy to get raw materials and finished goods in and out of the area. The Atlanta area is a major east-west and north-south crossroads for the state, as well as that region of the United States. Atlanta has the world's largest inter-modal passenger terminal complex and 80 percent of the population of the United States lives within a two-hour flight of Atlanta. Figure 1 shows Atlanta's location in comparison to the rest of the country.

Figure 1–Location of Atlanta, GA



Atlanta is the home to many national and international firms. It is the headquarters of soft drink manufacturer Coca-Cola, home improvement retailer Home Depot, shipping giant UPS and media suppliers such as HBO, CNN and TNT. Atlanta is also home to many professional sports teams, such as Baseball's Braves, Football's Falcons, Basketball's Hawks, and Hockey's Thrashers. The city also hosted the 1996 Olympic Summer Games. Atlanta is home to three symphonies, Atlanta Community Orchestra, Atlanta Pops Orchestra and Atlanta Symphony Orchestra, as well as the Atlanta Opera, and Atlanta Ballet Company.

B. POPULATION

The population of the Atlanta, GA MSA totaled 4,112,198 in 2000, according to the U.S. Department of Commerce/U.S. Census Bureau. Table 1 shows the age breakdown of the Atlanta, GA MSA in 2000.

Table 1–Age Breakdown of the Atlanta, GA MSA (2000)		
Age	Number	Percentage
Under 5 years	308,723	7.5
5 to 9 years	314,712	7.7
10 to 14 years	302,816	7.4
15 to 19 years	279,509	6.8
20 to 24 years	280,979	6.8
25 to 34 years	725,452	17.6
35 to 44 years	732,661	17.8
45 to 54 years	553,932	13.5
55 to 59 years	178,431	4.3
60 to 64 years	124,280	3.0
65 to 74 years	174,590	4.2
75 to 84 years	101,754	2.5
85 years and over	34,359	0.8

Source: U.S. Department of Commerce/U.S. Census Bureau

The U.S. Census Bureau reported the median age of the Atlanta, GA MSA was 32.9 years old in 2000, younger than the state median age of 33.4 years old. The bureau also reported 26.6 percent of the total population of the MSA was under the age of 18 in 2000, while only 7.6 percent of the population was over the age of 65.

The state of Georgia had one of the best rates of growth for population of any state east of the Rocky Mountains during the 1990s. The Atlanta MSA grew at an even better rate than the already strong growth rate of the 1980s. The population growth in Georgia has been centered mostly in the Atlanta area. By 1998, almost 50 percent of the state's total population resided in the 20-county MSA. More than half of the remarkable population growth of the 1990s is due to people moving to the Atlanta area from other areas of the United States. Natural increase (births minus deaths) accounted for about 40 percent of the population gain, while about eight percent was due to immigration from abroad. The state is projected to grow by 32.7 percent between 1995 and 2020.

The U.S. Census Bureau reported academic institutional enrollment in the Atlanta, GA MSA totaled 1,112,254 in 2000, including enrollees in nursery school, preschool and college and graduate school. High school enrollment totaled 226,370 in 2000, while college and graduate school enrollment totaled 221,819. Of the population 25 and over, 5.4 percent had less than a ninth grade education, 10.6 percent had attended ninth to 12th grade and received no diploma, and 24.4 percent had a high school diploma or high school equivalency. Of the population 25 and over, 21.6 percent had a bachelor's degree and 10.4 percent had a graduate or professional degree.

1. Total Personal Income

The U.S. Department of Commerce's Bureau of Economic Analysis reported the Total Personal Income of the Atlanta, GA MSA reached $136.8 billion in 2000, an increase of 52.4 percent from $89.8 billion in 1995. Total Personal Income consists of Net Earnings, Transfer Payments, and Dividends, Interest and Rent. In 2000, Net Earnings accounted for 77 percent of Total Personal Income in the Atlanta, GA MSA, as compared to 68.8 percent nationally.

As of June 30, 2000, FDIC insured bank deposits totaled $54.6 billion in 115 bank institutions. Deposits in commercial banks totaled $51.73 billion, while deposits in savings institutions totaled $2.88 billion.

2. Per Capita Personal Income

Per Capita Personal Income increased 29.1 percent from $25,571 in 1995 to $33,013 in 2000. Table 2 shows median hourly and mean annual wages of select occupations in the Atlanta, GA MSA in 2000.

Table 2–Wages of Select Occupations in the Atlanta, GA MSA (2000)

Occupation	Median Hourly	Mean Annual
Farm Workers, Farm and Ranch Animals	$8.73	$ 20,560
Earth Drillers, Except Oil and Gas	$14.21	$ 29,460
Construction Laborers	$10.15	$ 21,800
Molders, Shapers, and Casters, Except Metal and Plastic	$11.11	$ 23,730
Bus Drivers, School	$6.35	$ 14,550
First-Line Supervisors/Managers of Non-Retail Sales Workers	$24.50	$ 53,970
Retail Salespersons	$8.29	$ 21,090
Securities, Commodities and Financial Services Sales Agents	$20.32	$ 56,270
Pediatricians, General	$63.64	$121,520
Fire Fighters	$17.04	$ 33,890

Source: U.S. Department of Labor/Bureau of Labor Statistics

The cost of living in the Atlanta metropolitan area was more expensive than the national average according to the American Chamber of Commerce Researchers Association (ACCRA) during 2000. ACCRA examines the cost of living in specific areas based upon several factors that determine the composite cost of living. The areas are given a score based on the cost of living in the area compared with the national average, which equals 100. Table 3 shows the cost of living of several metropolitan areas for the third quarter 2000.

Table 3–ACCRA Cost of Living Comparison (3rd Quarter 2000)							
	Composite	Groceries	Housing	Utilities	Transport	Health Care	Misc.
New York, NY	241.0	143.9	485.3	199.3	121.2	176.3	137.0
San Diego, CA	120.8	119.9	142.6	122.0	117.5	123.6	103.0
Denver, CO	110.0	113.1	123.4	82.9	107.0	128.5	101.7
Cleveland, OH	109.8	104.4	108.0	140.5	108.8	115.0	106.1
Minneapolis, MN	109.2	101.9	108.5	111.2	112.2	127.6	109.1
Tampa, FL	102.6	107.1	99.2	96.6	102.2	102.9	104.9
Atlanta, GA	102.0	102.2	103.8	90.4	108.3	104.0	101.0
Dallas, TX	99.9	97.0	98.8	95.0	105.6	101.4	101.4
Provo/Orem, UT	99.2	110.3	94.7	82.6	100.8	90.9	102.4
Houston, TX	94.3	93.5	84.0	95.9	108.8	109.1	96.4

Source: Utah Department of Workforce Services

The most expensive aspect of the cost of living in the Atlanta, GA MSA during the third quarter 2000 was transportation. In June 2000, the Metropolitan Atlanta Rapid Transit Authority (MARTA) approved a 25-cent increase in fares to help offset an expected deficit in the 2001 fiscal year. The increase will raise the rate to ride MARTA to $1.75.

3. Earnings

The U.S. Department of Commerce's Bureau of Economic Analysis reported the construction sector had the largest percentage increase in earnings among major sectors between 1995 and 2000. Table 4 shows the percentage change in earnings of key non-farm sectors between 1995 and 2000. The table also shows the percentage of earnings each sector contributes to the non-farm total earnings in 2000.

Table 4–Earnings by Key Non–Farm Sector 1995 – 2000		
	Total % Change 1995–2000	% of 2000 Non–farm Total
Construction	74.5%	6.2%
Manufacturing	32.1%	10.7%
Transportation, Public Utilities	63.2%	12.5%
Wholesale Trade	60.9%	11.1%
Retail Trade	50.7%	8.5%
Finance, Insurance, Real Estate	66.1%	9.3%
Services	70.8%	30.6%
Government	31.6%	10.6%

Source: U.S. Department of Commerce/Bureau of Economic Analysis

A rapid growth in disposable income and population in the Southeastern United States in the 1990s has led to an increased demand for retail shopping centers and restaurants. However, higher fuel costs, weakened consumer confidence and lower stock returns have curtailed consumer spending. Many consumers have become more price conscious, leading to higher market share of discount retailers. The Federal Reserve Board reported that 2000 holiday spending in the Atlanta Federal Reserve District was low as compared to the 1999 holiday season. Discount retail stores fared better than did the department stores and mall retailers. The strongest sellers throughout the district were toys and apparel; while jewelry and home related products sales were sluggish.

Atlanta's hotel occupancy rates posted little growth in 2000 due to a decline in the number of large conventions being held in the city. The Federal Reserve Bank of Atlanta reported 26 Atlanta citywide conventions were planned for 2001 based on bookings at the end of 2000, rivaling 1999's figure, which was the biggest year for conventions in two decades.

Lackluster demand for the Ford Taurus and Mercury Sable helped to bring the Ford Motor Co. plant in Hapeville to a standstill during the fourth quarter 2000. The General Motors plant in Doraville was also idle due to slackened demand for the minivans produced at the plant.

High-tech and communication equipment production are expected to play a strong role in Atlanta's economy in the near future, as Lucent Technologies and Motorola Corp. are planning to make significant investments in plants just north of Atlanta. Lucent plans to invest $150 million in its Norcross, GA optical fiber plant, and Motorola plans to build a new corporate campus in Suwannee, GA. Scientific Atlanta, the second largest manufacturer of television set-top boxes for cable, has had strong sales due to healthy demand of the product. The company continues to increase production as they expect strong demand in the future. Atlanta accounts for nearly two-thirds of Georgia's single-family construction activity. During the first half of 2000, single-family permits were nearly equal to year earlier levels, but in the third quarter 2000, building permits declined seven percent year-on-year for single-family homes. Private housing permits totaled 4,475 in the Atlanta, GA MSA in December 2000, a decrease of 6.4 percent from December 1999 permits of 4,780. Year-to-date housing permits totaled 64,007 in December 2000, an increase of 5.8 percent from the year to date housing permits issued the previous year.

4. Employment

The Atlanta, GA MSA civilian labor force increased 1.6 percent from 2,268,589 in December 1999 to 2,305,445. The number of unemployed fell 9.4 percent to 60,248 in December 2000 from 66,514 in December 1999, leading to an unemployment rate of 2.6 percent in December 2000 from 2.9 percent in December 1999. Table 5 shows the percentage change in employment by key non-farm sector. The table also shows the percentage of workers each sector contributed to the non-farm total work force in 2000.

Table 5–Employment by Key Non–farm Sector (# of jobs, f/t & p/t) 1995 – 2000		
	Total % Change 1995–2000	% of 2000 Non–Farm Total
Construction	35.9%	6.5%
Manufacturing	3.6%	8.4%
Transportation, Public Utilities	30.2%	7.9%
Wholesale Trade	19.3%	7.5%
Retail Trade	17.6%	16.6%
Finance, Insurance, Real Estate	31.5%	8.6%
Services	31.6%	33.0%
Government	7.2%	10.4%

Source: U.S. Department of Commerce/Bureau of Economic Analysis

Table 5 shows the services sector accounted for nearly one-third of total non-farm employment in 2000. The largest sub-sector in the services sector was the business services sub-sector, totaling 230,950 workers in 2000, according to the U.S. Department of Labor/Bureau of Labor Statistics. Business services establishments totaled 11,737 in 2000. The health services sub-sector employment totaled 124,392 in 2000, an increase of 11.2 percent from 1997 employment of 111,874. The engineering services sub-sector increased employment 21.6 percent from 54,773 in 1997 to 66,600 in 2000.

The retail sector was the second largest non-farm sector in 2000, according to the U.S. Department of Commerce/Bureau of Economic Analysis. The eating and drinking places sub-sector totaled 141,430 workers, an increase of 9.2 percent from 129,500 in 1997, according to the U.S. Department of Labor/Bureau of Labor Statistics. The automotive dealers and service stations sub-sector saw a 6.6 percentage increase from 34.234 in 1997 to 36,483, while food stores increased employment 3.1 percent to 55,464 in 2000 from 53,815 in 1997. The total number of retail establishments increased 1.3 percent from 19,127 in 1997 to 19,374 in 2000, according to the Bureau of Labor Statistics.

The Federal Reserve Bank of Atlanta reported that several businesses in the Atlanta, GA MSA announced job cuts as the year ended. Some of the companies looking to eliminate jobs include AT&T Broadband, CNN, Amazon.com, Sony and Cypress Express, an Atlanta-based telecommunications company. Lockheed Martin Corp. plans to outsource some parts production from its Marietta plant, which will cost 675 jobs. The plant assembles F–22 fighter planes and C–130J cargo planes.

5. Projections

Woods and Poole Economics, a national economic research firm, project the population of Atlanta will increase 28.9 percent between 1995 and 2005. The 55 to 59 age group is projected to have the greatest percentage increase, increasing 89.9 percent between 1995 and 2005. However, the 50 to 54 and the 60 to 64 age groups are each projected to increase over 60 percent.

Total employment is projected to increase 31 percent between 1995 and 2005, with the greatest percentage increase in the agricultural services sector, which is projected to increase 42.3 percent. The construction sector is projected to increase 40.3 percent between 1995 and 2005.

Total earnings are projected to increase 57.3 percent between 1995 and 2005, according to Woods and Poole. The agricultural services sector is projected to increase 81.9 percent between 1995 and 2005, exhibiting the largest projected percentage increases in earnings.

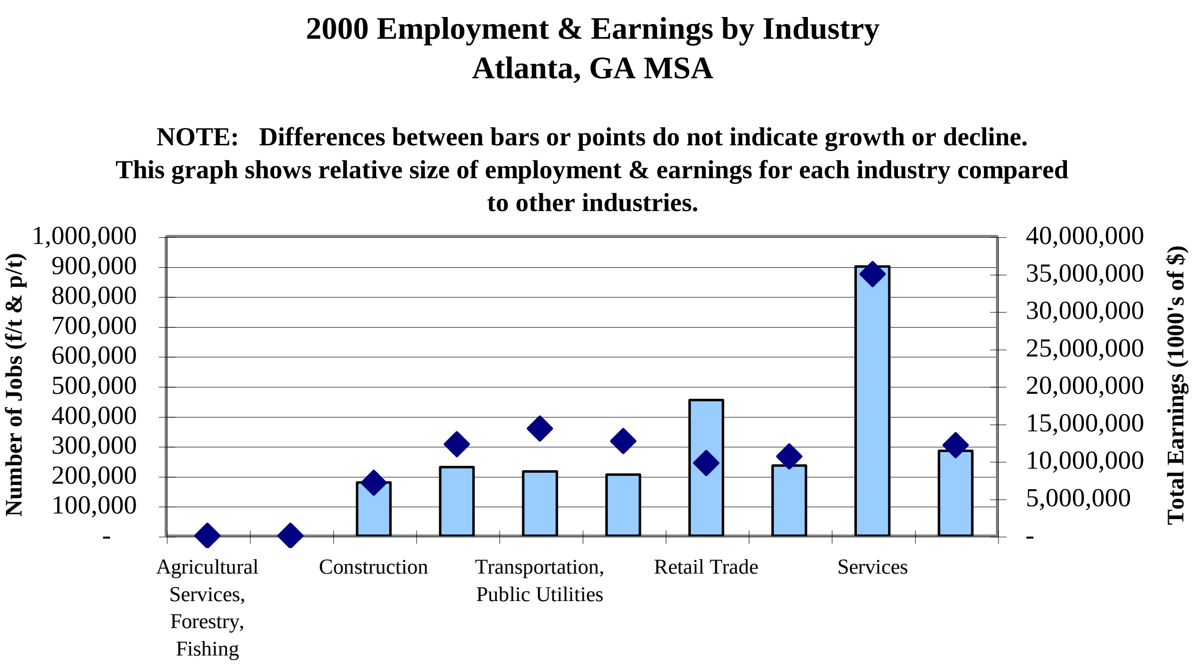
In the short term, economic growth in the Southeast should match the slower rate found in the second half of 2000, due to higher oil prices, slowing stock market, and the move of interest rates to historical norms. The outlook for Georgia's factory sector is mixed as the slowing housing market will adversely affect companies tied to the construction industry, such as lumber and carpets. Also, companies working in the apparel industry will have to cut employment as international competition drives down the cost of apparel.

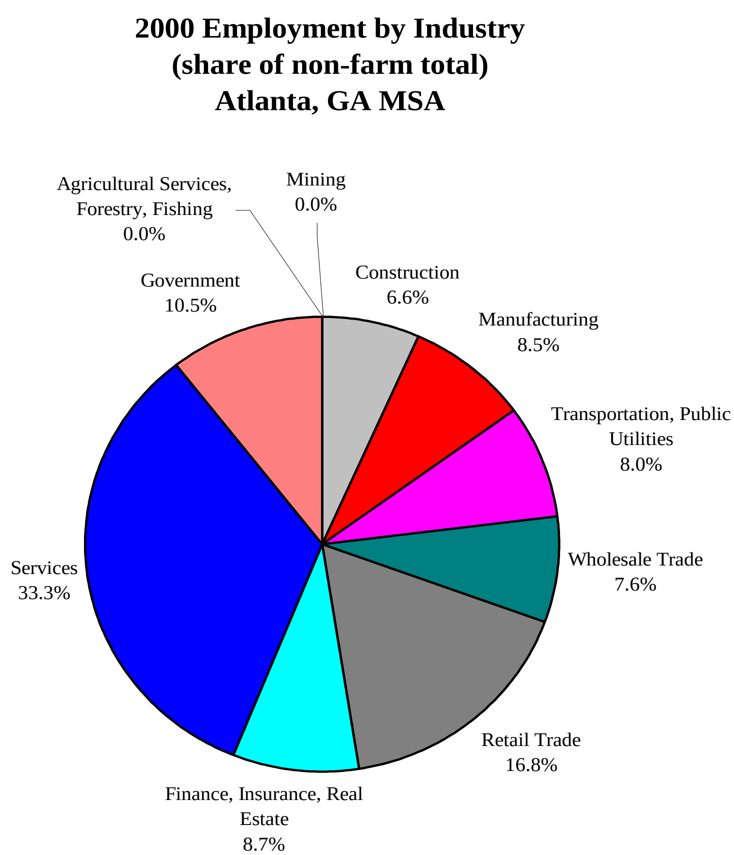
C. BIBLIOGRAPHY AND SOURCES

Atlanta, Georgia, MSA

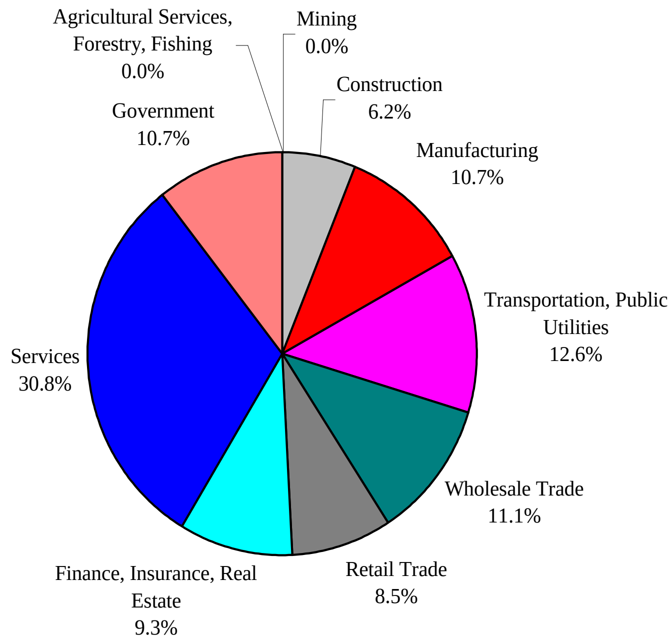
- Metro Atlanta Chamber of Commerce; Atlanta Chamber of Commerce; www.metroatlantachamber.com.
- Regional Economic Information System (REIS); U.S. Department of Commerce/Bureau of Economic Analysis; http://fisher.lib.virginia.edu.
- Geographic Names Information System (GNIS); U.S. Geological Survey/U.S. Department of the Interior; http://geonames.usgs.gov.
- 2000 Metropolitan Area Occupational Employment and Wage Estimates; U.S. Department of Labor/Bureau of Labor Statistics; http://www.bls.gov/oes/2000/oes_0520.htm.
- State and County Employment and Wages from Covered Employment and Wages, 1997–2000; U.S. Department of Labor/Bureau of Labor Statistics; http://data.bls.gov/labjava/outside.jsp?survey=ew.
- ACCRA Cost of Living Comparisons, Third Quarter 2000; Utah Department of Workforce Services; http://jobs.utah.gov/wi/pubs/CostofLiving/accra300.pdf.
- FDIC/OTS Summary of Deposits as of June 30, 2000; Federal Deposits Insurance Corporation; http://www3.fdic.gov/sod/sodSumReport.asp?barItem=3&sInfoAsOf=2000.
- Summary of Commentary on Current Economic Conditions by Federal Reserve District; Federal Reserve Board; http://www.federalreserve.gov/FOMC/BeigeBook/2001/20010117/6.htm.

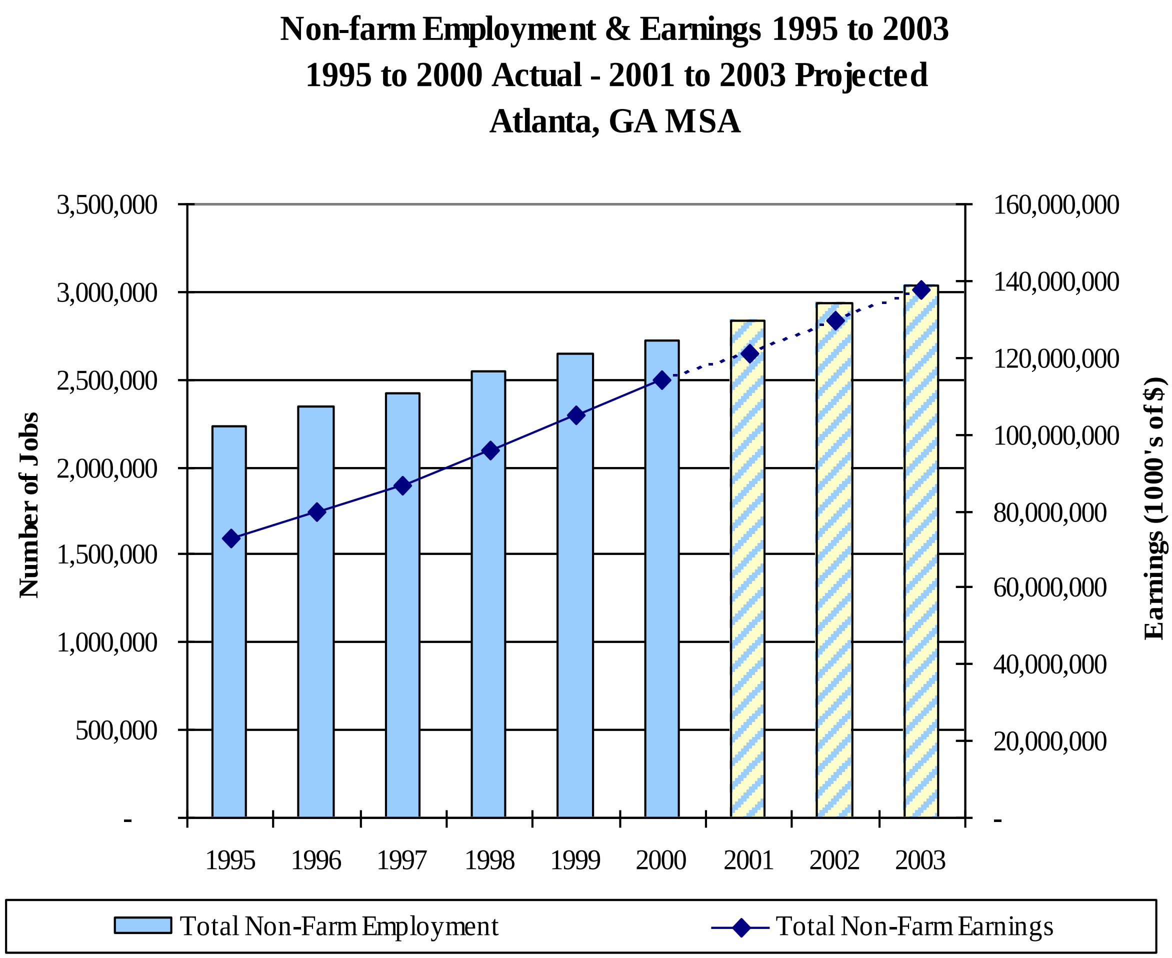
- New Privately Owned Housing Units Authorized–Unadjusted Units by Metropolitan Area; U.S. Department of Commerce/U.S. Census Bureau; http://www.census.gov/const/C40/Table3/tb3u0012.txt.
- "Southeast Stays on Course for 2001: Slower but Steady"; EconSouth; Federal Reserve Bank of Atlanta; Fourth Quarter 2000.
- "MARTA Approves 25–Cent Fare Hike"; Atlanta Business Chronicle; http://atlanta.bizjournals.com/atlanta/stories/2000/06/26/daily12.html.


2000 Employment & Earnings by Industry
Atlanta, GA MSA
NOTE: Differences between bars or points do not indicate growth or decline.
This graph shows relative size of employment & earnings for each industry compared to other industries.
Number of Jobs (f/t & p/t)
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
Total Earnings (1000's of $)
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
-
Agricultural Services, Forestry, Fishing
Construction
Transportation, Public Utilities
Retail Trade
Services

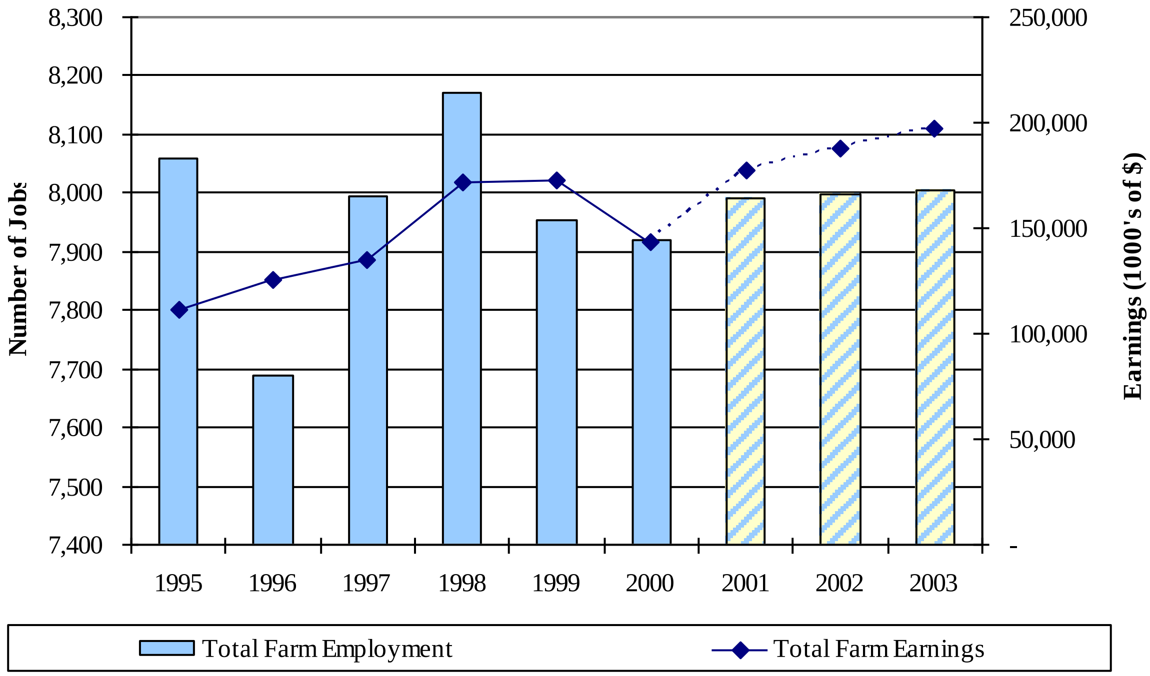

2000 Employment by Industry
(share of non-farm total)
Atlanta, GA MSA
Agricultural Services, Forestry, Fishing 0.0%
Mining 0.0%
Construction 6.6%
Manufacturing 8.5%
Transportation, Public Utilities 8.0%
Wholesale Trade 7.6%
Retail Trade 16.8%
Finance, Insurance, Real Estate 8.7%
Services 33.3%
Government 10.5%

2000 Earnings by Industry
(share of non-farm total)
Atlanta, GA MSA

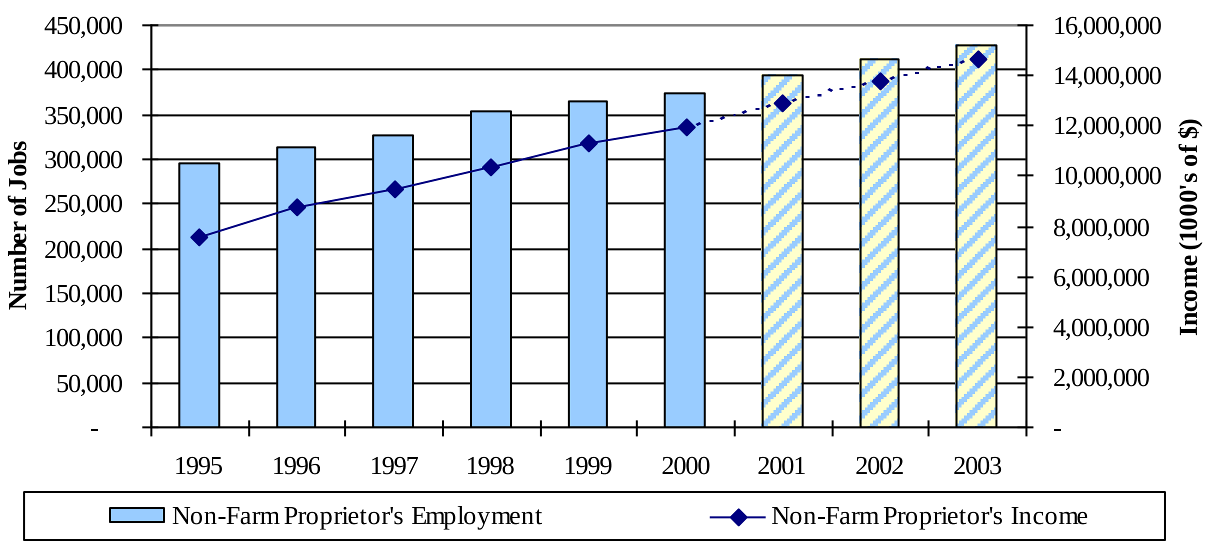



Non-farm Employment & Earnings 1995 to 2003
1995 to 2000 Actual - 2001 to 2003 Projected
Atlanta, GA MSA
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
-
Number of Jobs
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
-
Earnings (1000's of $)
1995
1996
1997
1998
1999
2000
2001
2002
2003
Total Non-Farm Employment
Total Non-Farm Earnings

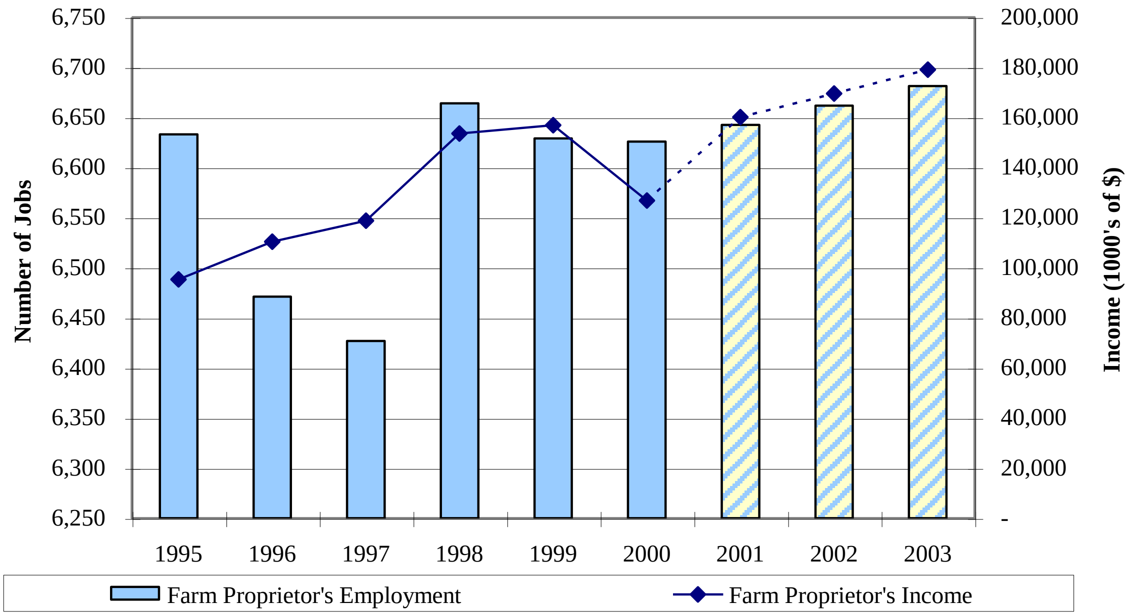
Farm Employment & Earnings 1995 to 2003
1995 to 2000 Actual - 2001 to 2003 Projected
Atlanta, GA MSA



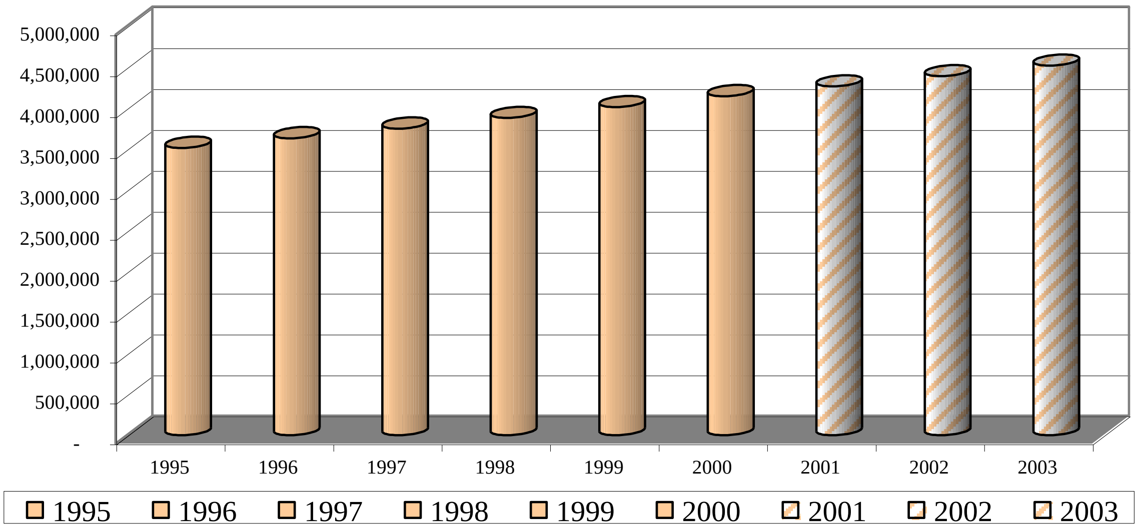
Non-farm Proprietor's Employment & Income 1995 to 2003
1995 to 2000 Actual - 2001 to 2003 Projected
Atlanta, GA MSA



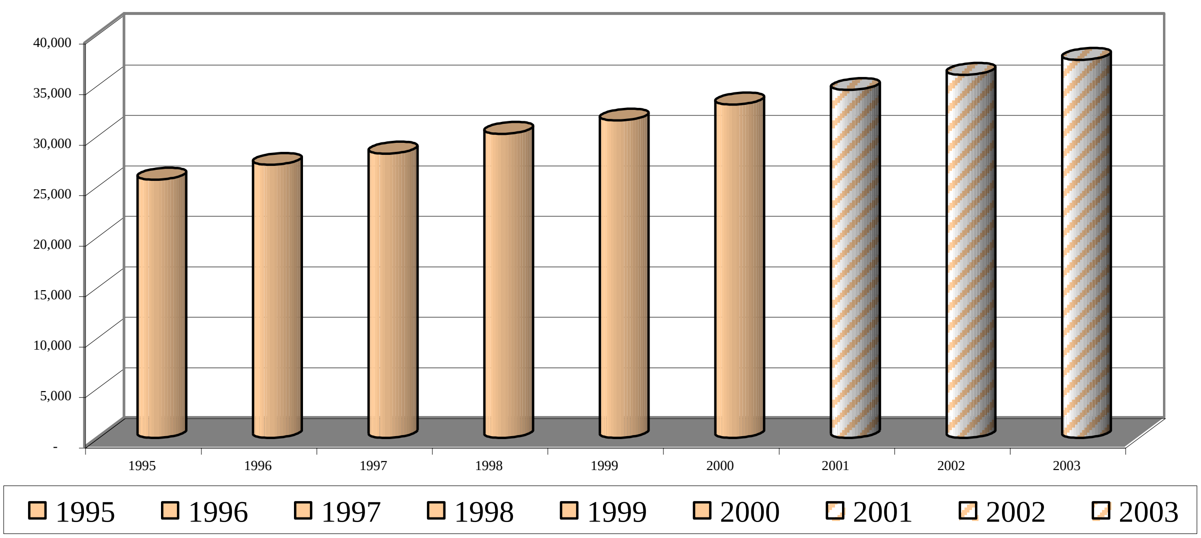
Farm Proprietor's Employment & Income 1995 to 2003
1995 to 2000 Actual - 2001 to 2003 Projected
Atlanta, GA MSA

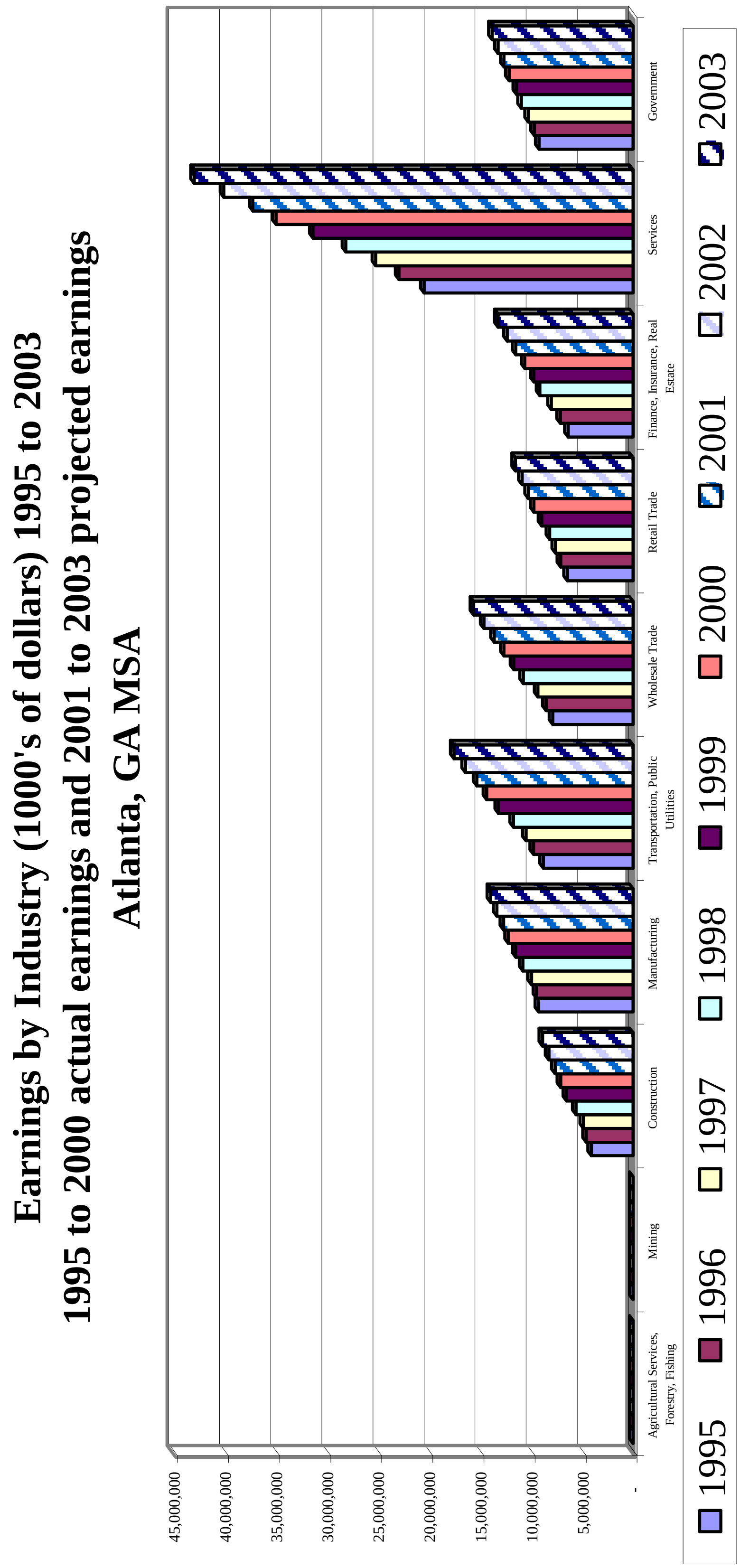


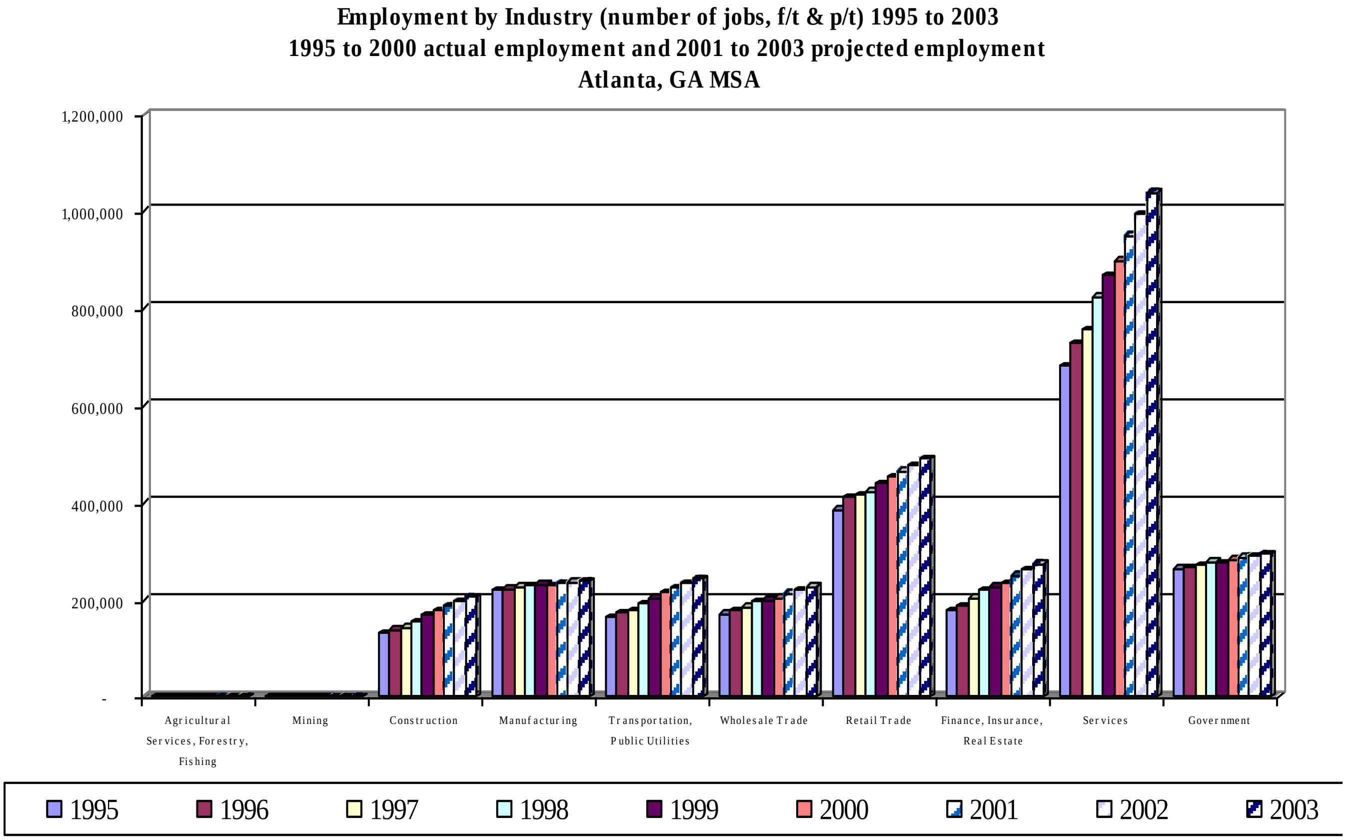
Population 1995 to 2003
1995 to 2000 actual population and 2001 to 2003 projected population
Atlanta, GA MSA

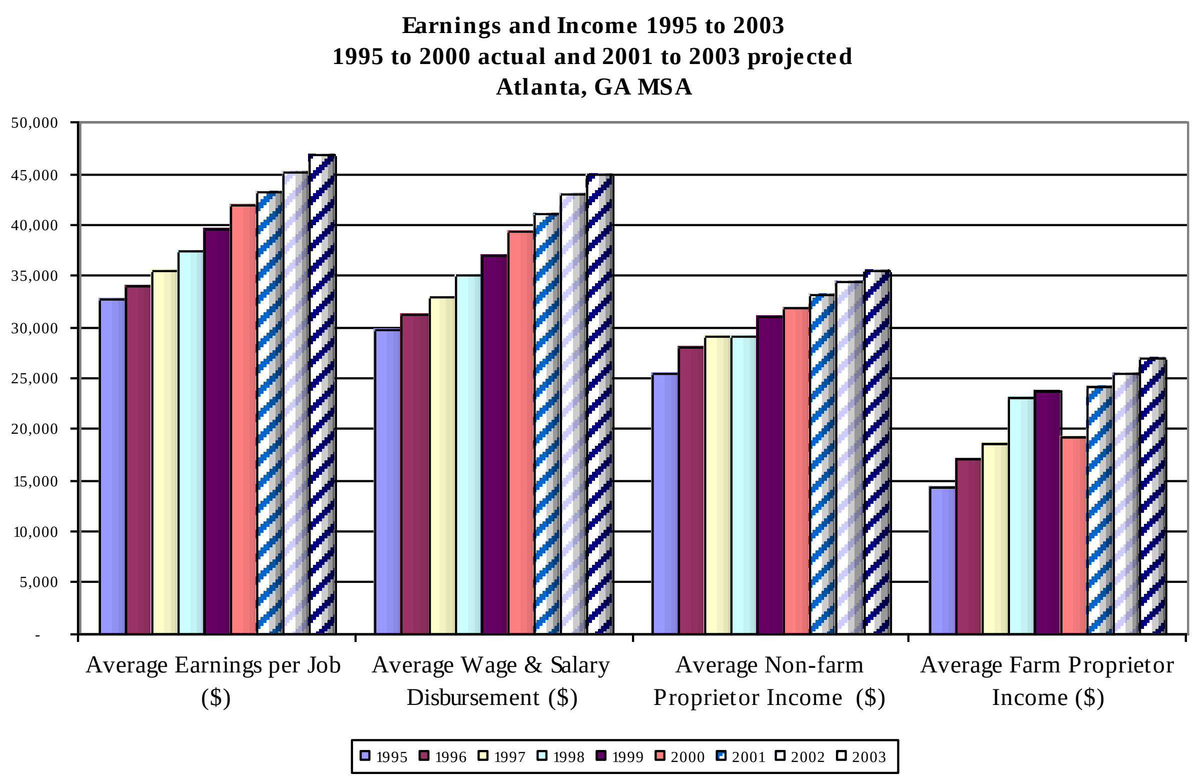


Per Capita Personal Income (PCPI) (in dollars) 1995 to 2003
1995 to 2000 actual PCPI and 2001 to 2003 projected PCPI
Atlanta, GA MSA




Earnings by Industry (1000's of dollars) 1995 to 2003
1995 to 2000 actual earnings and 2001 to 2003 projected earnings
Atlanta, GA MSA
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
-
Agricultural Services, Forestry, Fishing
Mining
Construction
Manufacturing
Transportation, Public Utilities
Wholesale Trade
Retail Trade
Finance, Insurance, Real Estate
Services
Government
1995
1996
1997
1998
1999
2000
2001
2002
2003


Employment by Industry (number of jobs, f/t & p/t) 1995 to 2003
1995 to 2000 actual employment and 2001 to 2003 projected employment
Atlanta, GA MSA
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
Agricultural Services, Forestry, Fishing
Mining
Construction
Manufacturing
Transportation, Public Utilities
Wholesale Trade
Retail Trade
Finance, Insurance, Real Estate
Services
Government
1995
1996
1997
1998
1999
2000
2001
2002
2003


Earnings and Income 1995 to 2003
1995 to 2000 actual and 2001 to 2003 projected
Atlanta, GA MSA
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
Average Earnings per Job ($)
Average Wage & Salary Disbursement ($)
Average Non-farm Proprietor Income ($)
Average Farm Proprietor Income ($)
1995
1996
1997
1998
1999
2000
2001
2002
2003

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THE RISK MANAGEMENT ASSOCIATION

Serving the Financial Services Industry

ANNUAL STATEMENT STUDIES 2000 2001

312 **MANUFACTURING—WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED** SIC# 2511 (NAICS 337122, 337215)

Current Data Sorted By Assets **Comparative Historical Data**

0-500M	500M-2MM	2-10MM	10-50MM	50-100MM	100-250MM		4/1/95-3/31/96 ALL	4/1/96-3/31/97 ALL
						Type of Statement		
		5	10	2	5	Unqualified	53	56
	3	17	1			Reviewed	25	28
3	10	7	2		1	Compiled	29	27
5	2					Tax Returns	8	8
3	15	9	11		2	Other	50	61
	23 (4/1-9/30/99)		90 (10/1/99-3/31/00)					
11	30	38	24	2	8	**NUMBER OF STATEMENTS**	165	180
%	%	%	%	%	%	**ASSETS**	%	%
3.7	7.0	3.7	4.5			Cash & Equivalents	5.5	4.7
19.1	22.7	27.0	24.2			Trade Receivables - (net)	23.8	24.0
32.6	36.3	33.1	30.1			Inventory	33.8	32.5
.1	.4	2.6	2.5			All Other Current	1.6	1.1
55.5	66.4	66.4	61.3			Total Current	64.6	62.4
41.6	28.4	27.1	30.6			Fixed Assets (net)	27.1	29.4
.5	1.8	.9	3.5			Intangibles (net)	2.4	1.6
2.3	3.5	5.5	4.6			All Other Non-Current	5.8	6.5
100.0	100.0	100.0	100.0			Total	100.0	100.0
						LIABILITIES		
9.5	11.4	18.8	13.0			Notes Payable-Short Term	11.9	10.8
3.3	2.9	5.3	2.6			Cur. Mat.-L/T/D	3.9	4.5
10.8	14.3	14.0	10.6			Trade Payables	12.8	13.1
.0	.1	.3	.4			Income Taxes Payable	.5	.4
14.3	8.3	11.1	7.9			All Other Current	7.7	8.4
38.0	37.0	49.5	34.5			Total Current	36.7	37.3
43.2	15.2	17.3	16.0			Long Term Debt	16.9	16.8
.0	.0	.6	1.0			Deferred Taxes	.8	.7
2.6	8.8	6.0	3.5			All Other Non-Current	4.0	3.3
16.1	39.1	26.6	45.0			Net Worth	41.6	41.9
100.0	100.0	100.0	100.0			Total Liabilities & Net Worth	100.0	100.0
						INCOME DATA		
100.0	100.0	100.0	100.0			Net Sales	100.0	100.0
46.8	32.8	23.9	25.7			Gross Profit	25.8	25.3
39.4	26.0	21.1	18.2			Operating Expenses	21.1	21.7
7.4	6.8	2.8	7.5			Operating Profit	4.7	3.6
3.1	1.4	2.0	1.6			All Other Expenses (net)	1.7	1.4
4.2	5.4	.9	5.9			Profit Before Taxes	3.0	2.2
						RATIOS		
3.2	4.8	2.1	3.9				2.8	2.9
1.7	1.7	1.4	1.8			Current	1.8	1.9
.9	1.1	.9	1.4				1.3	1.3
1.9	1.9	1.1	1.9				1.4	1.4
.9	.8	.6	.9			Quick	.8	(179) .9
.1	.3	.3	.5				.5	.5
0 UND	17 21.3	23 15.9	40 9.1				26 14.2	26 13.8
25 14.6	31 11.9	35 10.3	46 7.9			Sales/Receivables	41 9.0	39 9.3
64 5.7	48 7.6	54 6.8	57 6.4				52 7.0	50 7.3
23 16.1	32 11.3	34 10.7	47 7.7				50 7.3	41 9.0
44 8.3	74 4.9	61 5.9	80 4.6			Cost of Sales/Inventory	73 5.0	66 5.5
112 3.3	162 2.3	100 3.6	133 2.7				107 3.4	104 3.5
0 UND	11 34.0	15 24.6	9 40.4				12 30.5	13 27.4
16 23.1	24 15.3	25 14.7	25 14.4			Cost of Sales/Payables	22 16.4	24 15.3
27 13.6	46 8.0	41 9.0	44 8.4				37 10.0	35 10.3
6.1	4.8	5.7	3.4				4.9	4.9
11.5	7.8	18.4	7.0			Sales/Working Capital	8.5	9.5
−79.5	50.2	−100.9	11.3				19.0	20.7
5.6	9.4	5.4	10.1				6.6	7.8
2.3	(29) 4.5	(37) 2.4	(21) 2.7			EBIT/Interest	(152) 2.8	(167) 3.2
.4	1.2	.8	1.8				1.1	1.1
		3.4	4.2			Net Profit + Depr., Dep.,	4.1	4.9
		(13) 1.2	(11) 3.0			Amort./Cur. Mat. L /T/D	(72) 2.1	(72) 2.4
		.7	1.5				1.3	1.1
2.2	.1	.3	.4				.4	.4
4.0	1.0	1.0	.8			Fixed/Worth	.7	.7
−26.1	5.2	2.5	1.4				1.3	1.4
1.6	.5	1.5	.4				.6	.6
8.7	1.8	2.8	1.5			Debt/Worth	1.6	1.4
−57.0	9.1	5.1	3.9				3.9	3.2
	51.7	35.3	29.8			% Profit Before Taxes/Tangible	31.8	33.2
	(24) 23.8	(33) 13.0	(22) 17.6			Net Worth	(153) 14.8	(163) 14.7
	7.5	−2.5	11.0				3.8	2.3
17.7	19.9	10.9	14.3			% Profit Before Taxes/Total	13.3	14.6
7.3	10.5	4.5	6.0			Assets	5.6	5.9
−4.7	.7	−1.3	3.2				.4	.4
22.4	33.2	20.5	8.5				18.6	14.9
9.2	11.9	12.1	6.4			Sales/Net Fixed Assets	8.2	7.9
5.2	5.2	6.8	5.4				5.7	5.1
4.4	3.3	3.4	2.2				2.8	2.9
3.8	2.7	2.5	1.8			Sales/Total Assets	2.2	2.2
2.6	1.7	1.7	1.4				1.7	1.7
	.6	.7	1.8				1.1	1.3
	(26) 1.7	(37) 1.4	2.3			% Depr., Dep., Amort./Sales	(143) 2.0	(161) 2.0
	2.6	2.2	3.0				2.7	3.0
	2.7	1.5				% Officers', Directors',	1.5	2.1
	(13) 6.0	(16) 2.4				Owners' Comp/Sales	(67) 2.5	(65) 3.4
	10.1	3.6					5.8	6.7
11351M	87692M	454629M	889095M	281143M	2055303M	Net Sales ($)	4828583M	5676068M
3338M	34562M	179847M	515434M	139488M	1263568M	Total Assets ($)	2566687M	3026059M

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M = $ thousand MM = $ million

See Pages 11 through 20 for Explanation of Ratios and Data

MANUFACTURING—WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED SIC# 2511 (NAICS 337122, 337215) 313

Comparative Historical Data | **Current Data Sorted By Sales**

4/1/97-3/31/98 ALL	4/1/98-3/31/99 ALL	4/1/99-3/31/00 ALL		0-1MM	1-3MM	3-5MM	5-10MM	10-25MM	25MM & OVER
			Type of Statement						
42	40	22	Unqualified				1	7	14
31	18	21	Reviewed		1	3	6	9	2
43	39	23	Compiled	1	10	4	1	5	2
10	16	7	Tax Returns	2	4		1		
48	53	40	Other	5	8	5	7	6	9
				23 (4/1-9/30/99)			90 (10/1/99-3/31/00)		
174	166	113	**NUMBER OF STATEMENTS**	8	23	12	16	27	27
%	%	%	**ASSETS**	%	%	%	%	%	%
5.7	6.2	4.7	Cash & Equivalents		5.0	10.4	5.1	2.6	3.7
23.6	23.2	24.3	Trade Receivables - (net)		20.6	20.8	25.1	26.9	27.6
33.2	32.1	33.0	Inventory		37.5	35.0	41.0	31.2	30.4
1.8	1.5	1.6	All Other Current		1.8	.9	1.9	1.5	2.2
64.3	63.0	63.6	Total Current		64.8	67.0	73.2	62.2	63.9
28.3	29.1	29.8	Fixed Assets (net)		28.5	27.0	23.4	30.6	26.4
1.3	3.0	2.0	Intangibles (net)		1.6	2.0	1.1	1.3	4.2
6.2	4.8	4.6	All Other Non-Current		5.1	4.0	2.3	5.8	5.4
100.0	100.0	100.0	Total		100.0	100.0	100.0	100.0	100.0
			LIABILITIES						
11.4	12.1	13.7	Notes Payable-Short Term		15.2	9.9	16.1	20.8	8.3
4.4	3.6	3.6	Cur. Mat.-L/T/D		3.8	2.5	4.1	5.6	1.9
13.0	11.6	12.5	Trade Payables		14.0	12.3	12.0	15.1	10.5
.5	.3	.2	Income Taxes Payable		.0	.0	.4	.3	.4
10.2	8.2	9.7	All Other Current		14.5	5.7	13.9	8.0	8.7
39.5	35.8	39.7	Total Current		47.5	30.4	46.6	49.8	29.8
16.2	19.6	18.5	Long Term Debt		22.1	9.2	14.4	19.1	12.0
.7	.5	.6	Deferred Taxes		.0	1.0	.3	.5	1.3
3.0	5.7	5.6	All Other Non-Current		9.5	3.4	7.4	5.6	2.9
40.6	38.4	35.7	Net Worth		20.9	56.0	31.2	25.0	54.0
100.0	100.0	100.0	Total Liabilities & Net Worth		100.0	100.0	100.0	100.0	100.0
			INCOME DATA						
100.0	100.0	100.0	Net Sales		100.0	100.0	100.0	100.0	100.0
27.5	27.7	28.9	Gross Profit		33.7	27.0	29.1	23.3	22.9
22.4	23.1	23.1	Operating Expenses		29.1	21.4	25.3	19.3	15.3
5.1	4.6	5.8	Operating Profit		4.6	5.6	3.8	4.0	7.6
1.2	1.4	1.7	All Other Expenses (net)		1.9	.3	2.0	2.0	.9
3.9	3.2	4.1	Profit Before Taxes		2.7	5.3	1.8	2.0	6.7
			RATIOS						
3.0	3.3	3.2			2.8	6.5	2.4	2.1	3.9
1.8	1.9	1.6	Current		1.3	2.7	1.6	1.2	2.3
1.2	1.2	1.1			1.0	1.2	1.2	.9	1.5
1.4	1.6	1.6			1.8	2.6	1.2	1.1	2.0
.8	.8	.8	Quick		.4	.9	.6	.5	1.1
.4	.4	.4			.2	.4	.3	.4	.7
23 15.7	18 20.4	24 15.2			7 50.8	10 35.7	22 16.4	32 11.6	44 8.4
39 9.3	39 9.4	41 8.9	Sales/Receivables		25 14.6	34 10.7	30 12.3	40 9.2	51 7.1
49 7.4	50 7.3	54 6.8			42 8.8	45 8.1	50 7.4	52 7.0	59 6.2
43 8.4	36 10.1	40 9.2			37 9.8	26 13.8	40 9.2	34 10.6	49 7.4
69 5.3	64 5.7	73 5.0	Cost of Sales/Inventory		80 4.5	45 8.1	82 4.5	57 6.4	80 4.5
104 3.5	107 3.4	109 3.3			114 3.2	94 3.9	127 2.9	95 3.8	97 3.8
15 25.0	10 35.2	13 29.0			10 35.5	4 96.7	13 28.8	16 23.4	15 24.8
23 15.6	20 18.1	24 15.5	Cost of Sales/Payables		24 15.0	16 22.3	25 14.4	27 13.4	22 16.8
35 10.3	33 11.0	39 9.3			44 8.2	34 10.7	38 9.6	46 7.9	29 12.5
4.5	4.6	4.8			6.1	4.7	5.1	6.6	3.9
8.8	7.9	8.4	Sales/Working Capital		14.4	6.2	6.3	22.8	6.9
30.8	28.7	35.4			−100.4	57.3	23.9	−33.2	8.5
8.6	7.4	8.5			6.1	37.2	6.0	4.3	26.0
(160) 3.8	(148) 3.3	(108) 2.8	EBIT/Interest		(22) 2.5	4.2	2.7	(26) 2.4	(24) 8.3
1.5	1.2	1.3			.4	.2	.4	1.6	2.1
4.3	4.9	4.4						3.5	9.9
(64) 2.4	(48) 2.4	(30) 2.6	Net Profit + Depr., Dep., Amort./Cur. Mat. L/T/D					(10) 2.4	(10) 4.5
1.2	1.0	1.2						1.1	1.6
.3	.3	.3			.5	.1	.2	.6	.4
.7	.7	.9	Fixed/Worth		3.0	.4	.8	1.4	.5
1.4	2.3	2.7			−2.0	1.5	1.6	6.2	1.0
.6	.5	.7			1.8	.2	1.2	1.5	.3
1.5	1.8	2.3	Debt/Worth		5.0	.6	2.4	3.0	1.0
3.9	4.6	5.0			−9.6	2.2	4.0	20.5	1.8
42.2	33.7	37.7			71.1	43.7	34.7	29.0	38.5
(157) 24.0	(144) 18.0	(97) 21.7	% Profit Before Taxes/Tangible Net Worth		(14) 36.4	20.9	(15) 19.5	(22) 14.2	(26) 20.5
5.1	5.5	9.5			16.2	−1.3	.6	7.8	14.0
15.3	15.1	15.6			19.1	30.6	13.0	9.1	17.8
9.1	7.0	7.7	% Profit Before Taxes/Total Assets		7.8	11.4	6.6	5.2	12.3
1.7	.9	1.3			−4.7	−1.1	−3.2	2.2	4.0
21.1	17.6	17.3			30.8	36.2	34.7	15.9	9.7
7.9	8.7	8.0	Sales/Net Fixed Assets		11.4	11.6	15.9	9.6	6.4
5.2	4.9	5.3			5.8	6.2	7.7	5.4	5.4
3.0	3.0	2.9			3.8	3.2	3.0	3.5	2.3
2.2	2.2	2.3	Sales/Total Assets		2.7	2.8	2.4	2.4	1.8
1.7	1.6	1.6			1.7	2.4	1.7	1.6	1.5
1.2	1.1	.9			.8	.5	.5	1.0	1.6
(153) 2.0	(151) 1.7	(103) 1.9	% Depr., Dep., Amort./Sales		(20) 2.1	1.1	1.4	(26) 1.7	(24) 2.1
2.8	2.7	2.7			2.7	2.6	2.1	2.7	2.7
2.0	1.4	1.5			1.4				
(66) 3.5	(66) 3.2	(36) 3.4	% Officers', Directors', Owners' Comp/Sales		(13) 4.5				
6.3	6.2	6.8			9.9				
4905252M	5424644M	3779213M	Net Sales ($)	4828M	45369M	48223M	117753M	461518M	3101522M
2691503M	3060320M	2136237M	Total Assets ($)	4005M	23163M	19186M	52566M	239925M	1797392M

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M = $ thousand MM = $ million

See Pages 11 through 20 for Explanation of Ratios and Data

PARTICIPANT NOTES

APPENDIX VII

Federal Rules of Practice and Procedure

NOTE: This is an excerpt directly from the full document (spelling and punctuation has not been altered). The full document may be viewed, in PDF format, at www.uscourts.gov. The articles herein are in force as of December 1, 2002.

ARTICLE VII. OPINIONS AND EXPERT TESTIMONY

Rule 701. Opinion Testimony by Lay Witnesses

If the witness is not testifying as an expert, the witness' testimony in the form of opinions or inferences is limited to those opinions or inferences which are

(a) rationally based on the perception of the witness, and

(b) helpful to a clear understanding of the witness' testimony or the determination of a fact in issue, and

(c) not based on scientific, technical, or other specialized knowledge within the scope of Rule 702.

(As amended Mar. 2, 1987, eff. Oct. 1, 1987; Apr. 17, 2000, eff. Dec. 1, 2000.)

Rule 702. Testimony by Experts

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if

(1) the testimony is based upon sufficient facts or data,

(2) the testimony is the product of reliable principles and methods, and

(3) the witness has applied the principles and methods reliably to the facts of the case.

(As amended Apr. 17, 2000, eff. Dec. 1, 2000.)

Rule 703. Bases of Opinion Testimony by Experts

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect.

(As amended Mar. 2, 1987, eff. Oct. 1, 1987; Apr. 17, 2000, eff. Dec. 1, 2000.)

Rule 704. Opinion on Ultimate Issue

(a) Except as provided in (b), subdivision testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact.

(b) No expert witness testifying with respect to the mental state or condition of a defendant in a criminal case may state an opinion or inference as to whether the defendant did or did not have the mental state or condition constituting an element of the crime charged or of a defense thereto. Such ultimate issues are matters for the trier of fact alone.

(As amended Oct. 12, 1984.)

Rule 705. Disclosure of Facts or Data Underlying Expert Opinion

The expert may testify in terms of opinion or inference and give reasons therefore without first testifying to the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross–examination.

(As amended Mar. 2, 1987, eff. Oct. 1, 1987; Apr. 22, 1993, eff. Dec. 1, 1993.)

Rule 706. Court Appointed Experts

(a) Appointment.—The court may on its own motion or on the motion of any party enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations. The court may appoint any expert witnesses agreed upon by the parties, and may appoint expert witnesses of its own selection. An expert witness shall not be appointed by the court unless the witness consents to act. A witness so appointed shall be informed of the witness' duties by the court in writing, a copy of which shall be filed with the clerk, or at a conference in which the parties shall have opportunity to participate. A witness so appointed shall advise the parties of the witness' findings, if any; the witness' deposition may be taken by any party; and the witness may be called to testify by the court or any party. The witness shall be subject to cross–examination by each party, including a party calling the witness.

(b) Compensation.—Expert witnesses so appointed are entitled to reasonable compensation in whatever sum the court may allow. The compensation thus fixed is payable from funds which may be provided by law in criminal cases and civil actions and proceedings involving just compensation under the fifth amendment. In other civil actions and proceedings the compensation shall be paid by the parties in such proportion and at such time as the court directs, and thereafter charged in like manner as other costs.

(c) Disclosure of appointment.—In the exercise of its discretion, the court may authorize disclosure to the jury of the fact that the court appointed the expert witness.

(d) Parties' experts of own selection.—Nothing in this rule limits the parties in calling expert witnesses of their own selection.

(As amended Mar. 2, 1987, eff. Oct. 1, 1987.)

Note: Research provided by KeyValueData (dba www.keyvaluedata.com) - (800) 246-8488

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APPENDIX VIII

Other Methods to Project Earnings

I. TREND LINE STATIC METHOD

Up to this point, earnings have been plotted as average earnings without regard to "fit". The analyst must frequently answer the question, "What is a good fit?", as it pertains to determining trends in future earnings.

In order to develop a trend line with the best fit, the analyst can utilize a least squares formula based on the Gauss-Markov Theorem, which states that:

Within the class of linear unbiased estimators of slope, the least squares estimator has minimum variance.

Since this is a statistical calculation it should only be used when there is an adequate (at least five years, preferably seven) number of data points.

A. FORMULA

The trend line static method utilizes the following least squares formula:

$Y = a_0 + bx$

Where: $$a_0 = \frac{\Sigma Y - b\,(\Sigma X)}{N} = \text{intercept of Y axis}$$

And: $$b = \frac{N\,(\Sigma\, X\, Y) - (\Sigma\, X)\,(\Sigma\, Y)}{N\,(\Sigma\, X^2) - (\Sigma\, X)^2} = \text{slope}$$

x = Total # of observed years.
X = The i^{th} year, and weighting to be accorded in the i^{th} year (x^2).
Y = Earnings in the i^{th} year.
N = Number of observations.
Σ = Sum of the variables (X, Y, X^2, or XY)

The trend line static method in estimating future earnings is based on the above least squares formula, utilizing historical economic earnings to estimate the amount of future earnings. This method is most appropriately used when the company's past earnings trend has been consistent (either upward or downward) and can reasonably be expected to continue.

The trend line static method establishes an earnings amount in the last year, which is then assumed to occur at the same level throughout the estimated future period.

B. EXAMPLE

Assume Aubré Company had the following historical economic net income over the last five years:

2002	$110,600
2003	119,500
2004	131,700
2005	135,200
2006	140,400

C. CALCULATE THE TREND LINE

X	Y	X^2	X•Y
1	110,600	1	110,600
2	119,500	4	239,000
3	131,700	9	395,100
4	135,200	16	540,800
5	140,400	25	702,000

$\Sigma X=15$ $\quad \Sigma Y=637{,}400$ $\quad \Sigma X^2= 55$ $\quad \Sigma X\bullet Y= 1{,}987{,}500$

D. DETERMINE VALUE OF b (SLOPE)

$$b = \frac{5(1{,}987{,}500) - [15(637{,}400)]}{5(55) - (15)^2}$$

$$b = \frac{9{,}937{,}500 - 9{,}561{,}000}{275 - 225}$$

$$b = \frac{376{,}500}{50}$$

$$b = \$7{,}530$$

E. DETERMINE VALUE OF a_0 (INTERCEPT OF Y AXIS)

Where $$a_0 = \frac{\Sigma Y - b(\Sigma X)}{N}$$

$$a_0 = \frac{637{,}400 - 7{,}530(15)}{5}$$

$$a_0 = \$104{,}890$$

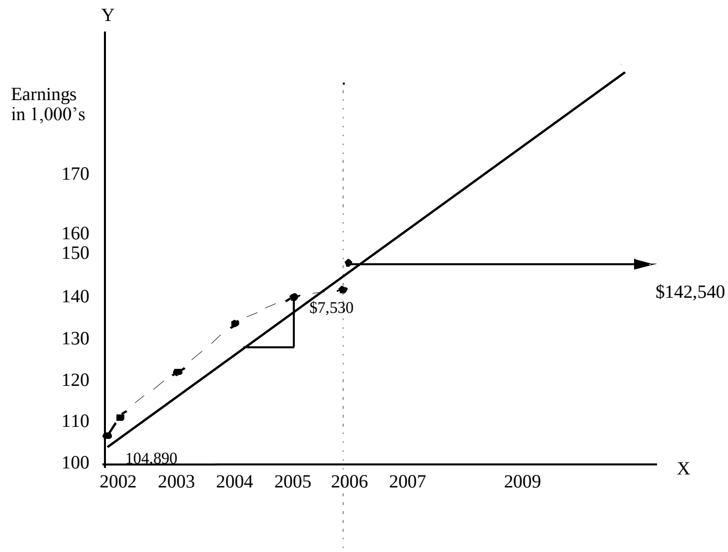
F. SOLVE FOR AMOUNT OF ESTIMATED FUTURE INCOME

$Y = a_0 + bx$

$Y = 104{,}890 + 7{,}530(5)$

$Y = \$142{,}540$ (2006)

The above example can be graphically illustrated as follows:



Even though a trend line has been developed, this method assumes that future estimated earnings will continue on a static basis (no growth), as do the unweighted and weighted average methods. This method simply estimates the level at which earnings will continue.

The trend line static method often puts a heavier weighting on the latest year, as does the weighted average method. However, because the trend line static method is based on least square formulas, it produces a trend line that lessens the impact which any particular year has on the calculation. The trend line static method assumes a capitalization process of earnings rather than a discounting process.

II. TREND LINE PROJECTED METHOD (DATA IS INCREASING AT A DECLINING RATE)

This projection approach is a linear or straight-line approach where it is expected that growth will continue to occur but at a declining rate.

The first three methods discussed assume no future positive or negative growth in earnings; in other words, future earnings are assumed to be static. Based on analysis, if it is determined that it is reasonable to expect continued future positive or negative growth in earnings, the analyst can utilize a method which accommodates such growth.

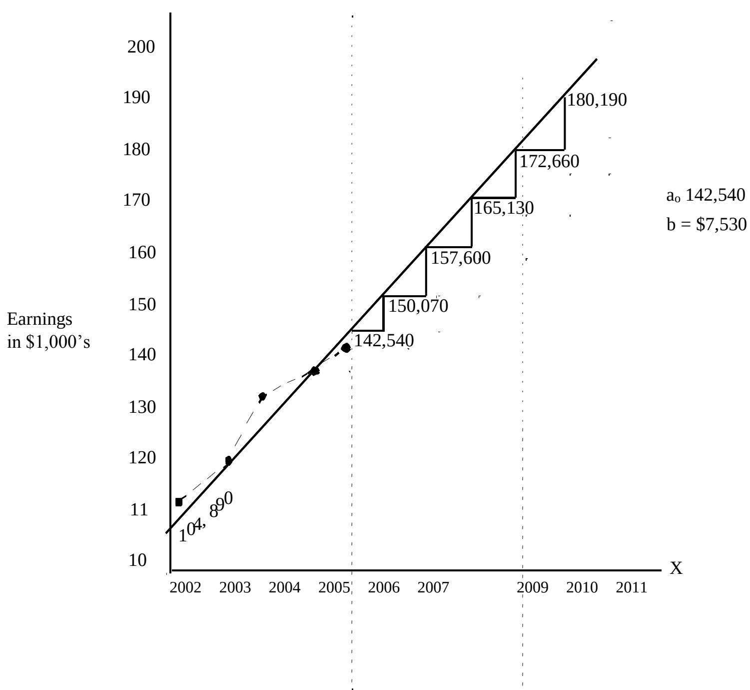
The first of these methods is the trend line projected. The trend line projected method builds on the trend line static method, utilizing identical formulae (see page 8) to develop a trend line. The difference in the two methods is how future earnings are assumed to behave. The trend line static method assumes "static" future earnings, that is, no growth or decline, whereas the trend line projected method assumes growth or decline.

The trend line projected method is also based on the least squares formula, utilizing historical economic/normalized earnings to estimate the amount of future earnings. This method is most appropriately used when the company's past trend in earnings can reasonably be expected to continue.

The trend line projected method establishes an earnings amount in the latest year. It then projects specific earnings amounts into the future five year period by increasing the earnings of the latest year by the value of 'b'.

The trend line projected method would be more appropriate than either the weighted average or the unweighted average methods, if the most recent year's earnings (income) significantly increases or decreases. It is also useful if growth or decline trends are based on other factors (other than past historical earnings) and the latest year's results are not necessarily indicative of the company's future earnings potential. The trend line projected method is also useful if the company has demonstrated consistent increases or decreases in its earnings.

We can graphically illustrate this by beginning with the same graphically illustrated data in the prior trend line static example.



Using the previously discussed least squares formula, $Y = a_0 + bx$, we can estimate income for years 2007 through 2011 as follows:

2007 = 104,890 + (6) (7,530) = 150,070
= 104,890 + (7) (7,530) = 157,600
2009 = 104,890 + (8) (7,530) = 165,130
2010 = 104,890 + (9) (7,530) = 172,660
2011 = 104,890 + (10) (7,530) = 180,190

III. PROJECTED GROWTH RATE IN EARNINGS METHOD (Data is increasing at a constant rate.)

Data is increasing at a constant rate; it is not linear. This "curve" is also referred to as an exponential curve. This method, which assumes growth in earnings, is the projected growth rate method, sometimes referred to as the "projection method". It is used:

1. To determine the annual compounded or average growth rate in earnings based on the last five years historical economic earnings.
2. To apply the same growth rate to the latest year's earnings, and continue this process over the following four consecutive years.

The projected growth rate method is applied to the latest year's historical economic earnings as a basis for estimating future earnings. It is most appropriately used when historical economic earnings suggest a consistent trend that the analyst feels has a high probability of continuing. Continuation of this earnings trend is almost guaranteed. This is the case for example, where existing contracts are already in place, ensuring the company's continued growth for several more years (five or more).

Example

Assume Lorenco Inc. had the following historical economic earnings for the last five years. Based on specific contracts the company has a high probability (nearly guaranteed) of continuing to generate earnings at the same growth rate it has experienced over the last five years.

	Historical Earnings	**Annual Growth Rate**
2002	$100,000	Base
2003	115,000	15%
2004	135,000	17%
2005	160,000	19%
2006	185,000	16%

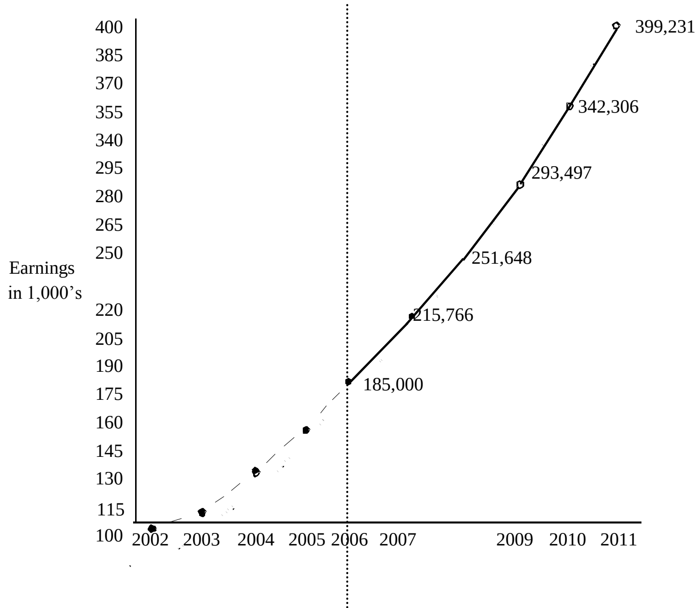
Average growth rate = 16.75%
Compound growth rate = 16.63%

a. Lotus = rate (FV, PV, TERM)

b. HP 12C
PV = -100,000
FV = 185,000
N = 4
I = Calculate
Projected next five years of earnings:

1995	185,000 x 1.1663	=	215,766
1996	215,766 x 1.1663	=	251,648
1997	251,648 x 1.1663	=	293,497
1998	293,497 x 1.1663	=	342,306
1999	342,306 x 1.1663	=	399,231

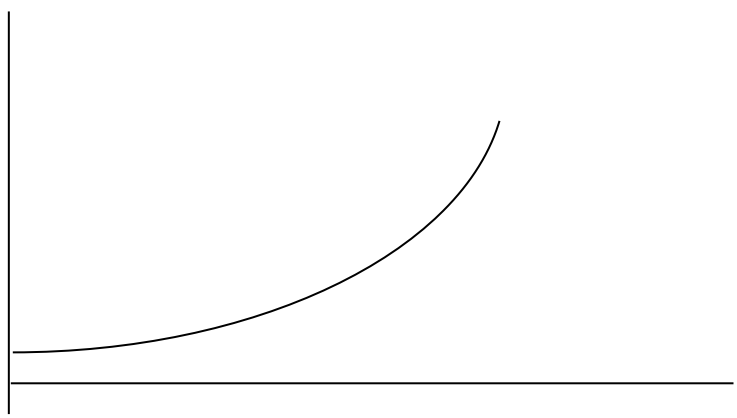
This example can be graphically illustrated as follows:



The estimate of future earnings determined by using the unweighted, weighted, or trend line static methods will be applied in a capitalization process, whereas, the trend line projected and the projected growth rate methods will be applied in a discounted earnings process.

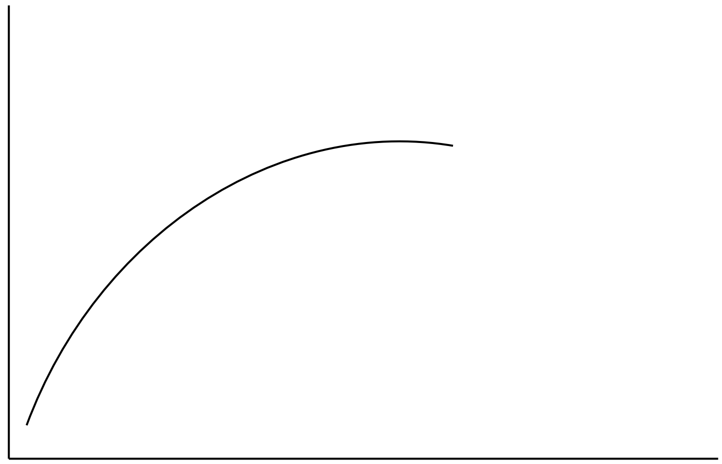
IV. OTHER GROWTH RATE PROJECTION METHODS

A. GEOMETRIC (Data is Increasing at an Increasing Rate)

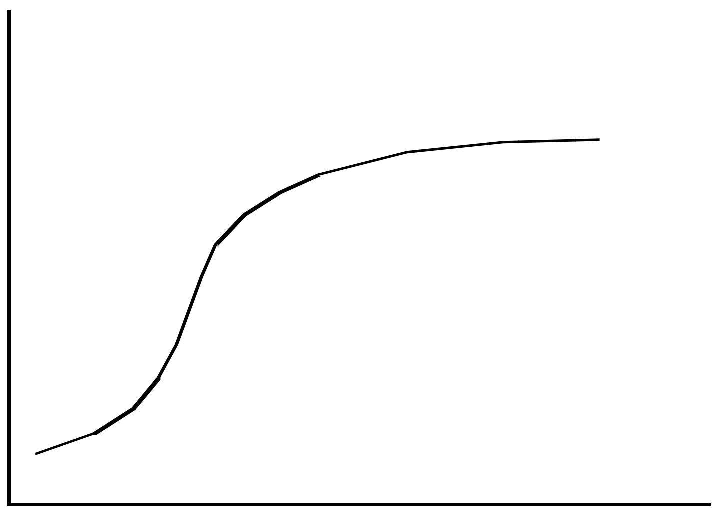


The geometric curve is sometimes referred to as the power curve.

B. LOGARITHMIC (Data is Increasing But at an Increasingly Declining Rate)



C. THE GOMPERTZ CURVE (Slow Growth Followed by Rapid Growth Followed by Slowing of Growth and Then a Declining Growth Rate)



This curve represents trends which have a general "S" shape where a series of data have an early rate of growth that is small. This is followed by a period of acceleration and then slowing again in the long term. Data curves for many mature companies and products often follow this curve. The Gompertz curve follows the introductory, growth, and early mature phases of the life cycle.

V. SELECTING AN APPROPRIATE METHOD

The following is based on an article by Robert L. Green, CPA, CVA, CFE, "Using Correlation Analysis in Determining Proper Method to Project Earnings," *The Valuation Examiner®,* 1st Quarter 1994. Excerpts reprinted with permission from NACVA.

At some point in a valuation, the analyst must select one of the aforementioned methods in order to estimate future earnings. The analyst should become familiar with the necessary criteria for each method, and simply view a graphical pattern of historical earnings, in order to arrive at a decision as to the appropriate method.

A. CORRELATION ANALYSIS

Certain professionals have advocated the use of correlation analysis as a more objective tool in the selection process. The correlation coefficient (*r*) and the coefficient of determination (r^2) are two statistically derived values that can be used to assist the analyst in making a projection method selection. The formulae for these derivations are as follows:

$$r = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2]\ [N\Sigma Y^2 - (\Sigma Y)^2]}}$$

and

$$r^2 = \frac{[(N\Sigma XY) - (\Sigma X)(\Sigma Y)]^2}{[N\Sigma X^2 - (\Sigma X)^2]\ [N\Sigma Y^2 - (\Sigma Y)^2]}$$

Note: Σ = sum

The coefficients of correlation and determination are measures of the covariance of X and Y relative to the variance of X and Y themselves.

The coefficient of determination (r^2) is more widely used. Simply put, r^2 indicates how well the estimated equation fits the data, or the goodness of the fit in the regression.

The coefficient of determination can also be expressed as follows:

$$r^2 = \frac{\text{Unexplained Variance}}{\text{Total Variance}}$$

In the context of this analysis the variables can be defined as:

N = number of observations

X = the i^{th} year

Y = earnings for a particular year

By using the coefficient of determination, the analyst is determining how much of the change in earnings from one year to the next is explained by the mere passage of time (i.e., a time series analysis).

To illustrate, data from the above example for the Projected Growth Rate in Earnings method shows:

	X	Y
2002	1	100,000
2003	2	115,000
2004	3	135,000
2005	4	160,000
2006	5	185,000

Calculation (in 1,000's)

X	**Y**	**X•Y**	**X^2**	**Y^2**
1	100	100	1	10,000
2	115	230	4	13,225
3	135	405	9	18,225
4	160	640	16	25,600
5	185	925	25	34,225
15	695	2,300	55	101,275

$$r^2 = \frac{[(5 \text{ x } 2{,}300) - (15 \text{ x } 695)]^2}{[(275 - 225) \text{ x } (506{,}375 - 483{,}025)]}$$

$$r^2 = \frac{1{,}155{,}625}{1{,}167{,}500}$$

$$r^2 = .98983$$

The coefficient of determination is a measurement of how much of the variation in Y is explained by X. Therefore, in this example, approximately 99% of the change in earnings (Y) is explained by the mere passage of time or years (X). Since the r^2 is greater than 95%, this would provide the analyst with significant confidence in predicting future earnings in this example.

Although the r^2 computed above indicates that there is a high correlation between the passage of time and the change in earnings, it raises a particular question: What level of r^2 is necessary to suggest the use of one method of estimating future earnings versus another?

Robert L. Green, of Prima Facie Software, Inc. provided the following ranges:

The following list suggests ranges of r^2 which appear to be reasonable for our needs in selecting the appropriate method of projecting earnings:

Method of Projection	***r^2 Range***
Unweighted Average	*.00 - .59*
Weighted Average	*.60 - .69*
Trend-Line Static	*.70 - .79*
Trend-Line Projected	*.80 - .89*
Projected Growth Rate	*.90 - 1.00*

"Although the above ranges are subjectively derived, it will give the analyst a useful backdrop to use in deciding upon one method of projection over another. Regardless of the method employed, whether it be a graphical method or the coefficient of determination method, or a combination of the two, the analyst must realize that common sense and informed judgment must be the determining factor in ultimately deciding upon the most appropriate method to project earnings."

Robert L. Green, CPA, CVA

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APPENDIX IX

Duff & Phelps, LLC
Risk Premium Report 2005

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Duff & Phelps, LLC
Risk Premium Report
2005

(Formerly the
Standard & Poor's Corporate Value Consulting
Risk Premium Report 2005)

This is an excerpt of the *Risk Premium Report 2005* that is available in its entirety at www.ibbotson.com.

Risk Premium Report 2005

Roger Grabowski and David King

Biography

Mr. Grabowski, ASA, is a Managing Director in the Duff & Phelps valuation practice and formerly with Standard & Poor's Corporate Value Consulting. Mr. King, CFA, is National Technical Director of Valuation Services at Mesirow Financial Consulting. We want to thank Sean Connor for his assistance in assembling the exhibits presented herein and Chad Johnson with editing and quality control.

Exhibits

This report discusses market data presented in several accompanying tables. These tables (along with this report) are available for purchase at www.ibbotson.com. The following is a complete list of these tables.

Two sets of tables with data updated through December 31, 2004 accompany the discussion in Part I of this report. These are:

Exhibits A-1 through A-8 Equity risk premiums vs. company size (eight measures of size)

Exhibits A-1 and A-2 are included in this excerpt; the entire *Risk Premium Report 2005* is available at www.ibbotson.com

Exhibits B-1 through B-8 Premiums over CAPM vs. company size (eight measures of size)

Exhibits B-1 and B-2 are included in this excerpt; the entire *Risk Premium Report 2005* is available at www.ibbotson.com

Two sets of tables with data updated through December 31, 2004 accompany the discussion in Part II of this report. These are:

Exhibits C-1 through C-8 Relation between size and company risk (eight measures of size)

Exhibits C-1 and C-2 are included in this excerpt; the entire *Risk Premium Report 2005* is available at www.ibbotson.com

Exhibits D-1 through D-3 Equity risk premiums vs. company risk (three measures of risk)

Exhibit D-1 is included in this excerpt; the entire *Risk Premium Report 2005* is available at www.ibbotson.com

Also, we have prepared two sets of tables that summarize the data presented in the above exhibits. These summary tables are not otherwise referenced in this report:

"Premiums over Long-Term Riskless Rate" (3-page summary of exhibits A-1 through A-8 and D-1 through D-3)

"Premiums over CAPM" (2-page summary of exhibits B-1 through B-8)

These Exhibits are available in the *Risk Premium Report 2005* at www.ibbotson.com

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Introduction

We have previously presented historical equity risk premiums for 25 size-ranked portfolios using eight alternate measures of company "size".[1] Part I of this report describes the latest revision of our study (most recently known as the Standard & Poor's Corporate Value Consulting *Risk Premium Report*) that now includes historical data updated through the end of 2004. As with our earlier research, this study made use of the database of the Center for Research in Security Prices ("CRSP") at the Graduate School of Business at the University of Chicago together with Standard & Poor's Compustat database.

Part II of this report presents an update of data that appeared in another article.[2] Part II presents data quantifying the relationship between rates of return, company size, and fundamental measures of company risk.

Part I: Historical Equity Risk Premiums and Company Size

We sort companies by size, breaking the New York Stock Exchange ("NYSE") universe into 25 size-ranked portfolios and adding American Stock Exchange ("AMEX") and National Association of Securities Dealers Automated Quotations ("NASDAQ") listed companies. These portfolios are limited to companies with a track record of profitable performance (we create a separate "high financial risk" portfolio composed of companies that are losing money, have high leverage, or are in bankruptcy). We use eight alternate measures of company "size", including fundamental financial characteristics such as sales and book value. The data shows a clear inverse relationship between size and historical rates of return.

A number of considerations have motivated us to pursue lines of research into historical equity returns using a) alternative measures of company size; b) methods of filtering the data to remove the effects of high financial risk; and c) elimination of companies without a proven record of performance.

What is Size?

Traditionally, researchers have used market value of equity as a measure of "size" in conducting historical rate of return research. For instance, this is the basis of the "small stock" return series published by Ibbotson Associates. But there are various reasons for seeking alternative measures of size.

First, it has been pointed out in the financial literature that researchers may unwittingly introduce a bias when ranking companies by "market value."[3] Market value is not just a function of "size"; it is also a function of the discount rate. Therefore, some companies will not be risky (high discount rate) because they are small, but instead will be "small" (low market value) because they are risky. Choosing a measure of size other than market value will help isolate the effects that are purely due to small size in the historical record.

[1] "New Evidence on Size Effects and Equity Returns", *Business Valuation Review*, September 1996 (covering the period 1963-1994); "Size Effects and Equity Returns: An Update", *Business Valuation Review*, March 1997. Both articles are available at www.appraisers.org, go to "Business Valuation".
[2] "New Evidence on Equity Returns and Company Risk", *Business Valuation Review*, September 1999 (revised March 2000). Both articles are available at www.appraisers.org.
[3] "A Critique of Size Related Anomalies," Jonathan Berk, *Review of Financial Studies*, vol. 8, no. 2 (1995).

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Also, the market value of equity is an imperfect measure of the size of a company's operations. Companies with large sales or operating income may have a small market value of equity if they are highly leveraged.

The use of fundamental accounting measures (such as assets or net income) may have the practical applied benefit of removing the need to make a "guesstimate" of size for comparative purposes. For example, such data might eliminate certain circularities that may arise in applying size-based adjustments to a discount rate for determining the market value of a privately held business.

Description of the Data

This study made use of the database of the Center for Research in Security Prices ("CRSP") at the University of Chicago, together with Standard & Poor's Compustat database. The population of companies considered in our study was taken from the intersection of the CRSP universe and the Compustat universe (that is to say, our study is limited to firms that are covered by both databases). We excluded American Depository Receipts (ADRs) and non-operating holding companies from the data set. We also exclude financial service companies (SIC code = 6). Some of the financial data used in our study are difficult to apply to many companies in the financial sector (e.g. "sales" at a commercial bank), and financial institutions support a much higher ratio of debt to equity than is normal in other industries. Also, companies in the financial services sector were poorly represented during the early years of the Compustat database.

The Compustat database was established in 1963 and in this study we calculated historical returns for the period 1963 through 2004. Compustat data is available for some companies going back into the 1950s, but this earlier data only consists of back histories for companies that were added to Compustat in 1963 or later. We exclude the pre-1963 data in order to avoid the obvious "selection bias" that would otherwise result.

For each year covered in our study, we considered only financial data for the fiscal year ending no later than September of the previous year. For example, in allocating a company to a portfolio to calculate returns for calendar year 1995, we consider financial data through the latest fiscal year ending September 1994 or earlier (depending on when the company's fiscal year ended).

For each year since 1963, we filtered the universe of companies to exclude the following:

- Companies lacking 5 years of publicly traded price history;
- Companies with sales below $1 million in any of the previous five fiscal years;
- Companies with a negative 5-year-average EBITDA (earnings before interest, taxes, depreciation and amortization).

Companies that pass this test have been traded for several years, have been selling at least a minimal quantity of product, and have been able to achieve some degree of positive cash flow from operations. This screening was a response to the argument that the "small cap" universe may consist of a disproportionate number of high-tech companies, start-up companies, and recent Initial Public Offerings, and that these unseasoned companies may be inherently riskier than companies with a track record of viable performance. The number of companies eliminated by these criteria varies from year to year over the sample period.

Once we eliminated the companies described above, we created a separate portfolio for companies with any one of the following characteristics:

- Companies identified by Compustat as in bankruptcy or in liquidation;
- Companies with 5-year-average net income available to common less than zero (either in absolute terms or as a percentage of the book value of common equity);
- Companies with 5-year-average operating income (defined as sales minus (cost of goods sold plus selling, general and administrative expenses plus depreciation)) less than zero (either in absolute terms or as a percentage of net sales);
- Companies with negative book value of equity at any of the previous five fiscal year-ends;
- Companies with debt-to-total capital of more than 80% (with debt measured in book value terms and total capital measured as book value of debt plus market value of equity).

These companies were excluded from our base set and placed in a separate portfolio which we refer to as the "high financial risk" portfolio. We sought in this manner to isolate the effects of high financial risk. Otherwise, the results might be biased for smaller companies to the extent that highly leveraged and financially distressed companies tend to have both high returns and low market values. It is possible to imagine financially distressed (or highly risky) companies that lack any of the above characteristics. It is also easy to imagine companies which have one of these characteristics but which would not be considered financially distressed. Nevertheless, we are confident that the resulting "high financial risk" portfolio is composed largely of companies whose financial condition is significantly inferior to the average public company.

The number of companies classified as "high financial risk" varied over the sample period. These companies represented approximately 25% of the data set in recent years, but less than 5% in 1963. Certain technical changes in methodology have resulted in a greater number of companies falling into the "high financial risk" portfolio than in versions of this study published prior to 2000.

The exclusion of companies based on historical financial performance does not imply any unusual foresight on the part of hypothetical investors in these portfolios. In forming portfolios to calculate returns for a given year, we exclude companies on the basis of performance during previous years (e.g., average net income for the five prior fiscal years), rather than current or future years. For instance, to form portfolios for 1963, we take into account the average net income for the five fiscal years preceding September 1962. We repeat this procedure for each year from 1963 through the latest available year.

Altogether, we have either excluded or segregated certain types of companies on the basis of past financial performance or trading history. We adopted this approach in response to arguments that the inclusion of such companies might introduce a bias in favor of the size effect to the extent that such companies tend to have low market values. A critic unfamiliar with this history might question whether we are introducing a bias by excluding such companies. We have run alternate analyses in which no company is excluded or segregated on the basis of past history (that is, using all available non-financial companies) and the results are similar to those reported herein.

Ranking Companies by Size

For the companies remaining in our base set, we formed portfolios of securities based upon relative size. Results for eight alternate measures of "size" are reported in the accompanying exhibits.

For each year, we formed portfolios by sorting all of the companies in the base set that traded on the NYSE. The size cutoffs (or "breakpoints") were chosen so as to divide the NYSE companies evenly into 25 groups. Once the breakpoints were chosen companies from the AMEX (available after 1962) and companies quoted on the

NASDAQ National Market System (available after 1972) were added to these portfolios. Since NASDAQ and AMEX companies are generally small relative to NYSE companies, their addition to the data set produces portfolios that are more heavily populated at the "small cap" end of the spectrum.[4]

The portfolios were rebalanced annually: that is, the companies were re-ranked and sorted at the beginning of each year. Portfolio rates of return were calculated using an equal-weighted average of the companies in the portfolio.

Correcting for "Delisting Bias"

An article by Tyler Shumway provided evidence that the CRSP database omits delisting returns for a large number of companies.[5] These returns are missing for the month in which a company is delisted from an exchange. Shumway collected data for a large number of companies that had been delisted for performance reasons (such as bankruptcy or insufficient capital). He found that investors incurred an average loss of about 30% after delisting. He further showed that delisting for non-performance reasons (such as mergers or changes of exchange) tended to have a neutral impact in the month that the delisting occurred.

We have incorporated the Shumway evidence into our rate of return calculations. In calculating rates of return, we have imputed a 30% loss in the month of delisting in all cases in which CRSP identified the reason for delisting as performance related, and also in all cases in which the reason for delisting was unknown.[6]

Measurement of the Historical Equity Risk Premium

The accompanying exhibits report average historical equity risk premiums for the period 1963 (the year that the Compustat database was inaugurated) through 2004. A longer-run average historical equity risk premium is often used as an indicator of the expected equity risk premium of a typical investor. Our measure of returns is based on dividend income and capital appreciation and represents returns after corporate taxes.

To estimate historical equity risk premiums, we first calculated an average rate of return for each portfolio over our sample period. Then, we subtracted the average income return earned on long-term Treasury bonds over the same period (using Ibbotson Associates' Stocks, Bonds, Bills and Inflation, or "SBBI," data) to arrive at an average historical equity risk premium.

[4] Some readers may wonder why we use NYSE breakpoints rather than ranking the entire NYSE/AMEX/NASDAQ universe. The consistent use of NYSE breakpoints avoids an apples-to-oranges mixing of pre-1972 (pre-NASDAQ) ranking criteria with post-1972 ranking criteria. Otherwise, for example, one would end up lumping "average" NASDAQ companies (in recent years) into the portfolios that contain much larger "average" NYSE companies (in earlier years) when calculating average returns for the mid-sized portfolios over the full sample period. The only logical alternatives are either to adopt our approach or to exclude NASDAQ companies altogether.

[5] "The Delisting Bias in CRSP data", Tyler Shumway, *Journal of Finance*, March 1997.

[6] This approach is consistent with updates that we have published since 1998. More recent evidence suggests that the average "delisting" loss is less than Shumway's original estimate. See "CRSP Delisting Returns", April 2001, white paper prepared by the Center for Research in Security Prices at http://gsbwww.uchicago.edu/research/crsp/news/downloads.

Presentation of the Results

In the accompanying exhibits we present summary data for companies ranked by various measures of size. The exhibits are as follows:

Measures of Equity Size
Exhibit A-1: *Market value of common equity* (common stock price times number of common shares outstanding).

Exhibit A-2: *Book value of common equity* (does not add back the deferred tax balance).

Exhibit A-3: *5-year average net income* (net income before extraordinary items).

Measures of Company Size
Exhibit A-4: *Market value of invested capital* (market value of common equity plus carrying value of preferred stock, long-term debt (including current portion) and notes payable)("MVIC").

Exhibit A-5: *Total Assets* (as reported on the balance sheet).

Exhibit A-6: *5-year average EBITDA* (operating income before depreciation plus non-operating income).

Exhibit A-7: *Sales* (net).

Exhibit A-8: *Number of employees* (number of employees, either at year-end or yearly average, including part-time and seasonal workers and employees of consolidated subsidiaries; excludes contract workers and unconsolidated subsidiaries).

The exhibits include the following statistics:

- Average of the sorting criteria (e.g., average number of employees) for the latest year
- The number of companies in each portfolio in the latest year
- Beta calculated using the "sum beta" method applied to monthly returns for 1963 through the latest year (see Ibbotson Associates' SBBI Valuation Edition 2005 Yearbook pp. 115-121 for a description of the "sum beta" method)
- Standard deviation of annual historical equity returns
- Geometric average historical equity return since 1963
- Arithmetic average historical equity return since 1963
- Arithmetic average historical equity risk premium over long-term Treasuries since 1963
- "Smoothed" average historical equity risk premium: the fitted premium from a regression with the average historical equity risk premium as dependent variable and the logarithm of the average sorting criteria as independent variable. (We present the coefficients and other statistics from this regression analysis in the top right hand corner of the exhibits.)
- Average carry value of preferred stock plus long-term debt (including current portion) plus notes payable ("Debt") as a percent of MVIC since 1963

Each of exhibits A-1 through A-8 shows one line of data for each of the 25 size-ranked portfolios, plus a separate line for the "high financial risk" portfolio. In each case, the "high financial risk" statistics are drawn only from companies for which the ranking criterion (e.g., sales, number of employees, etc.) is available. This gives rise to slight variations among the exhibits for the statistics for this portfolio (not all Compustat data items are available for all companies in all years). Exhibit A-1 presents the most complete set of data for this category of companies.

For comparative purposes, we also report average returns from Ibbotson Associates' SBBI series for Large Companies, Small Companies, and Long-Term Government Bond Income Returns for the period 1963 through the latest year.

Some Observations on the Data

By whatever measure of size we use, the result is a clear inverse relationship between size and historical equity returns. However, when one sorts by a size measure other than market value, the relationship is slightly flattened (compare exhibits A-1 and A-4, which use market value, with the other exhibits). The average historical equity risk premiums for the smallest companies are generally lower when one sorts by criteria other than market value.

The historical average Debt to MVIC ratio is approximately 30% for most size categories, regardless of the sorting criteria. This suggests that differences in leverage do not explain the small company effect in our sample. The leverage in the "high financial risk" portfolio is significantly higher than that of any of the other portfolios.

Premiums over CAPM

In the context of the Capital Asset Pricing Model ("CAPM"), the greater betas of the smaller companies explain some but not all of the higher average returns in these size-ranked portfolios. This can be verified by calculating a "Return in Excess of CAPM" using a methodology similar to that used in Ibbotson Associates' SBBI 2005 Yearbook (pp. 139-140 in the Classic Edition, pp. 134-143 in the Valuation Edition). An example of this calculation will illustrate the method. The following example uses data for Portfolio 19 of companies ranked by Book Value of Equity from exhibit A-2:

A. Portfolio beta = 1.19
B. Average historical market risk premium = 4.90%
   (historical large stock equity risk premium)
C. Indicated CAPM premium (A X B) =5.83%
D. Arithmetic average long-term Treasury
   income return = 7.28%
E. Indicated CAPM return (C + D) = 13.11%
F. Arithmetic average historical equity return = 17.01%
G. Return in excess of CAPM (F - E) = 3.9%

This compares to a premium over the overall market of 4.83% (F minus D minus B). In our exhibits we report betas calculated using the "sum beta" method applied to monthly portfolio return data. This method yields higher betas for smaller companies than would be obtained using ordinary least squares.

Exhibits B-1 through B-8 report calculations of premiums over CAPM for each portfolio for each of our eight measures of size. The exhibits report the following statistics:

- Average of the sorting criteria (e.g., average number of employees) for the latest year
- Beta calculated using the "sum beta" method applied to monthly returns for 1963 through the latest year (see Ibbotson Associates' SBBI Valuation Edition 2005 Yearbook, pp. 115-121, for a description of the "sum beta" method)
- Arithmetic average historical equity return since 1963
- Arithmetic average historical equity risk premium over long-term Treasuries since 1963
- Indicated CAPM premium, calculated as the beta of the portfolio multiplied by the average historical market risk premium since 1963 (measured as the difference between Ibbotson Associates' Large Stock total returns and Ibbotson Associates' income returns on long-term Treasury bonds)
- Premium over CAPM, calculated by subtracting the "Indicated CAPM Premium" from the "Arithmetic Equity Risk Premium"
- "Smoothed" Premium over CAPM: the fitted premium from a regression with the historical "Premium over CAPM" as dependent variable and the logarithm of the average sorting criteria as independent variable

Practical Application of the Data

This data can be used as an aid in formulating estimated required rates of return using objective measures of the "size" of a subject company. The historical equity risk premiums reported in exhibits A-1 through A-8 have not been adjusted to remove beta risk and, therefore, they should not be multiplied by a CAPM beta or otherwise included in a CAPM analysis. The data reported in exhibits B-1 through B-8 can be used in the context of a CAPM analysis.

A straightforward method of arriving at a discount rate would be a simple "build-up" approach using the historical equity risk premiums over the long-term riskless rate presented in exhibits A-1 through A-8. These premiums incorporate the "small company" effect. One could match the sales or total assets of the subject company with the portfolios composed of companies of similar size. The smoothed premiums of these portfolios can then be added to the yield on long-term Treasury bonds as of the valuation date to obtain benchmarks for the required rate of return.

The "smoothed" average premium is the most appropriate indicator for most of the portfolio groups. At the largest-size and smallest-size ends of the range, the average historical equity risk premiums tend to jump off of the smoothed line, particularly for the portfolios ranked by size as measured by market value (exhibits A-1 and A-4). For the largest companies (the first portfolio), the observed historical relationship flattens out and the smoothed premium may be an inappropriate indicator. For the smallest companies in our range (portfolio 25), the smoothed average premium is likely the more appropriate indicator.

Sometimes one must estimate the required rate of return for a company that is significantly smaller than the average size of even the smallest of our 25 portfolios. In such cases, it may be appropriate to extrapolate the equity risk premium to smaller sizes using the slope and constant terms from the regression relationships that we use in deriving the "smoothed" premiums. In so doing, one must be careful to remember that the logarithmic relationship is base-10, and that the financial size data is in millions of dollars, such that the log of $10 million is log(10), not log(10,000,000). Also, as a general rule one should be cautious about extrapolating a statistical relationship far beyond the range of the data used in the statistical analysis.

A brief example will illustrate the use of the regression equations in estimating an equity risk premium. Assume a company has book value of $50 million. If we insert this figure into the regression relationship reported in exhibit A-2 ("Companies Ranked by Book Value of Equity"), we obtain the following estimate of the risk premium:

Smoothed Premium = 17.826% - 3.233% log (50) = 17.826% - 3.233% (1.699) = 12.33%

Use of a portfolio's average historical rate of return to calculate a discount rate is based (in part) upon the implicit assumption that the risks of the subject company are quantitatively similar to the risks of the average company in the subject portfolio. If the risks of the subject company differ materially from the average company in the subject portfolio, then an appropriate discount rate may be lower (or higher) than a return derived from the average equity risk premium for a given portfolio. Material differences between the expected returns for a subject company and a given portfolio of stocks may arise due to differences in leverage (the average Debt/MVIC of the portfolios are displayed in exhibits A-1 through A-8 and exhibits C-1 through C-8), operating risks (the average unlevered portfolio sum beta for the portfolios are displayed in exhibits C-1 through C-8) or other fundamental risk factors.

The premium over CAPM data presented in exhibits B-1 through B-8 can be used to make size adjustments to a discount rate derived using the CAPM. When used in this manner, the premium over CAPM would be added to the CAPM calculation. That is, the premium should not be multiplied by beta, but instead should be added to the sum of the riskless rate and the product of beta times the aggregate market risk premium. This is similar to the methodology recommended in Ibbotson Associates' *SBBI Valuation Edition 2005 Yearbook*, p. 58.

The equity risk premiums reported here are historical averages since 1963. We report the average historical equity risk premium over the same period for Ibbotson Associates' Large Company stocks (essentially the S&P 500). This average was 4.90% over the period 1963-2004. If one's estimate of the equity risk premium for the S&P 500 on a forward-looking basis were materially different from the average historical equity risk premium since 1963, it may be reasonable to assume that the other historical portfolio returns reported here would differ on a forward-looking basis by approximately a similar differential.[7] For example, assume that your current estimate of the expected equity risk premium for Large Company stocks were 6.14%.8 The difference between the average historical risk premium since 1963 of 4.90% for Large Company stocks and the 6.14% forward-looking risk premium for Large Company stocks can be added to the average equity risk premium for the portfolio (observed or "smoothed") that matches to the size of the subject company to arrive at an adjusted forward-looking risk premium for the subject company. This forward-looking risk premium can then be added to the riskless rate as of the valuation date to estimate an appropriate rate of return for the subject company. This reasoning does not apply to the premiums over CAPM since these are based on relative performance over the reported period.

Estimating Required Rates of Returns: An Example

In this section we will show how the data reported here can be used to estimate the required return on equity or discount rate for a hypothetical company. Assume the subject company has the following characteristics:

Market Value of Equity	$120 million
Book Value of Equity	$100 million
5-year Average Net Income	$10 million
Market Value of Invested Capital	$180 million

[7] This average historical equity risk premium is consistent with the estimated equity risk premium on a forward-looking basis at the beginning of 2005. See: "Equity Risk Premium – What Valuation Consultants Need to Know About Recent Research-2005 Update", Roger J. Grabowski and David W. King, *Valuation Strategies*, September/October 2005. For a more complete discussion of the differences between historical realized risk premiums and forward-looking estimates see:"Equity Risk Premium", chapter one in *The Handbook of Business Valuation and Intellectual Property Analysis*, McGraw-Hill (2004).
[8] Supply side equity risk premium (arithmetic average) 1926-2004, Table 5-6, Ibbotson Associates' *SBBI Valuation Edition 2005 Yearbook*, p 96.

Total Assets	$300 million
5-year Average EBITDA	$30 million
Sales	$250 million
Number of Employees	200

If we are using a "build-up" method, we want to determine a premium over the riskless rate. The simplest approach is to turn to exhibits A-1 through A-8, and, for each of the eight size characteristics, locate the portfolio whose size is most similar to the subject company. For each guideline portfolio, the column labeled "Smoothed Average Equity Risk Premium" gives an indicated historical risk premium over the riskless rate. Example 1 shows the premiums indicated for our hypothetical company.

Example 1

Equity Risk Premiums over Riskless Rate: Using Guideline Portfolios

	Company Size	Relevant Exhibit	Guideline Portfolio	Premium over Riskless
Market Value of Equity	$120 mil.	A-1	24	12.3%
Book Value of Equity	$100 mil.	A-2	24	11.3%
5-year Average Net Income	$10 mil.	A-3*	23	11.4%
Market Value of Invested Capital	$180 mil.	A-4*	24	12.0%
Total Assets	$300 mil.	A-5*	23	11.2%
5-year Average EBITDA	$30 mil.	A-6*	24	11.8%
Sales	$250 mil.	A-7*	23	11.1%
Number of Employees	200	A-8*	25	12.6%
Mean premium over riskless rate				11.7%
Median premium over riskless rate				11.6%

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These premiums can be added to the riskless rate to derive an indicated required return on equity. In deriving the average historical equity risk premiums reported in exhibits A-1 through A-8, we have used Ibbotson Associates' income return on long-term Treasury bonds as our measure of the historical riskless rate. Therefore, a 20-year Treasury bond yield is the most appropriate measure of the riskless rate for use with our reported premiums.

With a riskless rate as of the valuation date of 5.5% (say), the above premiums would indicate a required rate of return on equity ranging from 16.6% to 18.1%, with an average of 17.2%.

As an alternative, one can estimate premiums using the regression equations that underlie the smoothed premium calculations. These equations are reported on exhibits A-1 through A-8. To estimate a premium, we multiply the logarithm of "size" by the slope coefficient, and add the constant term, as described above. In practice this approach generally produces results that are very similar to those of the guideline portfolio approach presented above (unless one is extrapolating to a company that is much smaller than the average size for the 25th portfolio). Example 2 illustrates this approach for our hypothetical company.

Example 2

Equity Risk Premiums over Riskless Rate: Using Regression Equations

	Company Size	Relevant Exhibit	Constant term	Slope term	log(Size)	Premium over Riskless
Market Value of Equity	$120 mil.	A-1	19.828%	-3.566%	2.079	12.4%
Book Value of Equity	$100 mil.	A-2	17.826%	-3.233%	2.000	11.4%
5-year Average Net Income	$10 mil.	A-3	*	*	1.000	11.5%
Market Value of Invested Capital	$180 mil.	A-4	*	*	2.255	12.1%
Total Assets	$300 mil.	A-5	*	*	2.477	11.2%
5-year Average EBITDA	$30 mil.	A-6	*	*	1.477	11.7%
Sales	$250 mil.	A-7	*	*	2.398	11.2%
Number of Employees	200	A-8	*	*	2.301	12.6%
Mean premium over riskless rate						11.8%
Median premium over riskless rate						11.6%

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One can adjust the observed premiums over the riskless rate for differences in financial leverage between the average companies comprising the portfolio and the subject company. The company in the example has a Debt/MVIC = $60 /$180 = 33% which is slightly more leverage than the average of the companies comprising portfolio 24 of Exhibits A-1 (29.13%) and A-4 (27.95%).[9]

But assume that the subject company had no debt in its capital structure. For example, we "unlever" the average levered risk premium in Exhibit A-1, portfolio 24, as follows:

Unlevered realized risk premium = Levered realized risk premium / [1 + D/E (1-t)]

where the average Debt to Equity ("D/E") ratio of the portfolio is based on the average Debt to MVIC for the portfolio since 1963 and the income tax rate, t, is the estimated federal plus effective state income tax rate for the companies comprising the portfolio companies. The income tax rate, t, we use is based on the average marginal federal corporate income tax rate for the tax bracket with the largest taxable income each year since 1963 plus an estimated weighted average state income tax rate.

We report unlevered average realized risk premiums for each of the eight size measures in exhibits C-1 through C-8. The unlevered average realized risk premium for portfolio 24 equals 10.2%. This compares to the average levered realized risk premium of 12.5% (not smoothed) reported in exhibit A-1.

These unlevered realized risk premiums represent the rates of return on a debt-free basis; the unlevered realized risk premiums can be used for estimating required rates of return for companies with no debt.

The unlevered realized risk premium can also be used as the first step in a relevering calculation where the subject company's debt level differs from the average debt level of the portfolio companies. To relever the realized risk premium, one can use the following formula:

[9] Debt equals MVIC ($180 million) minus Market Value of Equity ($120 million).

Levered realized risk premium = Unlevered realized risk premium x [1 + D/E (1-t)]

where the Debt to Equity ratio for the subject company is measured in terms of the carrying amount of Debt and the market value of equity for the subject company and the income tax rate, t, equals the marginal income tax rate for the subject company.[10]

An alternative to the "build up" approach is the CAPM. Appraisers commonly adjust the indicated required return by adding a size premium. With this adjustment, the formula for required return becomes:

Required Return = Riskless Rate + (Beta x Market Risk Premium) + Size Premium

The size premium can be measured using the "Premiums over CAPM" presented in exhibits B-1 through B-8. To estimate this size premium, we can turn to the exhibits and follow a procedure similar to what we used above when we determined premiums over the riskless rate. Again, the simplest approach is to find the "Smoothed Premium over CAPM" of the guideline portfolios in a manner similar to example 1. Example 3 illustrates this approach for our hypothetical company.

Example 3

Premiums over CAPM: Using Guideline Portfolios

	Company Size	Relevant Exhibit	Guideline Portfolio	Premium over CAPM
Market Value of Equity	$120 mil.	B-1	24	6.0%
Book Value of Equity	$100 mil.	B-2	24	5.0%
5-year Average Net Income	$10 mil.	B-3*	23	5.2%
Market Value of Invested Capital	$180 mil.	B-4*	24	5.6%
Total Assets	$300 mil.	B-5*	23	5.0%
5-year Average EBITDA	$30 mil.	B-6*	24	5.5%
Sales	$250 mil.	B-7*	23	5.1%
Number of Employees	200	B-8*	25	6.4%
Mean premium over CAPM				5.5%
Median premium over CAPM				5.4%

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If the indicated CAPM estimate before the size adjustment (Riskless Rate + Beta x Market Risk Premium) is 11.0% (say), then the above size premiums indicate a required rate of return on equity ranging from 16.0% to 17.4%, with an average of 16.5%.

As an alternative, we can use the regression equation reported in exhibits B-1 through B-8 to estimate premiums over CAPM. Again, this is similar to the method presented in example 2 for determining premiums over the riskless rate. Example 4 illustrates the results for our hypothetical company.

[10] See Ibbotson Associates' *SBBI Valuation Edition 2005 Yearbook*, pp 123 – 124. The unlevering and relevering of the realized risk premium may result in a different result than if one unlevers and relevers guideline company betas and adds the size premiums from exhibits B-1 through B-8, "Premium over CAPM".

Example 4

Premiums over CAPM: Using Regression Equations

	Company Size	Relevant Exhibit	Constant term	Slope term	log(Size)	Premium over CAPM
Market Value of Equity	$120 mil.	B-1	11.921%	-2.799%	2.079	6.1%
Book Value of Equity	$100 mil.	B-2	9.371%	-2.152%	2.000	5.1%
5-year Average Net Income	$10 mil.	B-3	*	*	1.000	5.3%
Market Value of Invested Capital	$180 mil.	B-4	*	*	2.255	5.7%
Total Assets	$300 mil.	B-5	*	*	2.477	5.0%
5-year Average EBITDA	$30 mil.	B-6	*	*	1.477	5.4%
Sales	$250 mil.	B-7	*	*	2.398	5.1%
Number of Employees	200	B-8	*	*	2.301	6.4%
Mean premium over CAPM						5.5%
Median premium over CAPM						5.4%

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One can unlever the portfolio betas. For example, we "unlever" the portfolio beta in Exhibit A-1, portfolio 24, as follows:

Unlevered portfolio beta = Levered portfolio beta / [1 + D/E (1-t)]

where the average Debt to Equity ("D/E") ratio of the portfolio is based on the average Debt to MVIC for the portfolio since 1963 and the income tax rate, t, is the estimated federal plus effective state income tax rate for the companies comprising the portfolio companies. The income tax rate, t, we use is based on the average marginal federal corporate income tax rate for the tax bracket with the largest taxable income each year since 1963 plus an estimated weighted average state income tax rate.

We report unlevered portfolio betas for each of the eight size measures in exhibits C-1 through C-8. The unlevered portfolio beta for portfolio 24 equals 1.04. This compares to the levered portfolio beta of 1.27 reported in exhibit A-1.

Unlevered betas are often called "asset betas" in the literature as they represent the risk of the operations of the business with the risk of financial leverage removed.

One can relever the beta based on the Debt of the subject company. To relever the beta, one can use the following formula:

Levered beta = Unlevered beta x [1 + D/E (1-t)]

where the Debt to Equity ratio for the subject company is measured in terms of the carrying amount of Debt and the Market Value of Equity for the subject company and the income tax rate, t, equals the marginal income tax rate for the subject company.

The unlevering formulae discussed above and used in exhibits C-1 through C-8 for unlevering the average realized risk premiums and portfolio betas for portfolios 1 through 25 and the relevering formulae discussed above assume that the business risk is fully borne by the equity capital; that is the variability of operating cash flows have a negligible effect on the risk of the debt capital. As a first approximation, this assumption appears reasonable for most of the companies comprising portfolios 1 through 25.

Application of the unlevering formulae to the high financial risk portfolio may be problematic for various reasons: the book value of debt may be a bad proxy for the market value of debt for many of these companies; debtholders have a greater share of the operating risk of the company for highly levered companies; and the ability to utilize tax shields for interest expense may be impaired for companies that are losing money.

Changes from Previously Published Versions of this Study

Readers may be interested in the difference between the data presented herein and analogous data published in articles that appeared in 1996 and 1997 (cited above), a 1995 article ("The Size Effect and Equity Returns" *Business Valuation Review*, June 1995), as well as annual updates published on the Ibbotson website since 1998 (most recently known as the Standard & Poor's Corporate Value Consulting *Risk Premium Report*):

- The 1995 article reported 30-year historical averages. We currently report averages since 1963.
- The 1995 article looked only at the market value of equity as a measure of size. We currently look at eight alternate measures of size.
- The current report includes Total Assets as one of the measures of size. This replaces a Book Value of Invested Capital measure that appeared in the 1996 and 1997 articles.
- The current report excludes newly listed companies, places many companies into a separate "high financial risk" portfolio, includes AMEX and NASDAQ companies, and includes only companies covered by Compustat. The 1995 article used all operating NYSE companies found in the CRSP database.
- The 1995 article used market-weighted averaging to calculate the portfolio rates of return. The current report uses equal-weighted averaging.
- The 1995 article used natural logarithms, while the current report uses base-10 logarithms. This makes no difference in the calculation of the "smoothed" premiums, but we have found that base-10 logs are easier to explain than natural logs.
- The 1995 and 1996 articles included financial companies. The current report excludes financial companies.
- The current report corrects for possible "delisting bias" in the CRSP database. The 1995, 1996, and 1997 articles did not make this adjustment.
- The current report includes tables showing "Premiums over CAPM". Versions of this study before 2000 did not include these tables.
- Certain revisions in methodology (made for technical reasons) expanded the number of companies in the "high financial risk portfolio" relative to versions published before 2000.
- The current report changes the method of using financial data such that no data is considered for fiscal years ending less than three months before the formation of portfolios. Versions of this study prior to 2001 allowed use of financial data through the previous month end.
- The current report uses the "sum beta" method applied to monthly returns to estimate portfolio betas. Versions before 2003 estimated betas using ordinary least squares with annual data.
- The current report includes unlevered average risk premiums and sum betas for each portfolio. Prior versions did not include this data.
- The current report incorporates various corrections and other changes that have affected the CRSP and Compustat databases since the data in the earlier articles was generated.

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Part II: Historical Equity Risk Premiums and Company Risk

Background

We previously published the results of research correlating historical equity returns (and historical equity risk premiums) directly with measures of company risk derived from accounting information.[11] These may also be called "fundamental" measures of company risk to distinguish these risk measures from a stock market-based measure of equity risk such as beta. Part II of this report presents an update of this research. This study made use of the database of the Center for Research in Security Prices ("CRSP") at the Graduate School of Business at the University of Chicago together with Standard & Poor's Compustat database.

A variety of academic studies have examined the relationship between financial statement data and various aspects of business risk.[12] Research has shown that measures of earnings volatility can be useful in explaining credit ratings, predicting bankruptcy, and explaining the CAPM beta.

Part II of this report examines three separate measures of risk:

- Operating margin (the lower the operating margin, the greater the risk);
- Coefficient of variation in operating margin (the greater the coefficient of variation, the greater the risk);
- Coefficient of variation in return on equity (the greater the coefficient of variation, the greater the risk).

Coefficient of variation is the standard deviation divided by the mean. It measures volatility relative to the average value of the variable under consideration. This normalizes for differences in the magnitude of the subject variables.

In Part II we present two varieties of data. First, we display the relationship between measures of company size and the above-mentioned measures of company risk. We do so by presenting average risk measures for each of the size-ranked portfolios of companies that were used in exhibits A-1 through A-8 (as described in Part I of this report). Next, we document the relationship between these risk measures and historical rates of return. The results reported herein suggest a positive relationship; that is, the greater the risk as measured by historical accounting information, the greater the rate of return earned by equity investors.

We sort companies by the measure of risk, breaking the NYSE universe into 25 risk-ranked portfolios and adding AMEX and NASDAQ companies. These portfolios are limited to companies with a track record of profitable performance (we create a separate "high financial risk" portfolio composed of companies that are losing money, have high leverage, or are in bankruptcy). We use three alternate measures of company "risk", all based on fundamental financial characteristics. The data shows a clear relationship between risk and historical rates of return.

[11] "New Evidence on Equity Returns and Company Risk", *Business Valuation Review*, September 1999 (revised March 2000). These articles are available at www.appraisers.org.

[12] A survey of the academic research can be found in *The Analysis and Use of Financial Statements*, 3rd edition, White et al., Wiley (2003), chapter 18.

Size and Risk

Traditionally, appraisers have used company "size" as a factor in determining discount rates for smaller companies. Small companies are believed to have higher required rates of return than large companies because small companies inherently are more risky. The historical data (as published by Ibbotson Associates and our previous articles and reports) verifies that small companies have, in fact, earned higher rates of return over long-run periods. Does the evidence support the claim that smaller companies inherently have greater risk? Our previous articles and reports have demonstrated that small companies exhibit greater risk as measured by two stock market-based indicators: beta and price volatility. The present study goes further by demonstrating that as company size decreases measures of risk calculated from financial statement data increase.[13]

It has been pointed out in the financial literature that researchers may be mixing a "size" effect with a "risk" effect when measuring company size by "market value".[14] Market value is not just a function of "size"; it is also a function of the discount rate. Therefore, some companies will not be risky (high discount rate) because they are small, but instead will be "small" (low market value) because they are risky. This motivated us to consider alternative measures of "size" in our previous articles and reports, where we looked at measures unrelated to market values such as Total Assets and Number of Employees. Part II of this report goes further in documenting indicators of risk in portfolios of stocks of small companies. It also goes beyond size and investigates the relation between equity returns and fundamental risk measures.

Is "size" correlated with financial risk measures?

Exhibits C-1 through C-8 display fundamental risk measures for portfolios formed by ranking public companies by "size". These exhibits report statistics for the same size-ranked portfolios as we described in Part I of this report.

Exhibit C-1 displays 25 portfolios with size measured by Market Value of Equity. The exhibit shows, for each portfolio, the average historical equity risk premium since 1963 (this repeats information reported in exhibit A-1). Also shown are five measures of risk corresponding to each portfolio:

- Beta (calculated using the "sum beta" method applied to monthly returns for 1963 through the latest year);
- Unlevered sum beta;
- Average operating margin (since 1963);
- Average coefficient of variation of operating margin (since 1963); and
- Average coefficient of variation of return on book equity (since 1963).

We see that beta of the portfolios decrease (as expected) as market value of equity increases.[15] We see that average operating margin increases as market value of equity increases. We see that average coefficient of variation of operating margin and average coefficient of variation of return on book equity decrease as market

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[13] A similar point was made by Barry Goodman in a presentation at the October 1997 ASA Advanced Business Valuation Conference in San Francisco.
[14] "A Critique of Size Related Anomalies," Jonathan Berk, *Review of Financial Studies*, vol. 8, no. 2 (1995)
[15] In our work on "size" as reported in Part I of this report, we have determined that, in the context of the CAPM, the higher betas of the small companies explain some but not all of the higher average historical equity returns in these portfolios.

value of equity increases. Also, we see that the three fundamental measures of risk display increasing risk as size decreases and the historical equity risk premium increases.[16]

Exhibits C-2 through C-6 display similar results for five other measures of size:

- Exhibit C-2: Size as measured by Book Value of Equity;
- Exhibit C-3*: Size as measured by Net Income;
- Exhibit C-4*: Size as measured by Market Value of Invested Capital;
- Exhibit C-5*: Size as measured by Total Assets;
- Exhibit C-6*: Size as measured by EBITDA.

Exhibit C-7* indicates that there is little differentiation in operating margin as size as measured by sales changes. The coefficient of variation of operating margin and return on book equity both indicate increasing risk as size decreases, as in the other exhibits.

Exhibit C-8* indicates that there is little differentiation in operating margin as size as measured by number of employees changes. The coefficient of variation of operating margin and return on book equity both indicate increasing risk as size decreases, as in the other exhibits.

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Why not just use measures of "size" as the measure of risk?

First, certain measures of size (such as market value of equity) may be imperfect measures of the risk of a company's *operations*. For example, a company with a large and stable operating margin may have a small and unstable market value of equity if it is highly leveraged. In this case the risk of the underlying operations is low while the risk to equity is high.

Second, while small size may indicate greater risk, some small companies have been able to maintain near economic monopolies by holding a geographic or market niche such that their riskiness is less than indicated by size. Alternatively, while larger "size" (as measured by sales, for example) may indicate less risk, some companies may be more risky than the average of companies with similar sales. For example, assume the subject company were expecting to emerge from reorganization following bankruptcy. The risk premium appropriate for this company may be more accurately imputed from the pro-forma operating profit (after removing non-recurring expenses incurred during the bankruptcy) than from its size as measured by sales. Use of fundamental accounting measures of risk allows one to directly assess the riskiness of the subject company.

Description of the Data

In the empirical work presented in Part II, we use the same underlying data set as was used in forming the size-based portfolios that we describe in Part I. The reader can refer to Part I for a description of our methodology for excluding certain classes of companies based on corporate status, industry, trading history, and financial performance. Also, Part I includes a description of the criteria used in separating certain companies into a "high financial risk" portfolio based on indicators of poor earnings, bankruptcy, or high leverage. As in Part I, this study

[16] Were one to calculate the respective correlations, those statistics would relate average portfolio statistics (e.g. average size vs. average risk) rather than correlation statistics across individual companies. At the individual company level, the correlations are much lower.

made use of the database of the Center for Research in Security Prices ("CRSP") at the University of Chicago, together with Standard & Poor's Compustat database.

As described in Part I, our data set excludes or segregates certain companies based on past financial performance or trading history. We have run alternate analyses in which no company is excluded or segregated on the basis of past history (that is, using all available non-financial companies), and the results are similar to those reported here.

Ranking Companies by Risk

For the companies remaining in our base set, we formed portfolios of securities based upon relative risk. Results for the three alternate measures of "risk" are reported in the accompanying exhibits.

For each year, we formed portfolios by sorting all of the companies in the base set that traded on the NYSE. The risk cutoffs (or "breakpoints") were chosen so as to divide the NYSE companies evenly into 25 groups. Once the breakpoints were chosen, companies from the AMEX (available after 1962) and companies quoted on the NASDAQ National Market System (available after 1972) were added to these portfolios.

The portfolios were rebalanced annually: that is, the companies were re-ranked and sorted at the beginning of each year. Portfolio rates of return were calculated using an equal-weighted average return of the companies in the portfolio. As described in Part I, our calculation of rates of return includes a correction for the "delisting bias" in the CRSP database.

Measurement of the Historical Equity Risk Premium

The accompanying exhibits report average statistics for the period 1963 (the year that the Compustat database was inaugurated) through 2004. A long-run average historical equity risk premium is often used as an indicator of the expected return of a typical investor. Our measure of returns is based on dividend income and capital appreciation, and so represents returns after corporate taxes.

To estimate historical equity risk premiums, we first calculated an average rate of return for each portfolio over our sample period. Then, we subtracted the average income return earned on long-term Treasury bonds over the same period (using Ibbotson Associates' SBBI data) to arrive at an average historical equity premium.

Presentation of the Results

In the accompanying exhibits we present summary data for companies ranked by various measures of risk. The exhibits are as follows:

Exhibit D-1: Companies ranked by Operating Margin (operating income divided by sales; operating income is defined as sales minus (cost of goods sold plus selling, general, and administrative expenses plus depreciation)). This is calculated as the mean operating income for the five prior years divided by the mean sales for the five prior years. (Note that this composite ratio is usually very close to a simple average of the annual ratios of operating income to sales, except in extreme cases generally involving companies with high growth rates.) Companies were re-ranked annually: for example, for the year 2001 we sorted companies into portfolios according to their mean operating margins for years 1996-2000, and then calculated the market return for 2001. (More precisely, in this example the statistics would be calculated for the most recent five fiscal years ending on or before September 2000.)

Exhibit D-2*: Companies ranked by Coefficient of Variation of Operating Margin. This is calculated as the standard deviation of operating margin over the prior five years divided by the mean operating margin for the same years, where operating margin is operating income as defined above divided by sales. Note that for calculating this coefficient, average operating margin is a simple average of the annual ratios of operating income to sales, rather than the composite ratio used in exhibit D-1. Companies were re-ranked annually: for example, for the year 2001 we sorted companies into portfolios according to their coefficient of variation for the years 1996-2000, and then calculated the market return for 2001. (More precisely, in this example the statistics would be calculated for the most recent five fiscal years ending on or before September 2000.)

Exhibit D-3*: Companies ranked by Coefficient of Variation of Return on Book Value of Equity. This is calculated as the standard deviation of return on book equity for the prior five years divided by the mean return on book equity for the same years (where return on book equity is net income before extraordinary items minus preferred dividends divided by book value of common equity). Companies were re-ranked annually: for example, for the year 2001 we sorted companies into portfolios according to their coefficient of variation for the years 1996-2000, and then calculated the market return for 2001. (More precisely, in this example the statistics would be calculated for the most recent five fiscal years ending on or before September 2000.)

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These exhibits include the following statistics:

- The median of the sorting criteria for the latest year (e.g., the median average operating margin for the latest five years before 2003). Note: The reported average risk statistics in exhibits D-1, D-2, and D-3 are not the same numbers as reported in exhibits C-1 through C-8. In exhibits C-1 through C-8, the reported statistics are calculated for portfolios of companies grouped according to size and are averages since 1963. In exhibits D-1, D-2, and D-3, the reported statistics are calculated for portfolios grouped according to risk, independent of the "size" of the companies, and are not averages since 1963.
- Log (base-10) of the median of the sorting criteria
- The number of companies in each portfolio in 2003
- Beta relative to the S&P 500 calculated using the "sum beta" method applied to monthly returns for 1963 through the latest year (see Ibbotson Associates' SBBI Valuation Edition 2005 Yearbook, pp. 115-121 for a description of the "sum beta" method)
- Standard deviation of historical annual equity returns
- Geometric average historical equity return since 1963
- Arithmetic average historical return since 1963
- Arithmetic average historical equity premium over long-term Treasuries since 1963
- "Smoothed" average historical equity risk premium: the fitted premium from a regression with the historical equity risk premium as dependent variable and the logarithm of the average sorting criteria as independent variable
- Average Debt as a percent of the MVIC since 1963

Each exhibit shows one line of data for each of the 25 risk-ranked portfolios, plus a separate line for the "high financial risk" portfolio. In each case, the "high financial risk" statistics are drawn only from companies for which the ranking criterion (e.g., five-year average operating margin, etc.) is available. This gives rise to slight variations among the exhibits for the "high financial risk" statistics, because not all Compustat data items are available for all companies in all years.

For comparative purposes, we also report average returns from Ibbotson Associates' SBBI series for Large Companies, Small Companies, and Long-Term Government Bond Income Returns for the period 1963 through 2004.

By each measure of risk that we use, the result is a clear relationship between risk and historical equity returns. The portfolios of companies with higher risk have yielded higher rates of return.

The historical average Debt/MVIC ratio does not appear to be strongly correlated with either the level or the volatility of the operating margin (exhibits D-1 and D-2). This suggests that leverage does not explain the greater returns of the riskier portfolios. As expected, the leverage in the "high financial risk" portfolio is significantly greater than that of any of the other portfolios. The Debt/MVIC ratio may have moderate correlation with the volatility of return on book equity (exhibit D-3). Higher leverage may accordingly explain some of the higher returns exhibited by the riskier portfolios (by this measure of risk).

In our sample, the companies that are riskier according to accounting information (operating margins and coefficients of variation) have also exhibited greater risk according to stock market-based risk statistics (betas and standard deviations of annual returns).

Practical Application of the Data

The data presented here can be used as an aid in formulating estimated required rates of return using objective measures of the "risk" of a subject company.

A straightforward method of arriving at a benchmark discount rate would be a simple "build-up" approach, using the data to estimate a total equity risk premium. One could match, say, the operating margin of the subject company with the portfolio composed of stocks with a similar average operating margin. The smoothed premium for this portfolio can then be added to the yield on long-term Treasury bonds as of the valuation date, resulting in a benchmark required rate of return. The "smoothed" average premium is a more appropriate indicator than the actual historical observation for most of the portfolio groups. Examples 6 and 7 illustrate the application of this method for a hypothetical company.

Example 5

Coefficient of Variation of Operating Margin:
(Standard Deviation of Operating Margin)/(Average Operating Margin)

		2004	2003	2002	2001	2000
Net Sales		$900	$800	$850	$750	$900
Operating Income		$150	$120	$130	$ 80	$140
Operating Margin		16.7%	15.0%	15.3%	10.7%	15.6%
Standard Deviation of Op. Margin	2.3%					
Average Operating Margin	14.6%					
Coefficient of Variation	15.8%					

Coefficient of Variation of Return on Book Value of Equity:
(Standard Deviation of ROE)/(Average of ROE)

		2004	2003	2002	2001	2000
Book Value		$820	$710	$630	$540	$500
Net Income b4 extraordinary items		$110	$ 80	$ 90	$ 40	$100
Return on Book Equity (ROE)		13.4%	11.3%	14.3%	7.4%	20.0%
Standard Deviation of ROE	4.6%					
Average ROE	13.3%					
Coefficient of Variation	34.7%					

Example 5 shows, for a hypothetical company, the calculation of the mean (average) and standard deviation over the last five fiscal years of operating margin and return on book value of equity ("ROE"). The ratio of the standard deviation to the mean is the coefficient of variation. These risk metrics can be used in conjunction with exhibits D-1 through D-3 to estimate a premium over the riskless rate. Example 6 illustrates the procedure.[17]

[17] For simplicity, in example 6 we use the average of the operating margins over five years (14.6%), rather than a composite ratio of average operating income divided by average sales (the actual ranking criteria in exhibit D-1). Readers may verify that the composite ratio is similar (14.8%), indicating an identical guideline equity risk premium over the riskless rate.

Example 6

Equity Risk Premiums over Riskless Rate: Using Guideline Portfolios				
	Company Indicator	Relevant Exhibit	Guideline Portfolio	Premium over Riskless
Operating Margin	14.7%	D-1	8	8.8%
CV(Operating Margin)	15.7%	D-2*	16	9.3%
CV(ROE)	34.7%	D-3*	15	8.8%
Mean premium over riskless rate				9.0%
Median premium over riskless rate				8.8%

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The indicated equity risk premium can be added to the riskless rate to get an estimate of the required rate of return on equity. Assuming a riskless rate of 5.5% (say) and in isolation from other considerations, the results suggest a required return on equity in a range of 14.3% to 14.8%, with an average of 14.5%.

Practical application of this data should not be conducted in isolation from other considerations about the subject company, its industry, or the general economic environment. For instance, a wholesale distributor might have thin operating margins compared to the average company on the NYSE, yet those margins might exhibit unusually low variation due to a particularly strong position in a stable market niche. Alternatively, a company's variation of operating income (calculated in the manner used in our study) might be uncharacteristically high due to an unusual event several years in the past. Appropriate knowledge of the company and its industry would give useful guidance in reconciling the historical equity risk premiums reported here and the historical equity risk premiums reported in Part I for portfolios of companies ranked by size. Size can be an important consideration in determining an appropriate discount rate.

The use of a portfolio's average historical rate of return to calculate a discount rate is based (in part) upon the implicit assumption that the risks of the subject company are quantitatively similar to the risks of the average company in the subject portfolio. If the risks of the subject company differ materially from the average company in the subject portfolio, then an appropriate discount rate may be lower (or higher) than a return derived from the average premium for a given portfolio. The data reported in exhibits C-1 through C-8 (where risk statistics are reported for each size category) may be helpful in making such a determination.

Changes from Previously Published Versions of this Study (Part II)

- The current report includes average unlevered risk premiums and sum betas for each portfolio in exhibits C-1 through C-8. Prior versions did not include this data.
- Versions of our study published after 1999 have included the three separate measures of risk described in Part II of this report and presented in exhibits C-1 through C-8 and exhibits D-1 through D-3.
- Various changes in methodology over the last several years have affected the underlying database, and these are summarized at the end of Part I.
- In the current version of exhibits D-1 through D-3, we report medians of the sorting criteria for the most recent year, while versions before 2003 reported the average of the medians for all years since 1963.

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Companies Ranked by Market Value of Equity **Exhibit A-1**

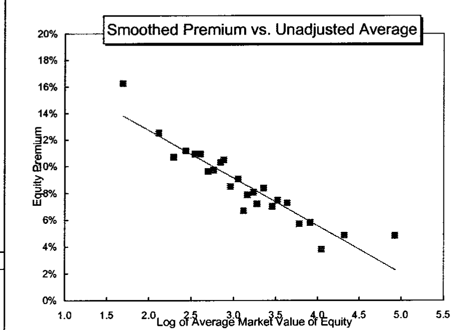
Historical Equity Risk Premium: Average Since 1963
Data for Year Ending December 31, 2004

Portfolio Rank by Size	Average Mkt Value ($mils.)	Log of Average Mkt Value	Number as of 2004	Beta (SumBeta) Since '63	Standard Deviation of Returns	Geometric Average Return	Arithmetic Average Return	Arithmetic Equity Risk Premium	*Smoothed Average Equity Risk Premium*	Average Debt/ MVIC
1	84,208	4.93	44	0.91	17.03%	10.78%	12.11%	4.83%	*2.26%*	16.44%
2	20,847	4.32	36	0.92	16.73%	10.88%	12.15%	4.87%	*4.43%*	22.87%
3	11,172	4.05	42	0.98	16.64%	9.83%	11.08%	3.80%	*5.39%*	25.14%
4	8,187	3.91	41	0.97	16.46%	11.88%	13.09%	5.81%	*5.87%*	25.94%
5	6,025	3.78	44	0.97	16.11%	11.84%	13.00%	5.72%	*6.35%*	27.05%
6	4,339	3.64	42	1.03	17.14%	13.25%	14.55%	7.27%	*6.86%*	27.02%
7	3,335	3.52	47	1.03	18.12%	13.35%	14.76%	7.48%	*7.26%*	27.38%
8	2,872	3.46	42	1.08	19.77%	12.56%	14.28%	7.00%	*7.50%*	26.42%
9	2,278	3.36	44	1.08	18.78%	14.13%	15.65%	8.37%	*7.86%*	25.36%
10	1,889	3.28	46	1.10	18.76%	12.92%	14.47%	7.19%	*8.15%*	25.16%
11	1,717	3.23	44	1.09	18.79%	13.77%	15.34%	8.06%	*8.29%*	25.16%
12	1,460	3.16	47	1.11	19.38%	13.55%	15.14%	7.86%	*8.54%*	25.72%
13	1,312	3.12	43	1.09	21.15%	12.00%	13.97%	6.69%	*8.71%*	26.66%
14	1,131	3.05	50	1.14	19.81%	14.63%	16.35%	9.07%	*8.94%*	27.33%
15	915	2.96	56	1.14	20.34%	13.89%	15.78%	8.50%	*9.27%*	26.70%
16	766	2.88	55	1.14	22.13%	15.69%	17.79%	10.51%	*9.54%*	25.99%
17	704	2.85	54	1.21	23.94%	15.23%	17.59%	10.31%	*9.67%*	26.79%
18	582	2.76	63	1.20	22.77%	14.73%	16.99%	9.71%	*9.97%*	27.03%
19	502	2.70	62	1.24	24.53%	14.39%	16.90%	9.62%	*10.20%*	26.54%
20	406	2.61	79	1.26	24.11%	15.71%	18.21%	10.93%	*10.53%*	27.40%
21	354	2.55	65	1.27	23.96%	15.85%	18.22%	10.94%	*10.74%*	27.61%
22	274	2.44	100	1.27	24.82%	15.89%	18.47%	11.19%	*11.14%*	27.89%
23	197	2.29	87	1.24	24.86%	15.35%	17.98%	10.70%	*11.65%*	28.33%
24	132	2.12	148	1.27	25.18%	17.21%	19.79%	12.51%	*12.27%*	29.13%
25	49	1.69	337	1.30	31.67%	19.64%	23.52%	16.24%	*13.79%*	31.27%
High financial risk			665	1.62	38.48%	16.82%	22.15%	14.87%		47.95%
Large Stocks (Ibbotson SBBI data)						10.89%	12.18%	4.90%		
Small Stocks (Ibbotson SBBI data)						15.24%	17.96%	10.68%		
Long-Term Treasury Income (Ibbotson SBBI data)						7.26%	7.28%			

Equity Risk Premium Study: Data through December 31, 2004
Data Smoothing with Regression Analysis
Dependent Variable: Average Premium
Independent Variable: Log of Average Market Value of Equity

Regression Output:		
Constant		19.828%
Std Err of Y Est		1.051%
R Squared		86%
No. of Observations		25
Degrees of Freedom		23
X Coefficient(s)	-3.566%	
Std Err of Coef.	0.297%	
t-Statistic	-11.99	

*Smoothed Premium = 19.828% - 3.566% * Log(Market Value)*



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Risk Premium Report
2005

Companies Ranked by Book Value of Equity **Exhibit A-2**

Historical Equity Risk Premium: Average Since 1963
Data for Year Ending December 31, 2004

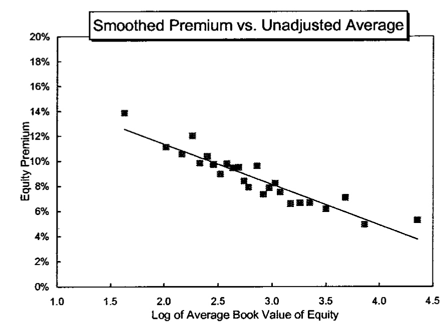
Portfolio Rank by Size	Average Book Val. ($mils.)	Log of Average Book Val.	Number as of 2004	Beta (SumBeta) Since '63	Standard Deviation of Returns	Geometric Average Return	Arithmetic Average Return	Arithmetic Equity Risk Premium	*Smoothed Average Equity Risk Premium*	Average Debt/ MVIC
1	22,708	4.36	41	0.84	16.38%	11.32%	12.55%	5.27%	*3.74%*	27.45%
2	7,264	3.86	37	0.85	16.65%	10.99%	12.21%	4.93%	*5.34%*	31.94%
3	4,806	3.68	37	0.90	16.60%	13.17%	14.37%	7.09%	*5.92%*	33.60%
4	3,158	3.50	39	0.90	16.81%	12.21%	13.45%	6.17%	*6.51%*	31.58%
5	2,233	3.35	40	0.99	16.98%	12.73%	13.96%	6.68%	*7.00%*	30.26%
6	1,819	3.26	48	1.00	19.01%	12.38%	13.93%	6.65%	*7.29%*	30.71%
7	1,482	3.17	38	0.98	16.70%	12.66%	13.89%	6.61%	*7.57%*	29.36%
8	1,183	3.07	40	1.05	16.69%	13.61%	14.80%	7.52%	*7.89%*	27.61%
9	1,063	3.03	39	1.09	19.62%	13.87%	15.50%	8.22%	*8.04%*	28.19%
10	940	2.97	42	1.02	18.88%	13.61%	15.14%	7.86%	*8.21%*	29.42%
11	830	2.92	43	1.09	19.06%	13.03%	14.61%	7.33%	*8.39%*	28.47%
12	724	2.86	45	1.05	19.31%	15.27%	16.88%	9.60%	*8.58%*	30.37%
13	603	2.78	51	1.12	18.92%	13.60%	15.17%	7.89%	*8.84%*	27.83%
14	546	2.74	50	1.12	20.06%	13.95%	15.68%	8.40%	*8.98%*	27.96%
15	490	2.69	43	1.11	19.95%	15.00%	16.77%	9.49%	*9.13%*	27.93%
16	430	2.63	55	1.17	21.02%	14.75%	16.71%	9.43%	*9.31%*	27.89%
17	380	2.58	66	1.19	22.01%	14.98%	17.08%	9.80%	*9.49%*	26.27%
18	333	2.52	57	1.23	21.43%	14.25%	16.24%	8.96%	*9.67%*	27.86%
19	286	2.46	58	1.19	21.64%	15.07%	17.01%	9.73%	*9.88%*	28.52%
20	251	2.40	72	1.22	22.62%	15.50%	17.65%	10.37%	*10.07%*	26.92%
21	213	2.33	76	1.22	22.43%	14.95%	17.11%	9.83%	*10.30%*	27.89%
22	182	2.26	80	1.24	24.36%	16.77%	19.30%	12.02%	*10.52%*	27.12%
23	146	2.16	95	1.25	24.56%	15.28%	17.85%	10.57%	*10.83%*	27.99%
24	104	2.02	139	1.29	25.59%	15.60%	18.39%	11.11%	*11.30%*	27.55%
25	43	1.63	387	1.33	31.95%	17.25%	21.12%	13.84%	*12.56%*	26.91%
High financial risk			665	1.61	38.06%	17.09%	22.29%	15.01%		48.78%
Large Stocks (Ibbotson SBBI data)						10.89%	12.18%	4.90%		
Small Stocks (Ibbotson SBBI data)						15.24%	17.96%	10.68%		
Long-Term Treasury Income (Ibbotson SBBI data)						7.26%	7.28%			

Equity Risk Premium Study: Data through December 31, 2004
Data Smoothing with Regression Analysis
Dependent Variable: Average Premium
Independent Variable: Log of Average Book Value of Equity

Regression Output:

Constant		17.826%
Std Err of Y Est		0.787%
R Squared		87%
No. of Observations		25
Degrees of Freedom		23
X Coefficient(s)	-3.233%	
Std Err of Coef.	0.263%	
t-Statistic	-12.28	

*Smoothed Premium = 17.826% - 3.233% * Log(Book Value)*



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Risk Premium Report
2005

Companies Ranked by Market Value of Equity | **Premium over CAPM** | **Exhibit B-1**

Historical Equity Risk Premium: Average Since 1963
Data for Year Ending December 31, 2004

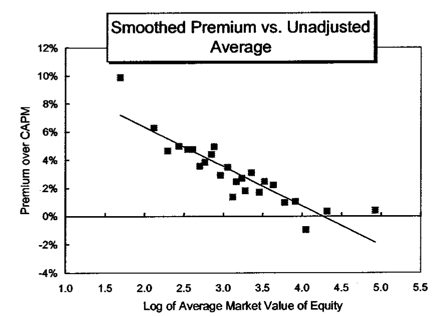
Portfolio Rank by Size	Average Mkt Value ($mils.)	Log of Size	Beta (SumBeta) Since '63	Arithmetic Average Return	Arithmetic Equity Risk Premium	Indicated CAPM Premium	Premium over CAPM	Smoothed Premium over CAPM
1	84,208	4.93	0.91	12.11%	4.83%	4.44%	0.38%	-1.86%
2	20,847	4.32	0.92	12.15%	4.87%	4.53%	0.34%	-0.17%
3	11,172	4.05	0.98	11.08%	3.80%	4.78%	-0.97%	0.59%
4	8,187	3.91	0.97	13.09%	5.81%	4.77%	1.04%	0.97%
5	6,025	3.78	0.97	13.00%	5.72%	4.75%	0.97%	1.34%
6	4,339	3.64	1.03	14.55%	7.27%	5.06%	2.21%	1.74%
7	3,335	3.52	1.03	14.76%	7.48%	5.02%	2.45%	2.06%
8	2,872	3.46	1.08	14.28%	7.00%	5.31%	1.69%	2.24%
9	2,278	3.36	1.08	15.65%	8.37%	5.28%	3.09%	2.52%
10	1,889	3.28	1.10	14.47%	7.19%	5.38%	1.81%	2.75%
11	1,717	3.23	1.09	15.34%	8.06%	5.36%	2.70%	2.87%
12	1,460	3.16	1.11	15.14%	7.86%	5.42%	2.44%	3.06%
13	1,312	3.12	1.09	13.97%	6.69%	5.33%	1.36%	3.19%
14	1,131	3.05	1.14	16.35%	9.07%	5.60%	3.47%	3.38%
15	915	2.96	1.14	15.78%	8.50%	5.59%	2.91%	3.63%
16	766	2.88	1.14	17.79%	10.51%	5.57%	4.94%	3.85%
17	704	2.85	1.21	17.59%	10.31%	5.92%	4.39%	3.95%
18	582	2.76	1.20	16.99%	9.71%	5.88%	3.83%	4.18%
19	502	2.70	1.24	16.90%	9.62%	6.07%	3.56%	4.36%
20	406	2.61	1.26	18.21%	10.93%	6.19%	4.74%	4.62%
21	354	2.55	1.27	18.22%	10.94%	6.20%	4.74%	4.79%
22	274	2.44	1.27	18.47%	11.19%	6.21%	4.98%	5.10%
23	197	2.29	1.24	17.98%	10.70%	6.07%	4.63%	5.50%
24	132	2.12	1.27	19.79%	12.51%	6.23%	6.28%	5.99%
25	49	1.69	1.30	23.52%	16.24%	6.36%	9.88%	7.19%
High financial risk			1.62	22.15%	14.87%	7.93%	6.94%	
Large Stocks (Ibbotson SBBI data)				12.18%	4.90%			
Small Stocks (Ibbotson SBBI data)				17.96%	10.68%			
Long-Term Treasury Income (Ibbotson SBBI data)				7.28%				

Equity Risk Premium Study: Data through December 31, 2004
Data Smoothing with Regression Analysis
Dependent Variable: Premium over CAPM
Independent Variable: Log of Average Market Value of Equity

Regression Output:

Constant		11.921%
Std Err of Y Est		1.029%
R Squared		80%
No. of Observations		25
Degrees of Freedom		23
X Coefficient(s)	-2.799%	
Std Err of Coef.	0.291%	
t-Statistic	-9.61	

*Smoothed Premium = 11.921% - 2.799% * Log(Market Value)*



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Risk Premium Report
2005

Companies Ranked by Book Value of Equity **Premium over CAPM** **Exhibit B-2**

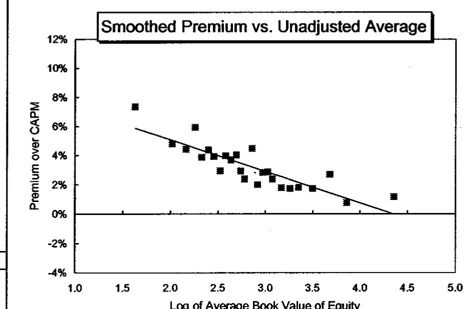
Historical Equity Risk Premium: Average Since 1963
Data for Year Ending December 31, 2004

Portfolio Rank by Size	Average Book Val. ($mils.)	Log of Size	Beta (SumBeta) Since '63	Arithmetic Average Return	Arithmetic Equity Risk Premium	Indicated CAPM Premium	Premium over CAPM	Smoothed Premium over CAPM
1	22,708	4.36	0.84	12.55%	5.27%	4.10%	1.18%	-0.01%
2	7,264	3.86	0.85	12.21%	4.93%	4.14%	0.78%	1.06%
3	4,806	3.68	0.90	14.37%	7.09%	4.39%	2.70%	1.45%
4	3,158	3.50	0.90	13.45%	6.17%	4.43%	1.74%	1.84%
5	2,233	3.35	0.99	13.96%	6.68%	4.87%	1.81%	2.16%
6	1,819	3.26	1.00	13.93%	6.65%	4.91%	1.74%	2.35%
7	1,482	3.17	0.98	13.89%	6.61%	4.82%	1.79%	2.55%
8	1,183	3.07	1.05	14.80%	7.52%	5.14%	2.38%	2.76%
9	1,063	3.03	1.09	15.50%	8.22%	5.33%	2.89%	2.86%
10	940	2.97	1.02	15.14%	7.86%	5.01%	2.85%	2.97%
11	830	2.92	1.09	14.61%	7.33%	5.32%	2.01%	3.09%
12	724	2.86	1.05	16.88%	9.60%	5.14%	4.47%	3.21%
13	603	2.78	1.12	15.17%	7.89%	5.49%	2.39%	3.39%
14	546	2.74	1.12	15.68%	8.40%	5.47%	2.93%	3.48%
15	490	2.69	1.11	16.77%	9.49%	5.45%	4.03%	3.58%
16	430	2.63	1.17	16.71%	9.43%	5.73%	3.70%	3.70%
17	380	2.58	1.19	17.08%	9.80%	5.83%	3.97%	3.82%
18	333	2.52	1.23	16.24%	8.96%	6.01%	2.94%	3.94%
19	286	2.46	1.19	17.01%	9.73%	5.82%	3.92%	4.08%
20	251	2.40	1.22	17.65%	10.37%	6.00%	4.37%	4.21%
21	213	2.33	1.22	17.11%	9.83%	5.95%	3.87%	4.36%
22	182	2.26	1.24	19.30%	12.02%	6.09%	5.93%	4.51%
23	146	2.16	1.25	17.85%	10.57%	6.14%	4.42%	4.71%
24	104	2.02	1.29	18.39%	11.11%	6.31%	4.80%	5.03%
25	43	1.63	1.33	21.12%	13.84%	6.51%	7.33%	5.86%
High financial risk			1.61	22.29%	15.01%	7.91%	7.10%	
Large Stocks (Ibbotson SBBI data)				12.18%	4.90%			
Small Stocks (Ibbotson SBBI data)				17.96%	10.68%			
Long-Term Treasury Income (Ibbotson SBBI data)				7.28%				

Equity Risk Premium Study: Data through December 31, 2004
Data Smoothing with Regression Analysis
Dependent Variable: Premium over CAPM
Independent Variable: Log of Average Book Value of Equity

Regression Output:	
Constant	9.371%
Std Err of Y Est	0.784%
R Squared	75%
No. of Observations	25
Degrees of Freedom	23
X Coefficient(s)	-2.152%
Std Err of Coef.	0.262%
t-Statistic	-8.20

*Smoothed Premium = 9.371% - 2.152% * Log(Book Value)*



 27 *Distributed by* **Ibbotson**Associates

Risk Premium Report
2005

Exhibit C-1

Companies Ranked by Market Value of Equity: Comparative Risk Characteristics
Data for Year Ending December 31, 2004

	Portfolio Statistics for 2004			Portfolio Statistics for 1963-2004								
Portfolio Rank by Size	Average Mkt Value ($mils.)	Log of Size	Number of Firms	Average Equity Risk Premium	Average Debt to MVIC	Average Debt to Market Value of Equity	Average Unlevered Risk Premium	Beta (SumBeta) Since '63	Average Unlevered Beta	Average Operating Margin	Average CV(Operating Margin)	Average CV(ROE)
1	84,208	4.93	44	4.8%	16.44%	19.7%	4.4%	0.91	0.82	15.2%	9.6%	14.0%
2	20,847	4.32	36	4.9%	22.87%	29.7%	4.2%	0.92	0.80	13.0%	10.6%	17.4%
3	11,172	4.05	42	3.8%	25.14%	33.6%	3.2%	0.98	0.83	13.3%	11.2%	17.2%
4	8,187	3.91	41	5.8%	25.94%	35.0%	4.9%	0.97	0.82	12.7%	12.0%	18.5%
5	6,025	3.78	44	5.7%	27.05%	37.1%	4.8%	0.97	0.81	12.6%	12.8%	19.4%
6	4,339	3.64	42	7.3%	27.02%	37.0%	6.1%	1.03	0.86	13.3%	12.5%	18.6%
7	3,335	3.52	47	7.5%	27.38%	37.7%	6.2%	1.03	0.85	12.6%	13.7%	20.9%
8	2,872	3.46	42	7.0%	26.42%	35.9%	5.9%	1.08	0.91	12.4%	13.6%	20.3%
9	2,278	3.36	44	8.4%	25.36%	34.0%	7.1%	1.08	0.91	12.2%	13.9%	21.0%
10	1,889	3.28	46	7.2%	25.16%	33.6%	6.1%	1.10	0.93	11.9%	13.6%	21.4%
11	1,717	3.23	44	8.1%	25.16%	33.6%	6.8%	1.09	0.93	11.8%	14.8%	20.6%
12	1,460	3.16	47	7.9%	25.72%	34.6%	6.6%	1.11	0.93	11.7%	14.6%	19.6%
13	1,312	3.12	43	6.7%	26.66%	36.3%	5.6%	1.09	0.91	11.1%	14.8%	20.5%
14	1,131	3.05	50	9.1%	27.33%	37.6%	7.5%	1.14	0.95	11.2%	15.0%	21.5%
15	915	2.96	56	8.5%	26.70%	36.4%	7.1%	1.14	0.95	10.9%	17.2%	23.0%
16	766	2.88	55	10.5%	25.99%	35.1%	8.8%	1.14	0.96	10.3%	17.5%	24.0%
17	704	2.85	54	10.3%	26.79%	36.6%	8.6%	1.21	1.01	10.0%	18.0%	24.9%
18	582	2.76	63	9.7%	27.03%	37.0%	8.1%	1.20	1.00	9.7%	20.3%	27.8%
19	502	2.70	62	9.6%	26.54%	36.1%	8.1%	1.24	1.04	9.4%	20.6%	26.9%
20	406	2.61	79	10.9%	27.40%	37.7%	9.1%	1.26	1.05	9.0%	23.7%	30.7%
21	354	2.55	65	10.9%	27.61%	38.1%	9.1%	1.27	1.05	8.5%	23.0%	30.3%
22	274	2.44	100	11.2%	27.89%	38.7%	9.3%	1.27	1.05	8.2%	25.1%	34.6%
23	197	2.29	87	10.7%	28.33%	39.5%	8.8%	1.24	1.02	7.9%	26.7%	34.2%
24	132	2.12	148	12.5%	29.13%	41.1%	10.2%	1.27	1.04	7.6%	28.6%	38.4%
25	49	1.69	337	16.2%	31.27%	45.5%	13.0%	1.30	1.04	6.1%	42.1%	55.4%

Note: CV(X) = Standard deviation of X divided by mean of X, calculated over 5 fiscal years. For Portfolios 1-25, calculation uses statutory federal tax rates plus weighted average effective state tax rates. The average blended income tax rate used is 42.4%.

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Risk Premium Report
2005

Exhibit C-2

Companies Ranked by Book Value of Equity: Comparative Risk Characteristics
Data for Year Ending December 31, 2004

	Portfolio Statistics for 2004			Portfolio Statistics for 1963-2004								
Portfolio Rank by Size	Average Book Value ($mils.)	Log of Size	Number of Firms	Average Equity Risk Premium	Average Debt to MVIC	Average Debt to Market Value of Equity	Average Unlevered Risk Premium	Beta (SumBeta) Since '63	Average Unlevered Beta	Average Operating Margin	Average CV(Operating Margin)	Average CV(ROE)
1	22,708	4.36	41	5.3%	27.45%	37.8%	4.4%	0.84	0.69	13.0%	12.8%	18.4%
2	7,264	3.86	37	4.9%	31.94%	46.9%	3.9%	0.85	0.67	14.0%	11.8%	16.7%
3	4,806	3.68	37	7.1%	33.60%	50.6%	5.6%	0.90	0.70	12.2%	11.8%	18.5%
4	3,158	3.50	39	6.2%	31.58%	46.2%	4.9%	0.90	0.72	12.5%	12.3%	21.2%
5	2,233	3.35	40	6.7%	30.26%	43.4%	5.4%	0.99	0.81	12.8%	12.7%	21.2%
6	1,819	3.26	48	6.7%	30.71%	44.3%	5.4%	1.00	0.81	12.4%	13.2%	21.4%
7	1,482	3.17	38	6.6%	29.36%	41.6%	5.4%	0.98	0.80	13.1%	13.3%	22.0%
8	1,183	3.07	40	7.5%	27.61%	38.1%	6.2%	1.05	0.87	12.7%	14.2%	21.5%
9	1,063	3.03	39	8.2%	28.19%	39.2%	6.8%	1.09	0.90	12.4%	14.2%	20.6%
10	940	2.97	42	7.9%	29.42%	41.7%	6.4%	1.02	0.83	11.8%	14.8%	20.2%
11	830	2.92	43	7.3%	28.47%	39.8%	6.0%	1.09	0.89	11.9%	14.7%	23.3%
12	724	2.86	45	9.6%	30.37%	43.6%	7.8%	1.05	0.85	12.3%	14.2%	20.4%
13	603	2.78	51	7.9%	27.83%	38.6%	6.5%	1.12	0.93	11.4%	16.3%	22.5%
14	546	2.74	50	8.4%	27.96%	38.8%	6.9%	1.12	0.92	10.9%	15.5%	21.6%
15	490	2.69	43	9.5%	27.93%	38.8%	7.8%	1.11	0.92	10.5%	15.8%	22.6%
16	430	2.63	55	9.4%	27.89%	38.7%	7.8%	1.17	0.97	10.1%	17.6%	25.0%
17	380	2.58	66	9.8%	26.27%	35.6%	8.2%	1.19	1.00	10.7%	16.8%	24.3%
18	333	2.52	57	9.0%	27.86%	38.6%	7.4%	1.23	1.02	10.1%	19.3%	25.7%
19	286	2.46	58	9.7%	28.52%	39.9%	8.0%	1.19	0.98	9.9%	19.2%	27.7%
20	251	2.40	72	10.4%	26.92%	36.8%	8.6%	1.22	1.02	9.2%	20.9%	29.8%
21	213	2.33	76	9.8%	27.89%	38.7%	8.1%	1.22	1.01	9.4%	22.3%	31.2%
22	182	2.26	80	12.0%	27.12%	37.2%	10.0%	1.24	1.04	8.5%	24.0%	30.0%
23	146	2.16	95	10.6%	27.99%	38.9%	8.7%	1.25	1.04	8.7%	23.7%	33.1%
24	104	2.02	139	11.1%	27.55%	38.0%	9.2%	1.29	1.07	8.2%	26.0%	36.0%
25	43	1.63	387	13.8%	26.91%	36.8%	11.5%	1.33	1.11	7.2%	37.5%	50.0%

Note: CV(X) = Standard deviation of X divided by mean of X, calculated over 5 fiscal years. For Portfolios 1-25, calculation uses statutory federal tax rates plus weighted average effective state tax rates. The average blended income tax rate used is 42.4%.

Risk Premium Report
2005

Companies Ranked by Operating Margin **Exhibit D-1**

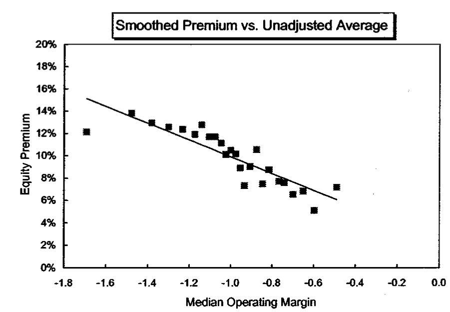
Historical Equity Risk Premium: Average Since 1963
Data for Year Ending December 31, 2004

Portfolio Rank by Size	Median Operating Margin	Log of Median Op Margin	Number as of 2004	Beta (SumBeta) Since '63	Standard Deviation of Returns	Geometric Average Return	Arithmetic Average Return	Arithmetic Equity Risk Premium	*Smoothed Average Equity Risk Premium*	Average Debt/ MVIC
1	32.4%	-0.49	80	0.81	17.08%	13.22%	14.46%	7.18%	*6.07%*	31.05%
2	25.3%	-0.60	55	0.76	16.61%	11.16%	12.38%	5.10%	*6.87%*	34.95%
3	22.3%	-0.65	55	0.80	16.09%	12.95%	14.11%	6.83%	*7.28%*	32.86%
4	20.0%	-0.70	52	0.95	17.08%	12.50%	13.80%	6.52%	*7.64%*	27.19%
5	18.1%	-0.74	50	0.99	17.56%	13.53%	14.88%	7.60%	*7.96%*	22.78%
6	17.1%	-0.77	65	1.11	18.94%	13.46%	15.01%	7.73%	*8.15%*	19.24%
7	15.3%	-0.81	67	1.15	19.92%	14.36%	16.01%	8.73%	*8.51%*	18.33%
8	14.3%	-0.85	59	1.12	19.60%	13.05%	14.76%	7.48%	*8.75%*	20.20%
9	13.3%	-0.88	49	1.19	19.98%	16.11%	17.84%	10.56%	*8.97%*	20.97%
10	12.4%	-0.91	64	1.20	21.74%	14.29%	16.31%	9.03%	*9.20%*	21.67%
11	11.7%	-0.93	64	1.21	21.31%	12.65%	14.61%	7.33%	*9.40%*	22.71%
12	11.1%	-0.95	55	1.18	21.45%	14.27%	16.19%	8.91%	*9.55%*	23.10%
13	10.6%	-0.98	63	1.21	22.37%	15.34%	17.45%	10.17%	*9.72%*	22.90%
14	10.0%	-1.00	66	1.20	23.10%	15.46%	17.79%	10.51%	*9.90%*	23.97%
15	9.5%	-1.02	58	1.22	24.62%	14.92%	17.39%	10.11%	*10.08%*	24.87%
16	9.0%	-1.05	67	1.17	22.91%	16.14%	18.41%	11.13%	*10.25%*	26.72%
17	8.4%	-1.07	59	1.26	24.45%	16.39%	18.97%	11.69%	*10.46%*	27.24%
18	7.9%	-1.10	79	1.26	24.85%	16.33%	18.98%	11.70%	*10.69%*	28.02%
19	7.2%	-1.14	73	1.29	25.12%	17.44%	20.07%	12.79%	*10.97%*	29.40%
20	6.7%	-1.17	68	1.27	26.48%	16.30%	19.20%	11.92%	*11.21%*	31.50%
21	5.8%	-1.23	82	1.25	25.88%	16.96%	19.66%	12.38%	*11.66%*	31.76%
22	5.0%	-1.30	106	1.29	28.88%	16.43%	19.84%	12.56%	*12.16%*	32.37%
23	4.2%	-1.38	94	1.29	26.14%	17.42%	20.22%	12.94%	*12.77%*	34.14%
24	3.3%	-1.48	89	1.31	28.64%	17.80%	21.10%	13.82%	*13.50%*	33.88%
25	2.0%	-1.69	99	1.29	27.87%	16.16%	19.41%	12.13%	*15.12%*	33.27%
High financial risk			665	1.62	38.48%	16.82%	22.15%	14.87%		47.95%
Large Stocks (Ibbotson SBBI data)						10.89%	12.18%	4.90%		
Small Stocks (Ibbotson SBBI data)						15.24%	17.96%	10.68%		
Long-Term Treasury Income (Ibbotson SBBI data)						7.26%	7.28%			

Equity Risk Premium Study: Data through December 31, 2004
Data Smoothing with Regression Analysis
Dependent Variable: Average Premium
Independent Variable: Log of Median Operating Margin

Regression Output:		
Constant		2.381%
Std Err of Y Est		1.189%
R Squared		77%
No. of Observations		25
Degrees of Freedom		23
X Coefficient(s)	-7.526%	
Std Err of Coef.	0.860%	
t-Statistic	-8.75	

*Smoothed Premium = 2.381% - 7.526% * Log(Operating Margin)*



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APPENDIX X

FT&T
Answers To
Chapter Review Questions

Review Questions Chapter 1 Introduction to Business Valuation

1. Primary opportunities for the valuation analyst can be found in working with:
   a. Business owners, investors, attorneys, and individuals performing valuations for a variety of reasons including estate planning and taxation, litigation support, mergers and acquisitions, and financial statement reporting
   A is Correct—As described on page 13 of Chapter One, there are many different purposes for valuations It should be noted that this list is not comprehensive, there are many other sources of valuation work.
   b. Business owners as only the owner of a business can engage a valuation analyst for a valuation engagement of a business
   Incorrect—Though the valuation analyst is often engaged by the owner of the business being valued, this is not the only way a valuation analyst may be engaged. In a divorce case, for example, the marital judge may order a valuation to be performed for the non-owner spouse.
   c. Other CPA firms as every privately held company is required to estimate the value of its intangible assets for financial statement reporting purposes
   Incorrect—Although privately held companies may need to determine the value of its intangible assets under FASB Accounting Standards Codification 805 or 350, this is not a requirement nor does this represent the primary opportunity for valuation analysts.
   d. Business owners in order to estimate the value of a group of assets as allocated on Form 8594.
   Incorrect—Although Form 8594 is the Asset Acquisition Statement used in allocation of purchase price, this is not a primary source of engagements for valuation analysts

2. What is the basic difference between an appraisal and a valuation?
   a. The act or process of determining the value of a business, business ownership interest, security, or intangible asset is an appraisal whereas a valuation is the process of determining the value of gems, equipment, furnishings, and other tangible assets to be used in determining the value of a business.
   Incorrect—The definitions for a valuation and an appraisal are reversed.
   b. Nothing; they are the same thing.
   Incorrect—There are times when valuation analysts will use the term “appraisal report” of a business but never “valuation report” of gems or other tangible assets. Tangible assets (whether used as part of the value of a business or not) require an appraisal by a qualified tangible asset valuator before they can be included in the business valuation. A valuation analyst is not qualified by this training to place a value on a tangible asset, only to place a value on the value of a business, business ownership interest, security or intangible asset.
   c. Appraisal is usually for a tangible asset and a valuation is usually for stock or interest in stock of a company or other intangible asset.
   C is Correct—Although the terms are often interchanged in a business valuation, a valuation analyst should define the meaning of each term in any written report, so as to prevent confusion by the report reader.
   d. Valuation is usually for stock or bond or other public security and an appraisal is usually for a non-public asset, stock or bond.
   Incorrect—Whether or not a company is public or non-public (private) does not change the meaning of the words valuation and appraisal.

3. Risk management in the valuation niche demands solid training and staying current through continuing education.
   a. True
      A is Correct—The depth of training, along with continuing one's learning and education helps the valuation analyst better evaluate the risks related to a particular engagement and make better choices.
   b. False
      Incorrect—Lack of appropriate training and not staying current with continuing education increases the risks of misapplying methods, using outdated techniques, and issuing incorrect conclusions of value.

4. A buy/sell agreement:
   a. Avoids litigation
      Incorrect—An agreement, properly drawn and executed, often can prevent litigation if it is entered into at the beginning of a business relationship. Some buy/sell agreements are themselves are subjects of litigation, especially if they do not establish a methodology to be followed by the parties to the agreement.
   b. Notes that an independent valuation is to be performed, when, and why
      Incorrect—Although this seems to be a logical step in any buy/sell agreement, the majority do not contain reference to a business valuation, or reasons under which a valuation should be performed.
   c. Identifies when or what events trigger a buyout, identifies how any buyout will be funded, and identifies the timing of any buyout
      C is Correct—Business owners, especially those in partnerships, or of owners close to retirement, use a buy/sell agreement to define who the new owners of the business will be, how they will pay or be paid for it. What is missing in many is the way to amicably establish the value of the business, often resulting in shareholder disputes.
   d. Always identifies the interest rate, if any, applicable
      Incorrect—Although many modern buy-sell agreements do peg the interest rates to be used, not all of them do so.

5. The most commonly quoted regulatory and professional bodies for business valuation are:
   a. NACVA, AICPA
      Incorrect—The National Association of Certified Valuators and Analysts and American Institute of CPAs are member organizations for valuation analysts and do not regulate conduct of non-members.
   b. IRS, DOL, FASB
      B is Correct—The Internal Revenue Service, Department of Labor and Financial Accounting Standards Board provide regulations for all practitioners to heed.
   c. ASA, IBA
      Incorrect—The American Society of Appraisers and the Institute of Business Appraisers are member organizations for valuation analysts, and do not regulate conduct of non-members.
   d. IACVA, ABV
      Incorrect—The International Association of Consultants, Valuation Analysts is a member organization and does not regulate conduct of non-members. A CPA may be Accredited in Business Valuations by the AICPA, and having an accreditation does not allow that individual to regulate valuations.

6. Three theoretical standards of value are:
   a. Investment value, going concern value, and fair market value
      Incorrect—Going concern value is premise of value
   b. Fair market value, investment value, and fair value
      B is Correct—The theoretical standards of value include fair market value, fair value and investment value
   c. Going concern value, asset value, and fair value
      Incorrect—Both going concern value and asset value are premises of value and not Standards of value.
   d. Book value, fair market value, and liquidation value
      Incorrect—According to the text, book value and liquidation value are both a premise of value; fair market value is the only standard of value listed

7. Fair Market Value is based upon:
   a. In business valuation, a legally created standard of value that applies to specific statutory transactions
      Incorrect—Fair Value is a legally created standard of value that applies to specific statutory transactions.
   b. The market value, the standard of value applicable in cases of dissenting stockholders' valuation rights. Fair market value, with respect to a dissenter's shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable
      Incorrect—It is Fair Value (the statutory value) which defines dissenting stockholders' valuation rights.
   c. The value described by an arms length transaction between a knowledgeable willing buyer and a knowledgeable willing seller
      C is Correct—In its broadest definition, FMV is the amount, price, highest price, most probable price, cash or cash-equivalent price at which property would change hands or the ownership might be justified by a prudent investor or at which a willing buyer and seller would exchange, would agree to exchange, possibly with equity to both and both fully aware of having knowledge or at least acting knowledgeably of the relevant facts, possibly even acting prudently and for self-interest and with neither being under compulsion, abnormal pressure, undue duress or any particular compulsion.
   d. The value described by an arm's length transaction involving a willing buyer or a willing seller—and depends upon the reason you have been retained to perform a business valuation
      Incorrect—Fair market value, per RR 59-60, mandates both a willing knowledgeable buyer and seller, and is independent of the reason for the valuation.

8. A valuation analyst must match the appropriate standard of value to the purpose for which the valuation engagement is performed.
   a. If the context in which the valuation is to be used is not critical and no lawsuit is in process, then the valuation analyst will always select fair value.
   Incorrect—Fair value will likely be the standard of value described by statute but not always. The valuation analyst must work with the client (and client attorneys if needed) to define the standard of value to be used – it is they who determine the standard of value, not the valuation analyst.
   b. A valuation for buying a business will be the same as for selling that business. It is the nature of the business that defines the standard of value.
   Incorrect—A buyer and seller have differing points of view and will view the subject company differently. A buyer, for example, will look at the synergy element whereas a seller may be looking at retirement. The business is a vehicle, not the determining factor.
   c. A valuation for securing a new loan should be done the same as a valuation in a divorce.
   Incorrect—Mortgage companies do look for investment value. Although both valuations may imply using investment value as the standard of value, for a divorce valuation, state law defines the standard of value to be used in valuing a business in a divorce. The analyst must look to applicable state law for the definition of the standard of value to be used.
   d. The valuation is to be used only for the purpose for which it was done and will likely be inappropriate for another use even by the same company or client.
   D is Correct—Valuations are specific to a point in time and to the reason the valuation was performed. For example, the valuation cannot be re-used, even by the same entity, at a different point in time, as the financial data underlying the analysis will have changed.

9. A valuator relies on quantifiable objective data in performing a valuation, attempting to remove as much subjectivity as possible. An advocate:
   a. Does essentially the same thing for a specific client
   Incorrect—It is not the client but the professional situation which defines whether the valuator is or is not an advocate. Although valuation analysts do (and should) advocate their own position, that position should be arrived at objectively.
   b. Introduces subjective factors and attempts to rely more heavily on qualitative factors
   B is Correct—An advocate, such as an attorney, attempts to use objective data in such a way as to assist his client in "looking good" and to place the opposing client in an unfavorable light.
   c. Is a valuator who works only for attorneys
   Incorrect—A valuator should strive to be objective at all times, whether or not the client is an attorney.
   d. Is an attorney who works for a valuation firm to edit valuation reports to prevent ambiguous terms and advocate the use of proper legal terms so the firm won't be sued
   Incorrect—Such an attorney-editor might become an advocate of some kind when in a court of law, but as an editor, advocacy would not be an issue.

10. What are the three main reasons for tax related valuations?
    a. Estate tax, gift tax, and allocation of purchase price
       A is Correct—All three valuations would be performed for tax purposes.
    b. Estate tax, buy/sell agreements, and litigation
       Incorrect—Valuations in buy/sell agreements and litigation are performed for non-tax reasons, and whether or not tax is involved is secondary to the reason for the valuation.
    c. ASC 805 (formerly FASB 141), ASC 350 (formerly FASB 142), and estate tax
       Incorrect—Valuations performed under FASB regulations are performed for regulatory reasons. And whether or not tax is involved is secondary to the reasons for the valuation.
    d. ASC 350 (formerly FASB 142), litigation, and gift tax
       Incorrect—FASB valuations are performed for regulatory reasons, and whether or not tax is involved is secondary. Litigation valuations are performed for a variety of reasons, some of which will have tax consequences, but tax issues are secondary.

11. The American Medical Association refers to going concern value as an "in-place value."
    a. True
       A is Correct—They consider the assets, assembled, in place, licensed, known systems and procedures set up so the buyer does not have to start over from scratch.
    b. False
       Incorrect—The American Medical Association refers to going concern value as an "in-place value," because they consider the assets, assembled, in place, licensed, known systems and procedures set up so the buyers does not have to start over from scratch.

12. The major point(s) of Internal Revenue Code §2703 is/are:
    a. For estate, gift and other tax purposes, the value of any property is determined without regard to any right or restriction relating to the property
       Incorrect—Although this is partially true, there are exemptions under section (b) that would make this statement false.
    b. An exception to restrictions on property exists for any option, agreement, right or restriction which (1) is a bona fide business arrangement, (2) is not a device to transfer property for less than its fair market value, (3) is comparable to similar arm's length arrangements; and (4) these safe harbors must be independently satisfied. The mere showing that a right or restriction to property is a bona fide business arrangement is not sufficient to establish the absence of a device
       Incorrect—Although this is partially true, the text must be considered in light of the general rule.
    c. Each right or restriction must be tested separately. A right or restriction is considered to meet the three 'safe harbor' requirements if more than 50% of the applicable property is owned by individuals who are not members of the transferor's family. Property owned by non-family members must be subject to the same rights or restrictions
       Incorrect—It is a partial and incomplete answer. IRC §2703 is a complex code, and a valuer needs to be aware of the full impact of issues raised in IRC §2703.
    d. Both a and b, but not c
       Incorrect—C is incorporated into IRC §2703, providing two key issues valuation analysts relating to family ownership a valuer should be aware of. A valuer should be certain family and non-family ownership are subject to the same rights/restrictions.
    e. a, b, and c
       E is Correct—All issues listed are key parts of IRC §2703. Valuation analysts must carefully address each of the issues raised with input form legal counsel when performing a valuation engagement for tax purposes.

13. The Internal Revenue Service first introduced the concept of goodwill and excess earnings when they issued:
    a. ARM 34
    A is Correct—ARM 34 was issued in 1920 as a result of the enactment of prohibition to assist the taxpayer in dealing with excess earnings and intangibles such as goodwill.
    b. Revenue Ruling 59-60
    Incorrect—RR 59-60 was issued in 1959 and outlined factors to be used in valuing a closely held business, involved itself with Estate and Gift Taxes and is widely accepted for tax and non–tax purposes.
    c. Revenue Ruling 68-609
    Incorrect—Revenue Ruling 68-609 was issued after ARM 34 but did address intangibles specifically goodwill and introduced a formula to determine value and sometimes referred to as the “excess earnings method” or “treasury method”.
    d. APB Opinion 16
    Incorrect—APB Opinion 16 was issued by the Financial Accounting Standards Board and dealt with business combinations later superseded by FAS 141.

14. Which of the following factors should be considered when valuing a closely held business under Revenue Ruling 59-60?
    i. Nature and history of the business
    ii. Economic outlook and industry condition
    iii. Methods to calculate preferred stock
    iv. The earnings capacity of the company

    a. i, ii, and iv
    A is Correct—Revenue ruling 59-60 lists the following factors, which require careful analysis:
    1. The nature and history of the business
    2. The economic outlook and outlook of the specific industry
    3. The book value of the stock and the financial condition of the business
    4. The earnings capacity of the company
    5. The dividend-paying capacity of the business
    6. Existence of goodwill value
    7. Sales of the stock and the size of the block of stock to be valued
    8. The market price of stocks of corporations engaged in a similar line of business.
    b. ii, iii, and iv
    Incorrect—Methods to calculate preferred stock are included in Revenue Ruling 83-120, and are not part of revenue Ruling 59-60.
    c. i, ii, and iii
    Incorrect—Although the nature and history of the business and earnings capacity of the company are covered under Revenue Ruling 59-60, methods to calculate preferred stock are included in Revenue Ruling 83-120.
    d. All of the above
    Incorrect—Methods to calculate preferred stock are included in Revenue Ruling 83-120.

15. If a valuator is retained to value a company for estate tax purposes, it is acceptable for the valuator to value the business as a/an:
    a. Advocate
    Incorrect—When valuing a company for estate and gift tax purposes the valuator must appear as an expert. This includes being objective and independent.
    b. Independent expert
    B is Correct—When valuing a business for estate and gift tax purposes an expert wants to appear objective and independent compared to being an advocate.
    c. Related party
    Incorrect—As a related party the valuator's independence would be impaired therefore implying a position of advocacy for the client.
    d. Employee of the company
    Incorrect—As an employee of the Company the valuator's independence would be impaired therefore implying a position of advocacy for the client.

16. IRC Section 401(a)(28)(C) requires the use of an "independent appraiser." For ESOP valuations to be independent, the following conditions must be met:
    a. The valuator is qualified, performs appraisals on a regular basis, and is not a related party
    A is Correct—A firm will be treated as an independent valuator under Sec. 401(a)(28)(C) if all of the following conditions are met; (a) The firm represents itself to the public as a valuator or performs appraisals on a regular basis, (b) The valuator is qualified to value the type of property, (c) The valuator is not a related party.
    b. The valuator is qualified, may be a related party, and performs appraisals on a regular basis
    Incorrect—The valuator is a related party it would project the appearance of advocacy and independence would be impaired.
    c. The valuator is qualified, does not perform appraisals on a regular basis, and is not a related party
    Incorrect—The valuator does not perform appraisals on a regular basis this would impair the qualifications of an independent valuator. (Note: A valuator does not have to perform appraisals on a regular basis to be independent; a valuator may be able to obtain the necessary assistance by using the mentoring program through NACVA to obtain the necessary support.
    d. The valuator does not need to be qualified, but must perform appraisals regularly and is not a related party
    Incorrect—Under the IRS regulation the valuator must now be qualified to meet the requirements of independence.

17. Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide "appraisal valuation services, fairness opinions or contribution-in-kind reports" for any of its audit clients.
    a. True
    A is Correct—Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide "appraisal or valuation services, fairness opinions, or contribution-in-kind reports" for any of its audit clients.
    b. False
    Incorrect—If an auditor performed valuation services for their audit clients, they would no longer be independent or able to issue an audit opinion.

18. Before the valuation analyst can proceed in valuing a business, the first step an analyst must determine is:
    a. The purpose of the valuation
       A is Correct—Once the purpose of the valuation is determined, the valuator may be able to determine what the appropriate standard of value is, a method to apply and if any discounts or premiums should be applied.
    b. The best method to apply
       Incorrect—The valuator cannot determine the best methods to apply without first understanding the purpose of the valuation.
    c. The standard of value
       Incorrect—The first step in any valuation process should be determining the purpose.
    d. The appropriate marketability discount
       Incorrect—Determining discounts for marketability and control would not be considered until the enterprise value has been established.

19. Which of the following cases provides guidance as to the admissibility of expert testimony in appraising a business:
    a. *Daubert v. Merrill Dow*
       A is Correct—The court held that the Federal Rules of Evidence, not Frye, provide the standard for admitting expert scientific testimony in a federal trial; nothing in the rules gives any indication that "general acceptance" is a necessary precondition to the admissibility of scientific evidence. While *Daubert* itself did not address the admissibility of expert testimony in appraising a business, it is generally accepted that it provides guidance for valuation purposes
    b. *Estate of Walter Gross v. Commissioner*
       Incorrect—Court ruling related to tax effect of S Corporation
    c. *Estate of Davis v. Commissioner*
       Incorrect—Court ruling related to discounts for trapped-in gains
    d. *Estate of Roark v. Commissioner*
       Incorrect—Case related to the failure to properly substantiate a donation results in denial of charitable tax deductions

20. The United States Department of Labor issues regulations specifically pertaining to business valuations for:
    a. Employee Stock Ownership Plans
       A is Correct—The Department of Labor issues regulations specifically pertaining to business valuations for Employee Stock Ownership Plans.
    b. Gift and estate tax returns
       Incorrect—The Internal Revenue Service issued Revenue Ruling 59-60 which applies to valuing business for gift and estate tax returns.
    c. Merger and acquisitions
       Incorrect—The Internal Revenue Service has issued guidance a valuator would apply for merger and acquisitions.
    d. Partner disputes
       Incorrect—The Internal Revenue Service and state law may provide guidance a valuator would apply for partner disputes.

21. Value equals the benefit stream divided by a required rate of return is an example of what principle?
    a. Alternative principle
       Incorrect—The alternative principle applies the concept a buyer and seller has alternatives.
    b. Principle of substitution
       Incorrect—The principle of substitution implies the value of a thing tends to be determined by the cost of acquiring an equally desirable substitute.
    c. Investment value principal
       C is Correct—The investment principle is based on the difficulty of valuing a closely held business because there a lack of an active free trading market. Therefore closely held businesses are valued based on the investment value principle. The simplified formula is: Value = Benefit Stream/Required Rate of Return.

22. A fundamental relationship exists between rate of return from an investment and the amount of risk in the investment. Therefore:
    a. An investor would expect a higher rate of return from a treasury note compared to large company stock
       Incorrect—The Treasury note is considered a riskless investment; therefore an investor would require less of a return from a treasury note than company stock.
    b. An investor would expect a higher rate of return from a six month CD compared to a 5-year treasury bond
       Incorrect—A six month CD would be considered more liquid than a 5-year treasury bond, therefore the rate of return from a 6 month CD would be less.
    c. An investor would expect a higher rate of return from a publicly traded company compared to a privately held company
       Incorrect—The publicly traded stock could be converted to cash in a couple of days. There is a market to trade a publicly traded stock. Whereas a privately held corporation does not have such a market and it is uncertain whether a market actually exists for a privately held company and the time it would take an investor to convert their investment to cash would take longer, therefore requiring a higher rate of return for an investment in a private company.
    d. An investor would expect a higher rate of return from a publicly traded stock compared to a 5-year treasury bond
       D is Correct—Due to the nature of the investment a treasury bond is less risky than a publicly traded stock and therefore a publicly traded stock would require a higher rate of return.

23. Strategic/Investment value is defined as:
    a. The amount at which property would change hands between a hypothetical willing buyer and a willing seller
       Incorrect—Fair market value is defined as "the price at which the property would change hands between a willing buyer and a willing seller, when the former is not under any compulsion to buy and the latter us not under any compulsion to sell both parties having reasonable knowledge of relevant facts."
    b. An amount determined under statutory standard of value
       Incorrect—Fair Value has several meanings, in most states fair value is the statutory standard of value applicable in cases of dissenting stockholders' valuation rights.
    c. The value to a particular investor based on individual investment requirements and expectations
       C is Correct—Strategic or Investment value is the value to a particular investor based on individual investment requirements and expectations.
    d. The value as if the business is going to continue operating as it presently is operating
       Incorrect—Going Concern value is a premise of value based on the notion the business is going to continue to operate as it presently is operating.

24. Revenue Ruling 93-12 was a significant benefit to taxpayers as it allowed that:
    a. Valuation of a minority (i.e., non-controlling) interest in an entity will not have to consider either the transferor or the transferee as they relate to control of the entity
    A is Correct – Revenue Ruling 93-12 eliminated the "family attribution rule" and states that "A minority discount will not be disallowed solely because a transferred interest, when aggregated with interests held by family members, would be a part of a controlling interest." This greatly enhanced estate and gift tax planning opportunities for individual taxpayers.
    b. Valuation of an ownership interest in a business for gift tax purposes would always allow rates of return on tangible assets between 8% and 10%
    Incorrect – The rates of return on tangible assets, provided for illustrative purposes only, are found in Revenue Ruling 68-609 in the discussion of the "excess earning" or "Treasury" method of valuation.
    c. Contributions of non-cash property for federal income tax purposes shall always be valued based on the historical cost of the property
    Incorrect – Contributions of non-cash property for federal income tax purposes is discussed in Revenue Procedure 66-49 and provided information and guidelines relative to appraisals of contributed property.
    d. Adopted the "family attribution" rule, which states that no minority interest discount is available for blocks of stock transferred to family members when the family holds a controlling interest in the entity
    Incorrect – Revenue Ruling 93-12 eliminated the "family attribution rule" as defined in this option which was introduced in Revenue Ruling 81-253.

Review Questions Chapter 2 Financial Statement Analysis and Calculation of Financial Ratios

1. Chianti Corp. reports the following items in their Balance Sheet: $70,000 fixed assets, $3,500 cash, $1,200 short term marketable securities, $4,500 in accounts receivables, $6,000 in inventories, $1,000 in prepaid expenses, $4,000 accounts payable and $2,100 in current notes payable. What is Chianti Corp.'s Current Ratio?
    a. 7.24
    Incorrect—This appears to be a mathematical error.
    b. 2.65
    B is Correct—See calculation below.
    c. 2.49
    Incorrect—This answer does not include short term marketable securities.
    d. 1.51
    Incorrect—This answer does not include either inventory or prepaid expenses.

Cash	$ 3,500
Short-term marketable securities	1,200
Accounts receivable	4,500
Inventories	6,000
Prepaid expenses	1,000
Total current assets	**$16,200**
Accounts payable	$ 4,000
Short-term notes payable	2,100
Total current liabilities	**$ 6,100**

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{16{,}200}{6{,}100} = \mathbf{2.65}$$

2. Assume the same facts as in question number one, what is Chianti Corp.'s Cash Ratio?
   a. 1.51
      Incorrect—This answer includes all assets except inventory and prepaid insurance.
   b. 1.75
      Incorrect—This answer includes all assets except accounts receivable and prepaid insurance.
   c. 2.49
      Incorrect—This answer includes all assets except prepaid insurance.
   d. 0.77
      D is Correct—Cash ratio equals cash & cash equivalents/current liabilities

$$\frac{\text{Cash + short-term marketable securities (\$3,500 + 1,200)}}{\text{Current liabilities (\$6,100)}}$$

= 0.77

3. Assuming that Chianti Corp. reported annual sales of $100,000, cost of goods sold of $65,000, average receivables of $5,600, average inventories of $3,800, and average payables of $5,700. What is Chianti Corp.'s Receivables Turnover and Average Receivables Collection Period?

	Receivables Turnover	Avg. Rec. Collection Period	
a.	10.0	36.5	**Incorrect**—The receivable turnover calculation appears to be a mathematical error.
b.	11.61	31.5	**Incorrect**—This answer assumes the numerator is cost of goods sold rather than sales.
c.	6.25	58.4	**Incorrect**—This answer subtracts cost of goods sold from sales prior to dividing by average accounts receivable.
d.	17.9	20.4	**D is Correct—**Receivable Turnover: Sales/Average Receivables Receivable Turnover = $100,000 / $5,600 Receivable Turnover = **17.9** Avg. Rec. collection period = 365/17.9 Avg. Rec. Collection Period = **20.4 days**

4. Assuming the same facts as outlined in question three, what is Chianti Corp.'s Inventory Turnover? And Average Inventory Processing Period?

	Inventory Turnover	Avg. Inventory. Processing Period	
a.	12.4	29.4	**Incorrect**—This appears to be a mathematical error based on the numbers provided.
b.	26.5	13.8	**Incorrect**—This answer divides sales by the average inventory.
c.	17.11	21.3	**C is Correct—**Inventory Turnover = Cost of Goods Sold / Average inventory Inventory Turnover = $65,000 / $3,800 Inventory Turnover = **17.11** Average Inventory Processing Period = 365 / Inventory Turnover 365 / 17.11 Average Inventory Processing Period = **21.3 days**
d.	13.4	27.2	**Incorrect**—This appears to be a mathematical error based on the numbers provided.

5. Assuming the same facts as in question three, what is Chianti Corp.'s Cash Conversion Cycle?
   a. 7.24 days
      Incorrect—This implies that the payable payment period is 34.5 days.
   b. 26.1 days
      Incorrect—This implies that the payable payment period is 15.6 days.
   c. 9.7 days
      C is Correct—Cash conversion cycle = inventory turnover period + days to collect receivables – payable payment period
      Cash conversion cycle = 21.3 (see #4) + 20.4 (see #3) – 32 (see payable payment calculation below)
      Cash conversion cycle = **9.7**
      Payable payment period = (365/(cost of goods sold/avg payables)) *or* (365/($65,000/$5,700))
   d. -5.67 days
      Incorrect—This implies that the payable payment period is 46.4 days.

6. Assuming that Chianti Corp. Reports Net Income of $5,200 and that its average total equity is $49,000, what is Chianti's Return on Equity?
   a. 9.42%
      Incorrect- This calculation incorrectly reverses the formula and calculates the return on equity as average total equity/net income.
   b. 21.20%
      Incorrect- This calculation incorrectly doubles the net income amount to $10,400 before applying the formula.
   c. 10.61%
      C is Correct—Return on equity = net income/average total equity
      Return on equity = $5,200 / $49,000
      Return on equity = 10.61%
   d. 11.51%
      Incorrect – This implies that the net income amount is incorrectly stated as $5,640.

7. Based on the information provided in questions one through six, what is Chianti Corp.'s Net Profit Margin and Equity Turnover?

Net Profit Margin	Equity Turnover	
a. 9.42%	2.13	**Incorrect**—This uses an erroneous net profit margin from question 6 and a mathematical error in the equity turnover calculation.
b. 5.2%	2.04	**B is Correct—**Net profit margin = Net income/sales Net profit margin = $5,200 / $100,000 Equity turnover = Sales / Average equity = $100,000 / $49,000 = **2.04**
c. 10.61%	2.04	**Incorrect**—The equity turnover calculation is correct, but the return on equity is used in place for the net profit margin.
d. 8.0%	4.32	**Incorrect**—Both answers appear to be mathematical errors.

8. The conversion of the balance sheet and income statement line items to percentages based on total assets or total sales is often referred to as:
   a. Trend analysis
      Incorrect—Trend analysis analyzes the financial statements over time.
   b. Common-size analysis
      B is Correct—Common-size analysis is the process of converting the balance sheet and income statement line items to percentages of total assets or total sales.
   c. Financial ratio analysis
      Incorrect—Financial Ratio Analysis is based on specific formulas and looks at profitability, leverage, equity, etc. of a company.
   d. Comparative analysis
      Incorrect—Comparative analysis is comparing the company's financial statements from year to year and to industry averages.

9. A financial analysis of any business would include all of the following EXCEPT for:
   a. An analysis of each balance sheet item over the period being analyzed
      Incorrect—The valuation analyst should analyze the balance sheet over each period being analyzed.
   b. An analysis of industry ratios in the same NAICS code as the company being analyzed
      Incorrect—This type of financial analysis should be performed.
   c. An analysis of the income statement, where each item is reported as a percentage of sales
      Incorrect—This common size analysis should be performed.
   d. An investigation as to the existence of inventory as of the valuation date
      D is Correct—The valuation analyst would rely on representations of management regarding the existence of inventory; a financial analysis would not detect the existence of inventory, however a physical inspection of the inventory may take place during a site visit.

10. Ratio analysis will assist the valuation analyst in determining the following:
   a. The financial condition of the company
      Incorrect—Ratio analysis could indicate how well the company is doing but C is also correct making E the best answer.
   b. Identifying all the strengths and weaknesses of the company
      Incorrect—An analysis of financial ratios will help identify a company's strengths and weaknesses, it has limitations and will not necessarily identify <u>all</u> strengths and weaknesses.
   c. The relative operating risks of the company
      Incorrect—Because A is also correct.
   d. Both a and b
      Incorrect—An analysis of financial ratios will help identify a company's strengths and weaknesses, it has limitations and will not necessarily identify all strengths and weaknesses.
   e. Both a and c
      E is Correct—This is the best answer to the question because ratio analysis may indicate how well the company is doing and identify some of the operating risks of the Company.
   f. Both b and c
      Incorrect—An analysis of financial ratios will not necessarily identify all of a company's strengths and weaknesses.

11. The most conservative ratio in measuring a company's solvency is the:
    a. Current ratio
       Incorrect—The current ratio is determined by dividing all current assets by current liabilities, because this includes items such as inventory and accounts receivable, this is not the most conservative ratio for measuring a Company's solvency.
    b. Quick ratio
       Incorrect—The quick ratio is determined by dividing current assets less inventory by current liabilities. This ratio is more conservative than the current ratio, however because it includes accounts receivable it is not the most conservative.
    c. Cash ratio
       C is Correct—The cash ratio is the most conservative measure of solvency because it includes only cash and marketable securities in its measurement of liquidity.
    d. Turnover ratio
       Incorrect—Turnover ratios apply to accounts receivable, inventory and accounts payable and do not indicate the solvency of a Company.

12. A high inventory turnover can indicate all of the following EXCEPT:
    a. Better liquidity
       Incorrect—A high inventory turnover ratio would indicate better liquidity. Inventory turnover is cost of sales for the time period analyzed divided by the average of beginning plus ending inventory. Therefore the higher the turnover the quicker inventory is being sold and therefore the more frequently inventory is converted into cash.
    b. Superior merchandising
       Incorrect—A high inventory turnover ratio would be an indication of superior merchandising. The higher the inventory turnover ratio the more frequently inventory is being sold and it therefore is a good indication of superior merchandising by the company.
    c. Shortage of inventory
       Incorrect—A high inventory turnover ratio would indicate a potential shortage of inventory.
    d. Obsolete inventory
       D is Correct—A low inventory turnover can indicate poor liquidity or obsolete inventory.

13. What type of ratios may a valuation analyst generally use to evaluate management performance?
    a. Operating profitability ratios
       A is Correct—Operating profitability ratios are used in the evaluation of management performance. These ratios include Cost of sales/Sales and Gross margin analysis.
    b. Liquidity ratios
       Incorrect—These ratios are used to measure a firm's ability to pay its near term financial obligations.
    c. Financial risk ratios
       Incorrect—These ratios measure a firm's degree of operating leverage.
    d. Business risk analysis
       Incorrect—These ratios assess the business risk.

14. Which of the following statements is correct?
    a. A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produce a satisfactory return on total assets.
       A is Correct—A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produces a satisfactory return on total assets.
    b. The net fixed asset turnover ratio is crucial when appraising a service business.
       Incorrect—Fixed assets usually do not drive the profits of a service business.
    c. If a company's cost of sales/sales ratio is decreasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.
       Incorrect—If a company's cost of sales as a % of sales is increase, it may indicate competition is forcing the company to cut profit margins or the company cannot pass increasing costs to its customers.
    d. Companies with significant fixed operating costs in proportion to variable costs can better weather an economic downturn.
       Incorrect—A company with significant fixed costs could not trim costs in a downturn.

15. Which ratio measures the ability to service total interest-bearing debt?
    a. Interest coverage ratio
       Incorrect—This ratio is a measure of a firm's ability to meet its interest payments.
    b. Operating cash flow ratio
       Incorrect—This ratio measures a firm's ability to generate the resources required to meet its current liabilities.
    c. Operating cash flow to long-term debt
       Incorrect—This ratio measures the ability to service total long term debt.
    d. Operating cash flow to total debt ratio
       D is Correct—Operating cash flow to total debt ratio measures the ability to service total interest-bearing debt.

16. What is the purpose of dividing a receivable or inventory turnover ratio by 365?
    a. We can never do enough math, so why not add another equation
       Incorrect—Math is always fun, and the purpose of dividing a turnover ratio by 365 days is to determine how long it may take to convert a current asset into cash.
    b. To determine the number of days it may take to convert a current asset into cash
       B is Correct—By dividing a receivable or inventory turnover ratio by 365 days a valuation analyst can determine how many days it will take to convert the current asset into cash.
    c. To determine if a company is effectively utilizing its fixed assets
       Incorrect—A fixed asset turnover could indicate any obsolete equipment, however the business is usually not in the business of selling fixed assets for a profit. Therefore dividing a fixed asset turnover ratio by 365 days would not applicable to this type of ratio.
    d. To determine a company's operating efficiency.
       Incorrect—Operating efficiency ratio analyze how efficient the company utilizes assets compared with converting assets into cash.

Review Questions Chapter 3 Economic/Normalized Financial Statements

1. Using the above illustration for sample year 2013, a comparative analysis for the Advanced Products Company, Inc. shows the industry profit margin per RMA to be 44.1%, whereas Advanced shows:
   a. 36.00%
      Incorrect—36% is for 1999.
   b. 37.00%
      Incorrect—37% is for 2011.
   c. 37.33%
      C is Correct—37.33% is for 2013.
   d. 38.24%
      Incorrect—38.24% is for 2012.

2. Using the illustration for year 2013, a comparative analysis for the Advanced Products Company, Inc. RMA shows the median industry accounts receivable turnover ratio to be 11.8 and Advanced accounts receivable turnover ratio to be 9.9.
   a. This indicates industry as a whole is better managing accounts receivable than Advanced.
      A is Correct—The higher turnover ratio of the industry indicates it is better at managing accounts receivable than the Advanced. A higher ratio indicates more efficient credit management or that the company operates on a cash basis.
   b. This indicates Advanced is better at managing accounts receivable than the industry as a whole.
      Incorrect—The lower turnover ratio by itself indicates Advanced is not better at managing accounts receivable than the industry as a whole. A lower ratio indicates inefficient credit management or that the company does not operate on a cash basis.
   c. This indicates that the industry as a whole and Advanced both carefully monitor accounts receivable.
      Incorrect—There is not enough information in the calculated ratios to discover the degree of monitoring by either the industry or any one industry member.
   d. This indicates that the industry as a whole and Advanced do not monitor accounts receivable with enough care, and both need to strive toward 5.0 as the ideal.
      Incorrect—There is not enough information to determine that there is an ideal for the industry.

3. The valuation analyst needs historical performance data in order to:
   a. Decide whether or not the subject company is using the proper taxed based accounting
      Incorrect—Although the historical data may indicate what the valuation analyst believes to be incorrect basis; this is a matter for an auditor or other internal control, not for the valuation analyst.
   b. Check and see whether or not the owner is taking too much in salary
      Incorrect—If, after all fiscal and economic analysis is complete, the valuation analyst believes salary to be an issue important to the reason for the valuation, the valuator may want to adjust salary. If salary is not an issue important to the reason for the valuation, no adjustment will likely be made.
   c. Find whether or not national economic reality may be properly reflected in the current year data
      Incorrect—There would not be enough information in the data itself to judge whether or not it is realistic from a national economic standpoint; other research would have to be done in order to form an opinion on this issue.
   d. Analyze and compare various years in the company history to identify trends, strengths, weaknesses, and look for potential adjustments to normalize if adjustments are necessary and/or deemed appropriate
      D is Correct—The valuation analyst with access to historical financial data is better able to determine trends and to look for potential adjustments to normalize.

4. Advanced Product's accounting shows various items of machinery that were purchased three years ago for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000. Would a balance sheet adjustment be advised?
   a. Yes. The valuation analyst should adjust the balance sheet to fair market value and consider adjustment of depreciation expense on the income statement as well as the related tax affect on both the balance sheet and income statement.
      A is Correct—This would be a typical adjustment for a valuation analyst to make in valuing a company.
   b. No. Valuation analysts do not have control over equipment, and adjusting the balance sheet would negatively skew company value.
      Incorrect—Whether or not the valuation analyst has control is not the issue. In looking at the company and analyzing its value as of the date of valuation, the analyst should consider depreciation and amortization, normalizing both if needed in order to calculate an unbiased value for the company.
   c. Yes. Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory in 1980. This data shows the adjustment was already made by the company.
      Incorrect—Changing how inventory costing is done is not related to net book value of machinery.
   d. No. The company owns two of its three facilities and leases the other. Advanced is not likely to update machinery for a leased facility.
      Incorrect—Leasing of facilities is not related to machinery book value.

5. Net Income can be based on GAAP (Generally Accepted Accounting Principles) or TBA (Tax Basis Accounting), but neither may be economic reality.
   a. This is true because TBA is done to minimize payments to banks and other lending institutions.
      Incorrect—Tax based accounting is to save/minimize payment of taxes.
   b. This is true as GAAP is too specific, and each company is unique. Therefore–even using the same set of accounting practices–no two companies will keep their books in the same exact way.
      Incorrect—GAAP is too general and it is this general form applied to a unique company which causes differences among companies as to how they keep their books.
   c. This is true as corporations (all kinds), public companies, partnerships, sole proprietorships, privately held family businesses, and any varying degrees in between, all have different rules and principles under which they are found. These affect fiscal statements, and the valuation analyst must know what the underlying concept of any given company is as opposed to what it may state in the numbers.
      C is Correct—Individualized companies have different rules, different numbers, and different principles. This creates a difference in economic reality for any given company.
   d. This is true as GAAP accounting is so similar to TBA that the numbers for one company in the same year will be different. Economic reality does not need to be reflected in either GAAP or TBA.
      Incorrect—Actually GAAP and TBA are so different numbers for one company in the same year will be different. TBA is used to minimize tax payments, and this definitely makes a difference in how the numbers are calculated. And neither may reflect economic reality.

6. When a valuation analyst is able to obtain audited GAAP compliance financial statements, most likely, normalized adjustments will not be necessary because of the high level of confidence placed on these issued financial statements.
   a. True
      Incorrect—Audited financial statements provide a very high level of confidence on the financial information. However, the valuator may still have to make normalizing and controlling adjustments for items such as officer's compensation, non–operating income & expense, and excess assets.
   b. False
      B is Correct—Even if financial statements are prepared under GAAP, these statements often present a picture that is different from economic reality.

7. The main objective for adjusting the financial statements of a closely held company is:
   a. To determine if the owner is taking unreasonable compensation
      Incorrect—This may be a type of normalizing adjustment but it is not the main objective.
   b. To adjust the financial statements of a business to more closely reflect its true economic financial position and results of operations on a historical and current basis
      B is Correct—The main objective for adjusting the financial statements of a closely held company is to more closely reflect its true economic financial position and results of operations on a historical and current basis.
   c. To adjust the financial statements to ensure the financial statements are in conformity with Generally Accepted Accounting Principles
      Incorrect—GAAP financial statements may not present a picture of economic reality.
   d. To adjust the financial statements so there is consistency in the financial statements over the time period the valuator is analyzing
      Incorrect—The valuator is trying to depict "a true economic picture" not consistency.

8. Which one of the following is NOT a general category of normalized adjustments?
   a. Removal of excess cash
      Incorrect—Excess cash could be considered a non-operating asset. The valuator may adjust excess cash from the balance sheet but will add this back into the conclusion of value.
   b. Inventory adjustment when inventory is recorded on a FIFO basis
      B is Correct—If inventory is recorded under LIFO an valuator may make a normalized adjustment.
   c. Reasonable compensation for owners
      Incorrect—Adjusting for owners' compensation would be described as a control adjustment. A control adjustment may be made based on the level of value being appraised.
   d. Bad debt adjustment for a significant write off due to an unexpected bankruptcy filing by a major customer
      Incorrect—An adjustment for a significant amount of bad debts would be an adjustment for non-recurring or extraordinary events.

9. Which of the following are considered “control” adjustments?
   a. Officers’ compensation and depreciation adjustments
      Incorrect—An adjustment to officer’s compensation would be considered a control adjustment however an adjustment of depreciation would not be controlling but considered a normalizing adjustment.
   b. Discretionary spending and depreciation adjustments
      Incorrect—An adjustment to discretionary spending would be a control adjustment and an adjustment of depreciation would not be controlling but considered a normalizing adjustment.
   c. Discretionary spending and officers’ compensations
      C is Correct— Adjustments to discretionary spending and officers compensation would be considered control adjustments.
   d. Depreciation adjustments and bad debt adjustments
      Incorrect—Adjustments for depreciation expense and bad debts would be considered normalizing adjustments.

10. A pending lawsuit, unrecorded pension liabilities, and capital gains tax on unrealized appreciation of assets are what type of normalized adjustments?
    a. Non-operating adjustments
       Incorrect—Non operating adjustments would be made for assets recorded on the balance sheet which are not necessary for the normal operations of the business.
    b. Non-reoccurring adjustments
       Incorrect—Examples would include sale of fixed assets and recognizing bad debts.
    c. Contingent liability adjustments
       C is Correct—The purpose of these adjustments is for the valuation analyst to determine if any contingent liabilities exist that are not recorded on the balance sheet.
    d. Timing adjustments
       Incorrect—Examples of timing adjustments include long term contracts and installment sales. The objective is for the valuator to understand revenue and expenses are recorded in the proper periods.

11. The cost to replace an asset under a particular fact situation is known as:
    a. Fair market value
       Incorrect—Fair market is defined as the price property would change hands between a hypothetical willing buyer and willing seller, both not under any compulsion to buy or sell and have the knowledge.
    b. Fair value
       Incorrect—Fair value is mainly a statutory value which can vary from state to state.
    c. Replacement cost
       C is Correct—Replacement cost is the cost to replace an asset under a particular fact situation.
    d. Strategic value
       Incorrect—Strategic value is the value to a particular investor.

12. In 2006, a company purchased a new operating press costing $300,000. The company elected Section 179 depreciation for this piece of equipment. An appropriate normalization adjustment would be:
    a. Do nothing
    Incorrect—When a company depreciates equipment using 179 bonus depreciation a valuator should adjust depreciation expense to accurately reflect depreciation over the assets useful life.
    b. Adjust the income statement, only to add back Section 179 depreciation
    Incorrect—Not only should the valuator adjust the income statement a balance sheet adjustment should be made to reflect the adjusted net book value of the asset.
    c. Adjust the income statement to add back the Section 179 depreciation and adjust the balance sheet to reflect the fair market value of the asset
    C is Correct—The valuator should adjust both the income statement and the balance sheet.
    d. Adjust the balance sheet only to reflect the fair market value of the equipment
    Incorrect—The valuator not only should adjust the balance sheet the income statement should be adjusted to reflect the annual depreciation expense based on the useful life of the asset.

Issues to Consider in Chapter 3–Bonus Question

Item 1 The estimated reserve for non-collectible accounts receivable is $50,000 and is based on approximately 1% of the company's most recent annual gross sales. Both the company and its auditors believe that the reserve is reasonable. However, after reviewing the receivable list, the president of the company estimates that actual bad debts on existing receivables will be only about $20,000.

Note Consider if the President has knowledge that supersedes the company and the auditors' position on the non-collectible accounts. Will this adjustment be self-serving to the President or does it accurately reflect the current financial position?

Item 2 Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory in 1980. Therefore, it is determined that Advanced's actual current inventory is understated by $80,000.

Note Consider an adjustment to inventory for the LIFO reserve. Consider if an adjustment must be made for each year or only the current year.

Item 3 The company owns two of its three facilities and leases the other. Due to a recent refinance proposal, the company obtained an MAI appraisal on both of the properties it owns. The total MAI appraisal for both properties is $250,000 and the current book value for both properties is $125,000.

Note Adjust the property to fair market value. Consider adjustment for deferred taxes on the built-in gains of the property.

Item 4 The company has various items of machinery that were purchased three years earlier for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000.

Note Adjust the balance sheet to fair market value. Consider adjustment of depreciation expense on income statement as well as the related tax effect on the balance sheet and income statement.

Item 5 The company has a negotiable note receivable, received in an arms-length transaction, bearing 12% interest over 5 years. If this note represents a safe loan with minimal risk of non-collection, its value is determined by comparison with similar safe notes. If the going rate for similar safe notes is 18% to 20%, then the face value of the note must be discounted to account for the interest rate differential.

Note Consider reducing the face value of the note to reflect the present value at 12% versus similar safe notes at 18%.

Observation (regarding #5 above):
In the above example the valuation dispute will probably center around one of two points: determination of the going interest rate for other safe loans and determination of the appropriate discount rate. In order to determine a safe rate, consideration should be given to the rates in effect for government securities, prime commercial paper, and corporate bond yields with similar maturity dates. There will probably be no precise comparable, and as such, an acceptable range should be developed. The calculation should be based upon present value factors and not a flat percentage reduction because the note is payable over a future period of time.

Review Questions Chapter 4 Defining and Estimating the Future Benefit Stream

1. Cash flows that are calculated as: net income after tax plus non-cash charges, less applicable capital expenditures, less additions to net working capital to support operations, plus changes in long-term debt from borrowings required for operations, less changes in long-term debt for repayments:
   a. Equals net cash flow to equity
   A is Correct—The valuation analyst should be aware that other definitions may be used which are part the body of knowledge, and should always define how the valuation analyst determined net cash flow to equity.
   b. Equals equity to debt ratio
   Incorrect—The debt to equity ratio is calculated by dividing total debt by total equity.
   c. Equals invested equity
   Incorrect—Return on equity is calculated by dividing net income by ½ of beginning common equity and ending common equity.
   d. Equals operations equity
   Incorrect—If you were calculating the operating margin ratio, you would divide the income from operations by net sales.

2. The formula for net cash flow to invested capital can be calculated as:
   a. Net income before tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
   Incorrect—One must consider net income after tax, i.e., taxes must be paid to properly calculate net cash flow. If taxes are not paid, cash or other equity must be adjusted.
   b. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, plus interest expense (tax-affected)
   B is Correct— The valuation analyst should be aware that other definitions may be used which do fit within the body of knowledge and should always define how the valuation analyst determined net cash flow to invested capital.
   c. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
   Incorrect—One must include interest expense and it should be tax-affected. EBITDA should not be treated as if it were free cash flow.
   d. Net income after tax, plus non-cash charges, plus capital expenditures, plus additions to net working capital for operations, less interest expense (tax-affected)
   Incorrect—Interest expense (tax-affected) should be *added back* in the formula.

3. Bell Landscape Company has the following historical earnings:

Year	Earnings
1	$75,400
2	65,200
3	87,600
4	90,500
5	53,900

Which method of projecting earnings would appear most appropriate to estimate future benefits?

a. Weighted average method
Incorrect—Weighted average method is used when the analyst can see past earnings indicated a pattern likely to recur in the future. This is not the observed pattern in this historical data set.

b. Unweighted average method
B is Correct—Unweighted average method is probably the most appropriate method because no historical pattern or trend exists that would suggest any year or years results are any more indicated than the rest of the historical data.

c. Trend Line—static method
Incorrect—Trend line—static methods best fit data increasing at a steady but declining rate. This is not the observed pattern in this historical data set.

d. Gompertz curve method
Incorrect—Gompertz curves best fit periods of slow growth followed by rapid growth followed by slowdown in growth and a declining growth rate. This is not the observed pattern in this historical data set.

4. Using the data provided above in question 3 for Bell Landscape, estimate the future benefits, using the method you have selected in question 3:

a. $73,340
Incorrect—This answer would be calculated using a weighted average method where the most recent year is given the greatest weight (5), declining by one (1) for each prior year with the oldest year given the least weight (1). The pattern of data does not suggest this to be the best method to use to calculate future benefits.

b. $75,700
Incorrect—This answer is calculated based on an inverse weighted average method, and does not fit the data pattern.

c. $93,150
Incorrect—This is not the amount calculated using an unweighted average method.

d. $74,520
D is Correct—This amount is calculated using an unweighted average method as follows: 75,400 + 65,200 + 87,600 + 90,500 + 53,900 equals $372,600 divided by 5 (the total number of years of data used) equals $74,520.

5. Start-up Jennings Baker Company provided you the following historical data:

Year	Earnings
1	($15,300)
2	32,400
3	89,600

Which method of projecting earnings would appear most appropriate to estimate future benefits?

a. Weighted average method
A is Correct—Weighted average method is typically used when the analyst concludes more recent past earnings/losses are more representative of the expected future results, or the historical data demonstrates a trend (profitability) that is expected to continue in the future. The startup costs in year 1 are not likely to recur, and profitability seems more likely.

b. Unweighted average method
Incorrect—No historical pattern or trend exists in this historical data which would suggest any year or years' results are any more indicated than the rest of the historical data.

c. Trend Line—static method
Incorrect—Trend line—static methods best fit data increasing at a steady but declining rate. This is not the observed pattern in this historical data set.

d. Gompertz curve method
Incorrect—Gompertz curve best fits periods of slow growth followed by rapid growth followed by slowdown in growth and a declining growth rate. This is not the observed pattern in this historical data set.

6. Net cash flow to equity will result in what type of value:

a. Invested capital
Incorrect—Net cash flow to invested capital will result in value of invested capital.

b. Equity
B is Correct—The net cash flow to equity will result in a value of equity capital.

c. Controlling interest
Incorrect—Controlling interest relates to the nature of the ownership interest being valued The value of equity capital can be determined on a controlling or non-controlling basis.

d. Non-controlling (i.e., minority) interest
Incorrect—Non-controlling (i.e., minority) interest relates to the nature of the ownership interest being valued. The value of equity capital can be determined on either a controlling or non-controlling basis.

7. When discounting cash flow to invested capital, the appropriate discount rate is:
   a. Cost of equity
      Incorrect—The appropriate discount rate when discounting cash flow to equity is cost of equity)
   b. Weighted average cost of capital
      B is Correct—When discounting cash flow to invested capital, the appropriate discount rate is the weighted average cost of capital (WACC). As its name implies, WACC blends a company's cost of equity with its cost of debt to arrive at the company's overall cost of capital. WACC adds versatility to the valuation in that it can be developed based on a number of assumptions involving the company's debt in its capital structure. These assumptions can include greater debt, less debt, or debt under different terms.
   c. Capital asset pricing model
      Incorrect—The capital asset pricing model does not consider the cost of debt, which is necessary to estimate the value of invested capital.
   d. Ibbotson build-up method
      Incorrect—This is an appropriate method in determining a discount rate to be used when discounting cash flows to equity

8. Generally, an estimated future benefit stream is based on historical economic income when:
   a. There is a lack of historical information
      Incorrect—Used when historical information is indicative of future benefits, if there is a lack of historical information, estimated future benefits would be based on projected income.
   b. Start up or development stage companies
      Incorrect—If valuing a start up or development stage company future benefits would generally be based on projected income.
   c. The future benefit stream is estimated to be non-linear
      Incorrect—If estimated future benefits are based on historical economic income the future benefit stream is generally estimated to be linear.
   d. The future benefit stream is estimated to be linear
      D is Correct—Estimated future benefits are based on historical income when future benefits are linear.

9. A linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate.
   a. True
      Incorrect—A linear benefit stream is a stream of future benefits that is expected to grow or decline at a constant rate
   b. False
      B is Correct—A non-linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate.

10. Two most commonly used methods to estimate future benefits based on a linear benefit stream are:
    a. Weighted average method and unweighted average method
    A is Correct—Two of the most commonly used methods to estimate future benefits based on a linear benefit stream are weighted average method and unweighted average method.
    b. Weighted average method and projected cash flow method
    Incorrect—The weighted average method is used when the analyst concludes one or more of the historical years are more representative of the future estimated benefits or that a trend or pattern exists and is expected to continue. The projected cash flow method is the most commonly used method to determine future benefits of a non-linear benefit stream
    c. Unweighted average method and projected cash flow method
    Incorrect—An unweighted average method is typically used when the analyst concludes all of the past earnings are representative of the expected future benefits and no existing pattern or trend would suggest that any one year or years' results are more indicative than the rest of the historical data. Projected cash flow would be used when the benefit stream is non-linear.
    d. Projected cash flow method and projected earnings method
    Incorrect—The projected cash flow and projected earnings method are most commonly used methods to determine future benefits of a non-linear benefit stream.

11. Using a weighted average method to determine a future benefit stream, a valuation analyst assigns more weight to the most recent years. This indicates:
    a. The valuation analyst determined the most recent year is the most indicative of future years
    A is Correct—The weighted average of historical economic earnings is most appropriately used for calculating future earnings when there appears to be a general pattern that may be extrapolated into the future.
    b. All of the past earnings are representative of the expected future benefits
    Incorrect—A weighted average method is typically used when the valuation analyst concludes that certain past earnings are more representative.
    c. No existing pattern or trend would suggest that any one year or years is more indicative than the rest of the historical data
    Incorrect—This would be unweighted average method.
    d. There is no apparent trend in the historical earnings
    Incorrect—The weighted average method is used when there appears to be a general pattern.

12. Using the Trend Line Projected Method, growth or data is:
    a. Increasing at a declining rate
    A is Correct— The trend line projected method is used where it is expected that growth is increasing at a declining rate.
    b. Increasing at an increasing rate
    Incorrect—When data is increasing at an increasing rate this is known as a Geometric method.
    c. Increasing at a constant rate
    Incorrect—When data is increasing at a constant rate this is known as the Projected Growth Rate in Earnings Methods
    d. Increasing at an increasingly declining rate
    Incorrect—When data is increasing at an increasingly declining rate this is referred to as logarithmic projection.

13. Projected economic income in constant real dollars is based on real dollars in the first year without regard for inflation.
    a. True
       A is Correct—Project economic income in constant real dollars is based on real dollars in the first year without regard for inflation.
    b. False
       Incorrect—If projected economic income in calculated in nominal dollars, then that would include inflation in the projected income

14. When utilizing projected or forecasted financial information, the adequate number of years to be included in the analysis is:

    a. 5 years for tax valuation per the Internal Revenue Service, 10 years for all other types of valuations
       Incorrect – There are no certain requirements for the number of years included in a forecast or projection for tax valuations or other types of valuations.
    b. A minimum of 10 years for all valuations
       Incorrect – There is no such minimum number of years requirement.
    c. Number of years based on the owner's investment horizon.
       Incorrect – The owner's investment horizon is not relevant as to the valuation based on a projection or forecast.
    d. The number of years until it is assumed the benefit stream becomes linear
       D is correct – The projection or forecast period should be as long as it takes until the benefit stream stabilizes and becomes linear, at which point the valuation analyst can then capitalize the benefit stream to determine the "terminal value."

Chapter 4 Bonus Question Responses:

Calculate the equity value using net cash flows to equity as the benefit stream. Assume a 20% after–tax net cash flow capitalization rate and a 15.58% weighted average cost of capital. Assume the net income (after–tax) is $500,000. Assume the non-cash charges are $250,000 a year, the expected capital expenditures to support the projected operations is $100,000 a year, the working capital necessary to support the projected operations is $50,000 a year, and the annual debt repayments are $250,000. Assume that the annual interest expense (tax effected) is $140,000 and that the debt capital is $3,000,000.

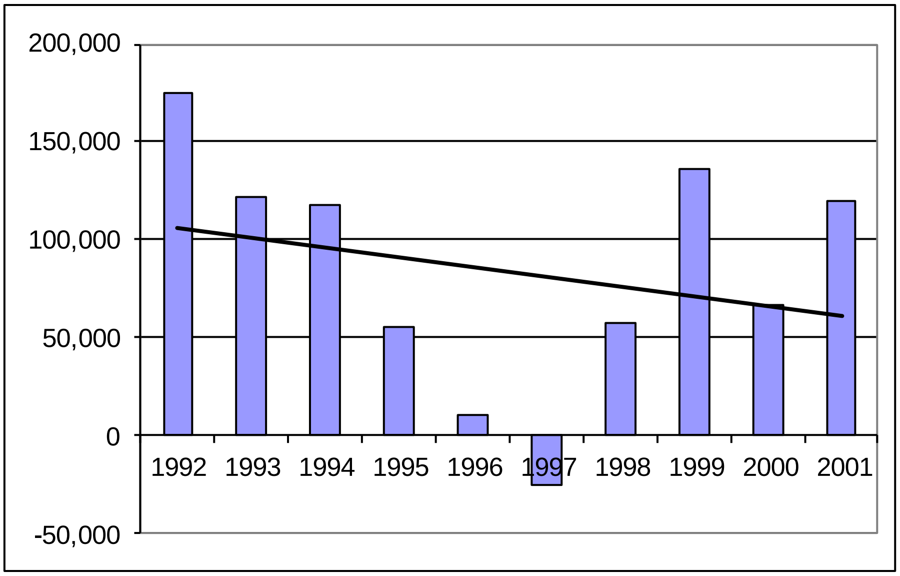
Net income (after-tax)	$ 500,000
Non-cash charges (e.g. depreciation, amortization, deferred revenue/taxes)	250,000
Capital expenditures necessary to support projected operations	(100,000)
Additions to net working capital necessary to support projected operations	(50,000)
Changes in long-term debt for repayments necessary to support projected operations	(250,000)
Net cash flow to equity	350,000
After-tax net cash flow capitalization rate	20%
Equity value	$1,750,000

Assuming the same facts as above, calculate the equity value using the net cash flows to invested capital.

ANSWER:

Net income (after-tax)	$	500,000
Non-cash charges (e.g., depreciation, amortization, deferred revenue, deferred taxes)		250,000
Capital expenditures necessary to support projected operations		(100,000)
Additions to net working capital necessary to support projected operations		(50,000)
Interest expense (net of tax deduction)		140,000
Net cash flow to equity		740,000
After-tax net cash flow capitalization rate		15.58%
Invested capital (rounded)		4,750,000
Debt		(3,000,000)
Equity capital	$	1,750,000

Debt	63.00%
Equity	37.00%
Total	100.00%
Debt - cost of capital (after-tax)	4.17%
Equity - cost of capital (after-tax)	35.00%
Weighted cost of capital	
Debt	2.63%
Equity	12.95%
Total	15.58%



This chart of trend line data (created in Excel) indicates this set of data probably doesn't lend itself well to linear analysis. Given trend linear analysis is inappropriate, how is the above chart useful to the valuation analyst? Or is it useful at all?

The type of data being charted is not identified. That is the first thing a valuation analyst must determine. What is being measured? It may be useful in showing the analyst a trend that might exist, or that something (seasonality) is affecting the numbers, or that there was some kind of change at the company for which the learning curve was very steep.

This unidentified data set also tells a valuation analyst to be certain to title as many of the charts as possible within the chart, so that when it is separated from any report, it is not misleading to another reader or user.

Review Questions Chapter 5 Capitalization/Discount Rates

1. What is a capitalization rate?
   a. The calculated external factor and internal factor multiplied by the investment factor.
      Incorrect—These are three of the factors that must be reviewed as they will influence the capitalization rate.
   b. Divisor (or multiplier) used to convert a defined stream of income to present value.
      B is Correct—The capitalization rate is a divisor or multiplier used to convert a defined stream of income (or benefit stream) determined by the valuation analyst to its present value.
   c. The price/earnings ratio divided by the dividend paying capacity.
      Incorrect—This formula will not yield a capitalization rate, although one may use P/E ratios or dividend ratios in the market method of valuation.
   d. Rate of return used to convert a series of future income amounts to their present value.
      Incorrect—This is not the definition of a capitalization rate.

2. What is a discount rate?
   a. The calculated external factor and internal factor multiplied by the investment factor.
      Incorrect—These are three of the factors that must be reviewed as they will influence the discount rate.
   b. Divisor or multiplier used to convert a defined benefit stream to present value.
      Incorrect—This is the definition of a capitalization rate.
   c. The price/earnings ratio divided by the dividend paying capacity.
      Incorrect—This formula will not yield a discount rate, although one may use PE ratios or dividend ratios in the market method of valuation.
   d. A rate of return used to convert a series of future income amounts to their present value.
      D is Correct—A discount rate is the rate of return used by the valuation analyst to convert a series of future benefit streams to their present value.

3. Earnings for Jasper Company for the last five years are shown below: What are the weighted average historical earnings?

Year	Earnings	Weight
1999	1,230,000	1
2000	1,240,000	2
2001	1,245,000	3
2002	1,230,000	4
2003	1,230,000	5

a. 1,230,000
Incorrect—$1,230,000 is an unweighted average amount
b. 1,234,333
B is Correct—The formula is the total of each earnings amount multiplied by its assigned weight divided by the sum of the weights.
c. 3,703,000
Incorrect—This is triple the average.
d. 7,714,581
Incorrect— This is not the weighted average.

4. Using the weighted average historical earnings from question #3, if the calculated discount rate is 15% and long-term growth is 3%, what is the indicated value of Jasper Company based on a capitalization of single-period earnings method?
a. $ 8,228,900
Incorrect—This figure is obtained by capitalizing 1,234,333 by 15%.
b. $15,429,200
Incorrect—This figure is unchanged and a terminal value represents the value of a company in the terminal year of an earnings forecast.
c. $10,286,100
Incorrect—This amount incorrectly uses the capitalization for next year without increasing the weighted average historical earnings by 3% to represent the estimated future benefit stream.
d. $10,594,700
D is Correct—This amount is calculated by increasing the weighted average historical earnings by the estimated long-term sustainable growth of 3% to determine the estimated future benefit stream for then dividing the amount by the capitalization rate of 12% (discount rate of 15% minus long-term sustainable growth rate of 3%). Another calculation would be to take the capitalization rate for next year of 12% and divide it by one plus the estimated long-term sustainable growth rate (12% / (1+.03) = 11.65%) and using the result to capitalize the weighted average historical earnings of $1,234,333 without adjusting for growth. Both methods will result in the same indicated value..

5. A capitalization rate and a discount rate are essentially the same thing.
a. True
Incorrect—A capitalization rate can be used to determine a value where the anticipated growth in the benefit stream is stable while a discount rate is used to convert a series of future benefit streams to a present value.
b. False
B is Correct—Discount rates are applied to convert a series of future income amounts to present value whereas capitalization rates are applied to a single-period benefit stream to convert to a value.

6. The price earnings ratios for five public companies are: 8.20, 4.60, 5.00, 4.86, and 2.10. The after-tax capitalization rate is:
   a. 16.00%
      Incorrect—This is a generic number used in text examples as a given rate.
   b. 18.08%
      Incorrect—This answer is the result of a higher average and likely due to mathematical errors.
   c. 20.19%
      C is Correct— The formula to determine a capitalization rate from a series of price/earnings ratios is: 1/(sum of P/E ratios / number of P/E ratios). Here the calculation is 1/((8.20 + 4.60 + 5.00 + 4.86 + 2.10)/5) = 20.19%
   d. 24.76%
      Incorrect—This number does not correctly apply the formula but is simply the sum of the P/E ratios themselves.

7. The primary formula for the Capital Asset Pricing Model (CAPM) is:
   a. Expected return = risk-free rate divided by beta multiplied by the expected return on a market portfolio.
      Incorrect—The market portfolio in this definition would be overvalued.
   b. Expected return = risk-free rate multiplied by beta multiplied by the expected return on a market portfolio less the risk-free rate.
      Incorrect—The beta-adjusted market return should be added to the risk-free rate, not multiplied
   c. Expected return = risk-free rate plus beta multiplied by the expected return on a market portfolio less the risk-free rate.
      C is Correct—Some valuation analysts substitute the average pre-tax return on equity for the market portfolio in CAPM. The valuation analyst needs to define which is used and why.
   d. Expected return = beta divided by the risk-free rate multiplied by the expected return on a market portfolio less the risk-free rate.
      Incorrect—Beta is not divided by the risk-free rate

8. To calculate the weighted average cost of capital (WACC):
   a. Calculate the cost of debt plus the cost of equity in proportion to their book values.
      Incorrect—The weights of both the cost of debt and the cost of equity are measured based on fair market value, not book value.
   b. Calculate the weighted average earnings and divide by the ratio of debt to equity.
      Incorrect—To calculate the WACC, the after-tax weighted cost of debt is added to the weighted cost of equity.
   c. Calculate the after-tax weighted cost of debt and add the weighted cost of equity.
      C is Correct—Formula for weighted average cost of capital is cost of capital = after tax weighted cost of debt + weighted cost of equity. The weights of both the debt and equity components are measure at fair market value.
   d. Calculate the interest rate on a mid-range treasury bond and divide by beta.
      Incorrect—Beta is important in many financial calculations, but is not appropriate in calculating debt or equity; the treasury rate may be useful in calculating debt but it does not factor directly into the general calculation for cost of capital.

9. An estimate of a long-term sustainable growth rate should:
   a. Equal inflation plus the real volume growth that can be achieved with additional capital investment
      Incorrect—Growth should include inflation and what the analyst can see as real growth by using only currently invested capital.
   b. Equal inflation less the real volume growth that can be achieved with additional capital investment
      Incorrect—Growth plus inflation must be taken into account in a growth rate used by the valuation analyst.
   c. Equal inflation plus the real volume of growth that can be achieved without additional capital investment
      C is Correct—The theoretical basis for long-term sustainable growth is that it cannot exceed the outlook for inflation plus the outlook for growth in the real gross domestic product (GDP).
   d. None of the above
      Incorrect—A long-term sustainable growth rate can be estimated based on expected inflation and growth in real gross domestic product (GDP)

10. Earnings per share is:
    a. The price of risk less the difference between the expected rate of return on a portfolio and the reasonable rate.
       Incorrect—This is the definition of a market risk premium, not earnings per share.
    b. The price of the dividend divided by the price.
       Incorrect—This is the definition of dividend yield.
    c. The market price per share divided by the book value per share.
       Incorrect—This is the definition of price to book ratio.
    d. The net income less preferred stock dividends divided by the number of common shares outstanding.
       D is Correct—This is the definition of earnings per share (EPS)

11. To convert a pre-tax capitalization rate to after-tax capitalization rate:
    a. Multiply the pre-tax capitalization rate by 1 minus the expected tax rate.
       A is Correct—The formula to convert an after-tax capitalization rate to a pre-tax capitalization rate is to multiply the pre-tax capitalization rate by 1 minus the expected tax rate.
    b. Divide the after-tax capitalization rate by 1 minus the expected tax rate.
       Incorrect—This is the formula to convert an after-tax capitalization rate to a pre-tax capitalization rate.
    c. Multiply the pre-tax capitalization rate by 1 plus the expected tax rate.
       Incorrect—In conversion, subtract the actual tax rate from one.
    d. Divide the after-tax rate by 1 plus the expected tax rate.
       Incorrect—This is not a formula for converting to either an after-tax capitalization or pre-tax capitalization rate.

12. Answer To Practice Exercise

Benefit Stream

Capitalization of Earnings/Cash Flow

Pre-tax earnings (income before taxes)

After-tax earnings (net income)

Net cash flow to invested capital

Net cash flow to equity(current year)

Pre-tax excess earnings

After-tax excess earnings

Discounting Future Cash Flows

Projected cash flows

Discount/Capitalization Rate

Ibbotson Build-Up Approach
+ Risk-free rate
+Equity risk premium
+Size premium
+ Company specific risks
= After-tax net cash flow discount rate
– Long-term sustainable growth rate
= After-tax net cash flow capitalization rate for next year
÷ Adjustment for current year
= After-tax net cash flow capitalization rate for current year
+ Cash to earnings factor
= After-tax net income capitalization rate for current year
+ Intangible earnings factor
= After-tax intangible capitalization rate for the current year
Tax effect:
= Pre-tax net income capitalization rate for current year
= Pre-tax intangible capitalization rate for the current year

Weighted Average Cost of Capital (WACC)
+ Weighted Cost of Debt
+ Weighted Cost of Equity
= WACC

13. General expectations of the particular business being valued, the size of the business being valued, and the nature of the business being valued are examples of:
   a. External factors that may influence the capitalization or discount rate
   Incorrect—External factors include; expectations of the general economy, existing conditions of the economy, expectations of the industry and existing conditions of the particular industry.
   b. Internal factors that may influence the capitalization or discount rate
   B is Correct—General expectations, size, and nature of the business being valued are internal factors that may influence the capitalization or discount rate.
   c. Investment factors that may influence the capitalization or discount rate
   Incorrect—Investment factors include risks associated with the investment itself, expectations as to the capital appreciation and liquidity of the investment and level of the expected management burden of the investment
   d. Marketability factors which affect the capitalization or discount rate
   Incorrect—Marketability relates to converting and investment into cash.

14. It is generally accepted that the capitalization rate is equivalent to the discount rate less:
    a. Short-term growth rate
    Incorrect—The short-term growth rate does not adequately consider the long-term sustainable growth rate necessary for accurate valuation calculations.
    b. Long-term sustainable growth rate
    B is Correct—The discount rate less the long term sustainable growth rate equals the capitalization rate.
    c. Equity risk premium
    Incorrect—The equity risk premium is a factor used to determine a discount rate and unrelated to the company specific growth rate.
    d. Risk free rate
    Incorrect—The risk free rate is generally the long-term governmental bond rate and should not be confused with the growth rate.

15. Which variable below is NOT included in the Ibbotson Build-Up Method?
    a. Risk free rate of return
    Incorrect—The risk free rate is the starting point for the Build-Up Method.
    b. Beta
    B is Correct—Beta is a component of the capital asset pricing model and is not included in the Ibbotson Build-up Method.
    c. Size premium
    Incorrect—Size premiums are included in the Build-Up Method, generally after the equity risk premium.
    d. Specific company risk
    Incorrect—The factors included in the Ibbotson Build-Up formula include the risk free rate of return, the equity risk premium, size premium, industry risk premium and company specific risk.

16. Which component of the Ibbotson Build-Up Method relates to the "unsystematic risk" associated with a particular business entity?
    a. Risk free rate
    Incorrect—The risk free rate relates to maturity risk. Maturity risk is the risk that the value may fluctuate due to changes in interest rates.
    b. Equity risk premium
    Incorrect—The equity risk premium relates to systematic risk. Systematic risk is uncertainty of future returns based on movements of the market.
    c. Beta
    Incorrect—Beta is not a component of the Ibbotson Build-Up Method
    d. Specific company risk premium
    D is Correct—The specific company risk premium relates to the unsystematic risk of a particular business entity.

17. Which of the following is not an assumption of the Capital Asset Pricing Model (CAPM)?
    a. Investors are risk averse
       Incorrect—The Capital Asset Pricing Model assumes all investors are risk averse.
    b. There are no taxes and no transactional costs
       Incorrect—The Capital Asset Pricing Model assumes there are no taxes or transactional costs.
    c. The rate received from lending money is the same as the cost of borrowing
       Incorrect—The Capital Asset Pricing Model assumes the rate received from lending money is the same as the cost of borrowing.
    d. All investors do not have identical investment holding periods
       D is Correct—The Capital Asset Pricing Model assumes all investors have identical holding periods.

18. Using the Modified Capital Asset Pricing Model a valuation analyst determines beta = 1.08, this means:
    a. The subject company is no more or no less volatile than the industry
       Incorrect—This would represent a beta of 1.0
    b. The subject company is less volatile than the industry
       Incorrect—This would be a beta less than 1.0
    c. The subject company is more volatile than the industry
       C is Correct—When beta is 1.08 this is representative that the company is more volatile or more risky than the overall industry.
    d. The subject company has no relative market risk
       Incorrect—This would mean the company has a zero beta which is equivalent to the risk free rate.

19. WACC can add versatility to the valuation, in that a valuation analyst could change the capital structure of an entity when valuing a non-controlling (i.e., minority) interest.
    a. True
       Incorrect—When valuing a non-controlling interest the valuator cannot change the capital structure of an entity.
    b. False
       B is Correct—A non-controlling (i.e.,minority) interest, by its nature, would not have the ability to change the capital structure of an entity.

20. If a valuation analyst uses the weighted average cost of capital (WACC) and is valuing only the equity of the company, the valuation analyst would:
    a. Capitalize equity and ignore the debt
       Incorrect—This method would yield an incorrect value as the debt would be included in the WACC, but not the benefit stream.
    b. Capitalize invested capital then subtract existing debt
       B is Correct—Using the WACC method and valuing only the equity of the company the valuation analyst must calculate the value of the company's entire capital structure and then subtract the debt.
    c. Determine the present value of the debt only
       Incorrect—Using the WACC the valuation analyst must determine the present value of invested capital.
    d. Capitalize the cash flow net of debt
       Incorrect—If valuing the equity using the WACC, the valuation analyst should use cash flow to invested capital and value the entire capital structure and then subtract the company's debt.

21. The criteria for companies included in the measurement data used to determine the equity risk premiums found in the Duff & Phelps Risk Premium report would include all EXCEPT:
    a. Must be publicly traded for 5 years
    Incorrect—Companies included in the measurement data must meet certain criteria including must be publicly traded for 5 years.
    b. Must have sales greater than $1 million in any of the previous 5 years
    Incorrect—This is to ensure companies in bankruptcy or liquidation are not used for analysis. The Risk Premium report has a separate “high financial risk” portfolio for those companies.
    c. Cannot be a financial service company
    Incorrect—Because financial service companies are excluded from the measurement data
    d. EBITDA can either be negative or positive based on the most recent 5 year average
    D is Correct—Companies must have a positive 5 year average EBITDA for the previous five fiscal years

22. The Duff & Phelps equity risk premium measurements are sorted into ___________________ measures of size.
    a. five
    Incorrect—This is the number of criteria in the “high financial risk” category.
    b. eight
    B is Correct—The Duff & Phelps equity risk premium measurement data is sorted into eight (8) measurements of size.
    c. ten
    Incorrect—This is the number of size premium deciles in the Ibbotson data.
    d. twelve
    Incorrect—This is an incorrect number as there are only eight criteria.

23. What component of cost of capital using a build-up method would the Duff & Phelps data help you determine:
    a. Company specific risk
    Incorrect—This factor is used to estimate the unsystematic risk of the target company.
    b. Equity risk premium
    B is Correct—The Duff & Phelps data was developed to measure the equity risk premium in determining the cost of capital.
    c. Risk free rate
    Incorrect—The risk free rate is generally the long-term governmental bond rate.
    d. Beta
    Incorrect—Beta is used in the Modified CAPM, not the Build-Up Method.

24. What are the four general risk factor categories of the risk rate component model (RRCM)?
    a. Competition, financial strength, profitability and stability of earnings, and management ability and depth
    A is Correct—The primary factors of the RRCM include competition, financial strength, management ability and depth, and profitability and stability of earnings.
    b. Competition, national economic effects, local economic effects, and depth of management
    Incorrect—National and local economic effects would not be considered primary factors of the RRCM.
    c. Local economic effects, financial strength, market stability, and profitability and stability of earnings
    Incorrect—Local economic effects and market stability are not considered primary factors of the RRCM.
    d. National and local economic effects, financial strength, management ability, and competition
    Incorrect—National and local economic effects would not be considered primary factors of the RRCM.

Review Questions Chapter 6 Commonly Used Methods of Valuation

1. The three general approaches that need to be considered by the valuation analyst in each valuation engagement include:
    a. Income, Asset Based, and Excess Earnings
    Incorrect— Excess Earnings is a method, not an approach to valuation.
    b. Market, Treasury, and Income
    Incorrect— Treasury is a method, not an approach to valuation.
    c. Income, Going Concern, and Market
    Incorrect— Going Concern refers to a premise of value, not an approach to valuation.
    d. Income, Asset Based, and Market
    D is Correct— Income, Asset Based and Market refer to the three general approaches to valuation which a valuation analyst must consider in each valuation engagement.

2. As a component of the capitalization of future earnings or cash flows method, the future earnings or cash flows as estimated by the valuation analyst:
   a. Are always calculated on an after-tax basis
   Incorrect—The future earnings or cash flows may be calculated on a pre-tax or after-tax basis (be careful of the word "always" in business valuation). It is extremely important, however, that the valuation analyst ensure that the basis of the benefit stream, either pre-tax or after-tax, match the basis of the capitalization rate.
   b. Exclude any income or expense items generated from non-operating assets and liabilities
   B is Correct—As their name implies, non-operating assets and liabilities do not contribute to the operations of a business, and any income or expense items related to them should not be included in the benefit stream in the capitalization of earnings/cash flows method. The value of any non-operating assets or liabilities are added back to the calculated value of the operating business to determine the overall.
   c. Are based only on the historical results of operations in the fiscal year closest to the valuation date
   Incorrect—Any number of fiscal years, weighted or unweighted, can be used to estimate the future earnings or cash flows in this method.
   d. Exclude any compensation to the owner(s) of the business
   Incorrect—Compensation to the owner(s) of the business should be included in the estimation of future earnings or cash flows. However, based on the facts and circumstances of the particular valuation engagement, the compensation amounts may be adjusted as a normalizing adjustment by the valuation analyst.

3. If the capitalization of future earnings/cash flows method is used in a valuation engagement for U.S. Gift Tax purposes, the valuation analyst is required to include how many historical years in the estimate of the future earnings/cash flows?
   a. At least three years, based on Treasury Regulations
   Incorrect—The Treasury Regulations do not specify a particular number of historical years which are required to be included in the estimate of future earnings/cash flows.
   b. As many years as the valuation analyst deems appropriate, based on his/her professional judgment
   B is Correct—The valuation analyst, in their financial analysis, will need to use his/her professional judgment in the determination of how many historical years are relevant in the calculation of the estimate of future earnings/cash flows.
   c. Five years, based on requirements of the Internal Revenue Service.
   Incorrect—The Internal Revenue Service does not specify a particular number of historical years which are required to be included in the estimate of future earnings/cash flows.
   d. Two to five years, based on Treasury Regulations.
   Incorrect— There is no specific requirement noted in the Treasury Regulations.

4. In the discounted earnings/cash flows method, the Gordon Growth Model is used:
   a. To determine the period of stabilized earnings/cash flows of the company
      Incorrect—The period of stabilized earnings/cash flows is based on assumptions developed for the projection period, not through use of the Gordon Growth Model, which is one possible method used to calculate the "terminal value" in the discounted earnings/cash flows method.
   b. To determine the number of periods (years) needed in the projection period
      Incorrect—The number of periods (years) needed in the projection period are based on assumptions used by management as to how long it will take the company to achieve a stabilized level of operations. The Gordon Growth Model is one possible method used to calculate the "terminal value" in the discounted earnings/cash flows method. In closely held businesses, the owner and owner's family may be the only stockholder(s) and may have approved this debt.
   c. To calculate the "terminal value" of the company
      C is Correct— The Gordon Growth Model is one possible method used to calculate the "terminal value" in the discounted earnings/cash flows method.
   d. To calculate the present value factor based on an assumed rate of return
      Incorrect—The present value factors are calculated based on the developed discount rate, not by the Gordon Growth Model, which is one possible method used to calculate the "terminal value" in the discounted earnings/cash flows method.

5. To find useful and relevant comparable guideline publicly traded companies to use in the market approach is:
   a. Relatively easy because numerous comparable guideline publicly traded companies exist for the privately held businesses that are the subject of the valuation analysts valuation engagements
      Incorrect—There are relatively few, if any, guideline publicly traded companies that are comparable to the privately held companies that are the subject of the typical valuation engagement.
   b. Relatively easy because finding comparable guideline publicly traded companies is quick and inexpensive as the information is readily available from public sources
      Incorrect—Finding comparable guideline publicly traded companies is a time consuming and costly approach. The valuation analyst must perform significant financial analysis of the subject company and each potential comparable company.
   c. Relatively difficult because the methodology relies on explicit financial forecasts which are not readily available for the comparable companies
      Incorrect—Although the market approach requires significant financial and operational analysis to determine the comparable companies, it does not rely on explicit financial forecasts but uses relatively simple financial ratios in order to determine a value.
   d. Relatively difficult because company size differential, management depth, product and services diversity and access to debt capital will seldom match the privately held company being valued
      D is Correct—These reasons and others require the valuation analyst to understand, reconcile, and adjust for any perceived differences and similarities between the guideline comparable publicly traded companies and the company being valued.

6. The primary methods used to calculate the value of privately held business interests in the income approach are:
   a. Capitalization of Earnings/ Cash Flows Method and Excess Earnings/Treasury Method
      Incorrect—The Excess Earnings methods are hybrid methods, containing elements of both the Income and Asset Approaches.
   b. Excess Earnings/Treasury Method and Discounted Earnings/Cash Flows Method
      Incorrect— The only income approach method noted in this option is the Discounted Earnings/Cash Flows method.
   c. Capitalization of Earnings/Cash Flows Method and Discounted Earnings/Cash Flows Method.
      C is Correct—These are the two primary methods within the income approach.
   d. Discounted Earnings/Cash Flows Method and Price/EBITDA Method
      Incorrect—The Price/EBITDA Method is a market approach, not an income approach.

7. According to Russel L. Parr in *Investing in Intangible Assets*, there are ten essential characteristics of an intangible asset. One such essential characteristic is:
   a. To provide an economic advantage in the form of lower manufacturing or operating costs such as substituting high cost high quality materials for low cost materials enabling a higher quality product
      Incorrect—Actually the opposite would be true – enabling the use of low cost materials to maintain a product of equal quality – would be an intangible asset.
   b. To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing the amount of labor required to manufacture, inspect, package or account for a product
      B is Correct—This is one of the ten essential characteristics of an intangible asset per Parr's *Investing in Intangible Assets*.
   c. To provide an economic advantage in the form of lower manufacturing or operating costs such as lowering high manufacturing speeds by reducing fuel or electric power requirements
      Incorrect—The opposite is correct—producing higher manufacturing speeds and still being able to reduce fuel or electric power requirements—would be what is needed.
   d. To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing shipping costs by eliminating manufacturing environmental hazards
      Incorrect—The two issues—shipping a product and an environmental hazard created by manufacturing – do not directly relate.

8. The Financial Accounting Standards Board (FASB) has issued Accounting Standards Codifications that address valuation considerations for goodwill and other intangible assets. Which of the following is correct?
   a. ASC 830 did not affect valuations based on arms-length bargaining.
      Incorrect—ASC 830 deals with foreign currency translation and not valuation issues.
   b. ASC 59-60 does affect valuations, and the valuation analyst must take care to follow the eight factors outlined in ASC 59-60.
      Incorrect—There is no ASC 59-60. The answer is confusing the ASC with Revenue Ruling 59-60 which is often quoted as the basis for valuing a business.
   c. ASC 66-49 outlined procedures to all types of non-cash property for which an appraisal is required for gifting and/or charitable contribution.
      Incorrect—There is no ASC 66-49. The answer is confusing the ASC with Revenue Ruling 66-49 which outlines procedures for all types of non-cash property being gifted and/or charitably donated.
   d. ASC 350 addresses how intangible assets acquired with a group of assets (but not those required in a business combination) should be accounted for upon their acquisition.
      D is Correct—ASC 350 discusses accounting for intangible assets outside a business combination, and its oft-stated companion ASC 805 discusses accounting for intangible assets in a business combination.

9. When valuing the stock of a real estate holding company, most likely the valuator will give the greatest weight to which method?
   a. Capitalization of earnings method
      Incorrect—When valuing a real estate holding company, the value of the stock is most closely related to the underlying assets owned by the company and not the earnings generated from the asset. Therefore an asset approach would be most appropriate.
   b. Book value method
      Incorrect—The book value method is based on the company's book value and does not take into account fair market value as of the valuation date.
   c. Adjusted net assets method
      C is Correct—The Adjusted Net Assets Method is a sound method for estimating the value of a non-operating business such as a real estate holding company
   d. Rule of thumb
      Incorrect—Rules of thumb are not valid valuation methods and should only be used as a sanity check.

10. Using the adjusted net asset method, the valuation analyst only values the tangible assets of the company.
   a. True
      Incorrect—If only tangible assets are used, there will likely be significant differences between the other methods (income and market) due to the missing identifiable intangible asset values.
   b. False
      B is Correct—Both tangible and identifiable intangible assets are valued in determining total adjusted net assets.

11. The adjusted net assets method generally sets a ______________ for determining total entity value.
    a. floor value
       A is Correct—The adjusted net assets method generally sets a floor or the minimum value for determining the total entity value.
    b. high value
       Incorrect—The adjusted net assets method generally sets a floor value or minimum value an owner with a controlling interest would sell their ownership interest for.
    c. forced liquidation value
       Incorrect—In a forced liquidation a shareholder may not be able to obtain the fair market value of the underlying assets.
    d. investment value
       Incorrect—Investment value represents the value to a particular investor.

12. Which one of the following adjustments would be a normalized adjustment to the balance sheet in the adjusted net assets method?
    a. Convert inventory from FIFO to LIFO
       Incorrect—Inventory should be valued on a FIFO basis; the carrying cost of inventory on the balance sheet should be representative of the most recent prices to acquire the inventory.
    b. Remove excess cash
       B is Correct—If the valuator identifies excess cash, the excess cash would be considered a non operating asset and removed from a normalized balance sheet.
    c. Adjust owner's compensation
       Incorrect—An adjustment to owner's compensation would be an appropriate adjustment on the income statement not the balance sheet.
    d. Remove expenses related to fire damage of a Company's manufacturing plant
       Incorrect—An adjustment for expenses due to a fire would be adjusted on the income statement.

13. Which method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value?
    a. Capitalization of earnings
       Incorrect—The capitalization of earnings is determined based on a single earning stream and divided by the discount rate less a long term growth rate.
    b. Discounted cash flows
       B is Correct—The Discounted cash flow method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value.
    c. Excess earnings
       Incorrect—The excess earnings method is a formula method that combines both an income and asset approach.
    d. Adjusted net assets method
       Incorrect—The adjusted book value method is based on the fair market value of the company's net assets.

14. The mid period method of discounting should be used when the equity holder:
    a. Has access to cash flows at the end of the year (or period)
    Incorrect—If the equity holder only has access to the cash flows at the end of the year, then the valuator should use an end of period discount rate.
    b. Has access to cash flows throughout the year (or period)
    B is Correct—The mid period discounting method should be used when the equity holder has access to the cash flow throughout the year to receive dividends
    c. Does not have access to any cash flows
    Incorrect—The mid period discounting method should be used when the equity holder has the ability to receive cash flows throughout the year, when the company does not generate any cash flows this method would not be appropriate.
    d. A and B
    Incorrect—This answer cannot be correct, as the items described in A and B cannot occur at the same time.

15. Advantages of the market approach include:
    a. It uses actual data, it is relatively simple to apply, and it is inexpensive to determine.
    Incorrect—The market approach is a costly approach, when done correctly, the analyst must perform significant financial analysis on the subject company.
    b. It uses actual data, it is inexpensive to determine, the data obtain via transaction databases are very reliable.
    Incorrect—The market approach is costly to implement when done correctly and the reliability of transactional data is questionable.
    c. It uses actual data, it is relatively simple to apply, and it does not rely on explicit forecasts.
    C is Correct—The market approach uses actual data for comparison purposes, it can be relatively simple to apply and does not rely on explicit forecasts.
    d. It is user friendly, relatively inexpensive to determine, and simple to apply.
    Incorrect—In order to identify comparable companies, verify comparability, and identify the underlying assumptions built into the pricing model, the market approach is often very time consuming and costly.

16. Which two private company transactional databases cover relatively small companies?
    a. IBA Market Database and Done Deals
    Incorrect—The BIZCOMPS database covers transactions of relatively small companies, however, the DoneDeals database includes deal prices ranging from $1 million to $1 billion.
    b. BIZCOMPS and IBA Market Database
    B is Correct—The BIZCOMPS and IBA databases cover transactions of relatively small companies.
    c. IBA Market Database and Mergerstat
    Incorrect—The IBA database covers transactions of relatively small companies, however, Mergerstat data generally include transactions where one of the companies was publicly traded.
    d. Mergerstat and BIZCOMPS
    Incorrect—The BIZCOMPS database cover transactions of relatively small companies, however, Mergerstat data generally include transactions where one of the companies was publicly traded.

17. Using the market approach, "price" should be matched to the appropriate parameter based on which providers of capital in the numerator will be paid with the monies given in the denominator. Market value of invested capital (MVIC) is usually the numerator that is paired with _____________ in the denominator.
    a. EBITDA
       A is Correct—Any denominators that exclude interest should usually be matched with a corresponding numerator of invested capital.
    b. pretax income
       Incorrect—Market value of equity as the numerator would be paired with pretax income.
    c. net income
       Incorrect—Market value of equity as the numerator would be paired with net income.
    d. book value of equity
       Incorrect—Market value of equity as the numerator would be paired with book value of equity.

18. Which method combines the income and asset based approaches to arrive at a value of a closely held business?
    a. Adjusted net assets value method
       Incorrect—This is an asset based approach.
    b. Discounted cash flows method
       Incorrect—This is an income based approach.
    c. Guideline public companies method
       Incorrect—This is a market based approach.
    d. Excess earnings method
       D is Correct—The excess earnings method incorporates elements of both the income and asset approaches to arrive at the value of a privately held company.

19. A "pass-through" entity is one which:
    a. Passes the value of the entity to the owners in a taxable transaction
       Incorrect—A pass-through entity is one which pays no entity-level income taxes but passes on any income or loss to the owners.
    b. Pays no entity-level income taxes, but passes through any income or losses to the owners of the entity
       B is Correct—This is a proper definition of a pass-through entity.
    c. Calculates its entity-level tax liability and passes it through to the owners of the entity
       Incorrect—A pass-through entity does not incur any tax liability itself.
    d. Pays the individual taxes of the owners as a pass through item
       Incorrect—Although many pass-through entities may make distributions of cash to its owners to satisfy any individual tax liability they may incur as owners of the entity, the payment of the distribution is often discretionary and the entity does not pay the individual taxes of he owners.

20. Which model for valuing a minority interest in a pass-through entity assumes 100% of the company's earnings is being distributed?
    a. Mercer
       Incorrect—Mercer concludes that the amount of distributions causes no differences in value.
    b. Grabowski
       Incorrect—Although the Grabowski model assumes that 100% of free cash flow is available for distributions, it does not assume that 100% of the free cash flow will actually be distributed and allows for consideration of appropriate discounts for lack of control and lack of marketability to the extent that such amounts will not be distributed.
    c. Van Vleet
       C is Correct—This model assumes that the subject S Corporation is distributing 100% of its earnings and if this is not the case then any appropriate discount for lack of marketability should be adjusted.
    d. Treharne
       Incorrect—Treharne's model allows for varying levels of distributions from no distributions to 100% distribution.

21. The S election allows a shareholder to avoid which individual level tax?
    a. Capital gain tax
       Incorrect—Both the S and C corporations will pay capital gain tax.
    b. Income tax
       Incorrect—A Corporation will pay income taxes at corporate rates and the owners of an S corporation will pay income taxes at the individual's effective income tax rate.
    c. Dividend tax
       C is Correct—The S election allows a shareholder to avoid the dividend tax.
    d. Foreign tax
       Incorrect—A US S Corporation which conducts business in a foreign country would be subject to income taxes of that country and neither the shareholder nor the corporation would be able to avoid this tax. However, they may receive a tax credit for income taxes paid in a foreign country.

22. There are four recognized models for valuing a minority interest in a pass-through entity. Which of the following statements is incorrect?
    a. All four models recognize distributions impact value
       Incorrect—All four models recognize distributions impact value.
    b. All four models recognize there is potential value in retained net income
       Incorrect—All four models recognize there is potential value in retained net income.
    c. All four models assume the same holding period
       C is Correct—All four models recognize a different holding period. Treharne's model assumes the interest is held into perpetuity, Van Vleet assumes the ownership interest can be liquidates at the option of the shareholder, Mercer assumes a selected holding period and Grabowski considers two holding periods.
    d. All four models consider the dividend tax on C corporation dividends
       Incorrect—All four models consider the dividend tax on C Corporation dividends.

Chapter 6 Bonus Question Reponses

1. The **Excess Earnings/Treasury Method** presumes that the value of a business is the sum of the values of its adjusted net assets and intangible assets, using what is considered to be a "reasonable" return on the adjusted net assets. List the steps used in the method:
   a. Determine the estimated future earnings of the company. Usually this is the historical economic unweighted or weighted average earnings over the last five years, adjusted for any non-recurring items.
   b. Determine the unweighted or weighted average of the GAAP (or tax basis) net assets. This calculation should exclude goodwill or other intangible assets, whose value is also to be estimated by this method. The analyst uses GAAP assets in this step in order to ensure as much comparability with industry data as possible, from which a reasonable rate of return will be obtained in Step #3.
   c. Select a reasonable rate of return to apply to the GAAP net assets whose value was determined in Step #2. The most appropriate rate of return is the average return on equity (unweighted or weighted) for comparable companies, or as determined from industry averages.
   d. Multiply the value of the GAAP net tangible assets of the business, as determined in Step #2, by the rate of return determined in Step #3. The product is that portion of total earnings of the business attributable to a reasonable return on the weighted average or unweighted average net adjusted assets.
   e. The earnings determined in Step #4 are then subtracted from the total earnings determined in Step #1. The difference is the "excess" earnings that is attributable to the intangible assets being valued by this method.
   f. Select a capitalization rate which corresponds to an appropriate rate for a safe return, adjusting it accordingly to reflect the perceived level of risk associated with the company.
   g. The amount of excess earnings determined in Step #5 is then divided by the capitalization rate determined in Step #6. The amount thus derived is the estimated total value of intangible assets.
   h. Determine the current adjusted net assets at fair market value, utilizing the FMV adjusted net assets method. This determination excludes goodwill and all other intangible assets.
   i. The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step #7) to the adjusted net tangible assets (determined in Step #8).

2. List the steps to be used in **Excess Earnings/Reasonable Rate Method**:
   a. Determine the estimated future earnings of the company.
   b. Determine the current adjusted net assets at fair market value, utilizing the FMV adjusted net assets method. This determination must exclude goodwill and other intangible assets.
   c. Select a reasonable rate of return to apply to adjusted net assets whose value was determined in Step #2. The rate chosen should correspond to the relative liquidity and risk of the underlying assets which it is being applied to.
   d. Multiply the value of the adjusted net tangible assets of the business determined in Step #2 by the rate of return determined in Step #3. The product is the portion of total earnings attributable to a return on adjusted net assets. Adjusted net assets, once again, exclude intangible assets of any kind.
   e. The earnings determined in Step #4 are then subtracted from the total earnings determined in Step #1. The difference is the "excess" earnings considered to be attributable to the intangible assets being valued by this method.

3. Geri Co has a 10-year history of weighted average profits of $900,000 and a weighted average dividend paid of 3.5% of earnings. Comparable companies indicate a weighted average yield of 6.2%.

   1st - Calculate the value under the **dividend payout** method:

   Earnings: 900,000
   Dividend amount: 900000 X 3.5% = 31500
   Weighted average yield of comparables: 6.2%
   Dividend payout value: 31500 ÷ 6.2% = 508,065.

   2nd - Calculate if the weighted average dividend payout was:

   45% = 900000 X 45% = 40500 ÷ 6.2% = 6,532,258
   30% = 900000 X 30% = 270,000 ÷ 6.2% = 4,354,839
   50% = 900000 X 50% = 450000 ÷ 6.2% = 7,258,065

   QUESTION: What issues do you see using this method?

   a. Family owned businesses often pay out the bulk of their profits to family members in various ways. These are usually termed dividends by many courts.
   b. Would a buyer pay that much for this company? Use a justification of purchase method to document your opinion.
   c. Differences in capital structure between this company and public comparable companies make it difficult to truly compare dividend payout potential.

4. The steps used when valuing a company using the **discounted earnings** method are:
   a. Determine projected annual estimated earnings of the business for an appropriate forecast period (generally three to five years into the future).
   b. Estimate a long term (perpetual) growth rate for earnings for the period beginning after the forecast period.
   c. Determine an appropriate discount rate.
   d. Calculate the present values of the projected annual earnings using the discount rate. Next, calculate a terminal value using the cap rate (discount rate minus the perpetual growth rate), then use the discount rate to determine the present value of the terminal value.
   e. Sum the present values determined above.

Review Questions Chapter 7 Valuation Discounts and Premiums

1. Select the reason(s) why a discount for lack of marketability (DLOM) for a controlling interest, even one that is 100%, may be applicable.
   a. Uncertain time horizon to complete the offering or sale
   Incorrect—This is one of the correct options available.
   b. Cost to prepare for and execute the offering or sale
   Incorrect— Although this is a correct option, there are two correct options available.
   c. The eventual sale price is finalized
   Incorrect—The eventual sale price for a controlling (or non-controlling) interest is never certain until the transaction actually takes place.
   d. Market conditions may require a quick sale
   D is Correct—Both option "a" and "b" are valid reasons why a DLOM is appropriate for a controlling interest.

2. What circumstances permit the additive application of the DLOC and DLOM?
   a. There are no circumstances permitting additive application of discounts
   A is Correct—When more than one discount is applicable, they should be taken individually in successive order—generally the DLOC first and then the DLOM.
   b. When the DLOM is applied prior to the DLOC
   Incorrect— The order in which the discounts are applied is not the issue, although it is more theoretically correct to apply the DLOC first as the DLOM relates directly to the non-controlling interest that is the subject of the valuation.
   c. When the DLOC is applied prior to the DLOM
   Incorrect—The order in which the discounts are applied is not the issue. The issue is whether or not one should total the discounts being applied and take one total discount.
   d. All circumstances require the addition of all applicable discounts
   Incorrect—While it is true that Courts often apply only one discount, how the court arrives at the final number is a matter of law judgment and not valuation judgment. Valuation discounts are to be taken successively but not additively.

3. Which of the following best describes the concept of marketability?
   a. How much one will be paid for a bundle of rights
   Incorrect—The amount of payment is not the issue in marketability.
   b. The best listing price to get the greatest number of buyers
   Incorrect—Listing can be done at any time and quite easily. Listing a property for sale is not the issue in marketability.
   c. How quickly an interest can be sold in terms of cash
   C is Correct—The speed of sale is the primary issue in marketability.
   d. Having control of the assets of a business
   Incorrect—Asset control may affect how cash might be paid out, but this is not the issue in marketability.

4. The DLOM and DLOC show a relationship in valuations that:
   a. Indicate it is more difficult to sell a non-controlling (i.e., minority) interest in any privately-held business than to sell a controlling interest in that same business
   A is Correct—A number of studies indicate that it is more difficult to sell a non-controlling interest in a privately-held entity than a controlling interest.
   b. The greater the DLOC, the greater the DLOM
   Incorrect—There is no empirical data that supports this relationship.
   c. A DLOM is only available for a non-controlling interest, which is also subject to a DLOC
   Incorrect—Controlling interests can also be subject to a DLOM.
   d. Indicate it is harder to sell a controlling interest in any business than to sell a non-controlling (i.e., minority) interest in that same business
   Incorrect— A number of studies indicate that the opposite is true, it is more difficult to sell a non-controlling interest in a privately-held entity than a controlling interest.

5. It would be appropriate for the valuation analyst to use the restricted stock studies DLOM average of 35% in the valuation of a non-controlling (i.e., minority) interest.
   a. Yes. The studies were done by well-known entities, including the SEC, and, as such, can be trusted by the valuation analyst and report receiver to be accurate.
   Incorrect—A one-style discount is not applicable to all companies or all situations. Each situation is unique and must be looked at in and of itself. Trust in the studies is not the issue.
   b. No. Not all the studies are published, and, therefore, those numbers must be deleted from what the valuation analyst uses.
   Incorrect—Even though some studies are not published, this does not in and of itself determine what discount a valuation analyst should use.
   c. Yes. The studies are updated periodically, so the average is current and applicable to today's valuations.
   Incorrect—The issue is not whether the studies are new or old.
   d. No, the average rate of 35% may be used as a starting point for the valuation analyst.
   D is Correct—The valuator must take additional steps, such as application of current case law, such as *Mandelbaum*, and other studies to determine a reasonable discount.

6. The formula used to generate an implied minority interest discount from control premium data (such as found in the *Mergerstat Review*) is:
   a. 1 minus ((1) divided by (1 minus Control Premium))
   Incorrect—The control premium is not to be subtracted.
   b. 1 plus ((1) divided by (1 plus the control premium))
   Incorrect—The second part of the calculation relating to control premium is not added to 1.0.
   c. 1 minus ((1) multiplied by (1 plus the control premium))
   Incorrect—The control premium calculation is not multiplied by 1.
   d. 1 minus ((1) divided by (1 plus the control premium))
   D is Correct—Thus if the control premium is 44.70% the implied minority interest discount is calculated to be 30.89%.

9. In a valuation in which the valuation analyst applies both a marketability discount and a discount for lack of control, the application of the discounts is additive not multiplicative.
   a. True
      Incorrect—When both a discount for lack of control and a discount for lack of marketability are applied, the application of the discounts is multiplicative.
   b. False
      B is Correct—When both a discount for lack of control and a discount for lack of marketability are applied, the application of the discounts is multiplicative, not additive.

10. Which level of value would be considered equivalent to owning stock in a publicly traded company?
    a. Control marketable
       Incorrect—Most investors in a publicly traded stock own a minority interest.
    b. Minority marketable
       B is Correct—A marketable minority interest is most representative of owning stock in a publicly traded company.
    c. Synergistic value
       Incorrect—A synergistic value is a level of value to a specific investor
    d. Minority non-marketable
       Incorrect—Owning stock in a publicly traded company would be considered marketable and could be converted into cash fairly quickly.

11. The ability of an individual to set company policy, appoint management, and ability to determine dividend policy and payments are examples of:
    a. A minority interest
       Incorrect—A minority shareholder would not be able to change any management policies.
    b. A control interest
       B is Correct—A controlling interest would have the ability to set company policy, appoint management and determine dividend policy.
    c. An equal shareholder with 50% operating control
       Incorrect—A 50% interest is not considered controlling interest.
    d. A shareholder of a publicly traded company
       Incorrect—Majority of shareholders in a publicly traded company have a minority interest, they would have a vote in management decisions but individually would not be able to set policy, appoint management and determine dividend policy.

12. The following are sources of empirical data on control/minority interests except for:
    a. *Mergerstat Review*
       Incorrect—*Mergerstat Review* is published annually by Applied Financial Information, LP to determine control/minority interest information from tender offers and industry transactions.
    b. Morningstar Principia
       Incorrect—Morningstar Principia provides a database on closed-end funds which provides discounts for lack of control as used in the price/net asset value method under the market approach.
    c. SEC Studies
       Incorrect—SEC Studies were published in the Office of the Chief Economist as a source of empirical data on control/minority interests.
    d. Emory Studies
       D is Correct—The Emory studies may be used to determine a discount for lack of marketability.

13. It would not be surprising for a valuation analyst to have the same marketability discount for a controlling interest as they would when valuing a minority interest.
    a. True
       Incorrect—It would be very rare for a controlling interest to have a marketability discount equal or higher than for that of a minority interest.
    b. False
       B is Correct—Where discounts for lack of marketability are appropriate for controlling interests, they are typically much smaller than those for minority interests.

14. Which of the following factors may increase a marketability discount?
    a. Restrictions on transfer, limited access to financial information, and an imminent public offering
       Incorrect—An imminent public offer would decrease the discount because a public offering would instantly make the shares marketable (excluding restricted stock agreements).
    b. Little or no dividends, little prospect of going public, and high dividend payouts
       Incorrect—High dividend payouts would decrease the value of the discount.
    c. Low dividend payouts, limited access to financial information, and an imminent public offering
       Incorrect—Low dividends payouts and limited access to financial information would increase the marketability discount, but an imminent public offering would decrease the discount.
    d. Restrictions on transfers, little or no dividends, and limited access to financial information
       D is Correct—Any time there are restrictions on transfers, little or no dividends, and when an individual has limited information to financial information all of these would be considered risk factors which would increase a marketability discount.

15. What are the two primary cases listed in the Internal Revenue Service Valuation Training for Appeals Officers as the basis for discounts for lack of marketability?
    a. *Simplot* and *Central Trust Co.*
    Incorrect—*Simplot* related with swing vote implications.
    b. *Central Trust Co.* and *Estate of Andrews*
    B is Correct—*Central Trust Co.* and *Estate of Andrews* are the two primary cases listed in the Internal Revenue Service Valuation Training for appeals Officers as the basis for discounts of lack of marketability.
    c. *Estate of Andrews* and *Estate of Gross*
    Incorrect—*Estate of Gross* related to the tax effect of pass through entities.
    d. *Estate of Gross* and *Estate of Adams*
    Incorrect—Both the estate of gross and Adams relate to the tax effect of pass through entities.

16. Which court case specifically isolates the issue of marketability discounts?
    a. Simplot
    Incorrect—Court case relates to swing vote implications.
    b. Estate of Kelly
    Incorrect—Court case discusses control and minority interest discounts.
    c. Mandelbaum
    C is Correct—The *Mandelbaum* case specifically isolated the issue of marketability discounts and the court listed various factors to calculate this discount.
    d. Gross
    Incorrect—Discusses tax effect on pass through entities.

17. It would be appropriate for a valuator, when adjusting assets to their fair market value, to also make an adjustment for the liability resulting from a built-in capital gains tax.
    a. True
    A is Correct—When writing up fixed assets to fair market value for valuation purposes, it is relevant to consider the application of the deferred tax liability to reflect the economic reality of the company's balance sheet.
    b. False
    Incorrect—When adjusting assets to their fair market value it would also be appropriate for the valuator to make and adjustment for the liability resulting from build-in capital gains.

18. Transactions offering a substantial amount of a single entity's stock, which visibly creates a supply that exceeds current demand may result in a:
    a. Blockage discount
    A is Correct—The need for a blockage discount usually arises in consideration of supply and demand influences in the publicly traded securities markets. In other words, a transaction offering a substantial block of a single entity's issued and outstanding shares may create a supply that exceeds current demand. Such an occurrence will generally impair the subject company's value because of the reduced liquidity associated with the oversupply.
    b. Key person discount
    Incorrect—A key person discount is an additional discount for a company where thin management and there is a strong dependency on a single individual.
    c. Restrictive agreement discount
    Incorrect—This discount is the result of various documents such as restrictive stock agreements or buy sell agreements that limit the ability of a shareholder to sell or transfer stock.
    d. Investment company discount
    Incorrect—An investment company discount arise from a minority shareholder to force a sale of and illiquid asset such as a building.

Chapter 7 Bonus Questions Responses

1. Your state __________________ what does your state consider a majority interest?
   While we cannot answer for your state here it is written in corporation law of some states that a 33.33% interest has the power to liquidate. This is generally considered a control option. *(Check the laws of the state in which the subject company is domiciled and note the special rules for minority and controlling interest.)*

2. Synergy—what is this and how does it affect value?
   a. An aggregation of two companies where a particular asset makes a section of the other firm more profitable explains synergy.
   b. Value is increased—as the value of the firm with the asset makes the value of the larger organization exceed any value calculated of each on a standalone basis. Therefore, one cannot simply add the value of the two companies valued on standalone basis—the effect of the synergy must be considered. Important in buyouts or sales.

Review Questions Chapter 8 Professional Standards

1. What are the types of Valuation Services recognized by the Professional Standards?
   a. The Professional Standards recognize two types of services, Conclusion of Value and Calculated Value.
   Incorrect—Conclusion of Value and Calculated Value are the results of the Valuation Services provided by the member.
   b. The Professional Standards recognize two types of services, Valuation Engagements and Calculation Engagements.
   B is Correct—These are the two types of services that can be provided by complying with the Development and Reporting Standards of the Professional Standards.
   c. The Professional Standards recognize three types of services, Conclusion of Value Services, Opinion of Value Services, and Estimate of Value Services.
   Incorrect—The Conclusion of Value is the end result of a Valuation Engagement, not a type of Valuation Service, while the Opinion of Value and Estimate of Value Services represent terms that are not defined by the Professional Standards.
   d. The Professional Standards recognize two types of services, Conclusion of Value Services and Opinion of Value Services.
   Incorrect—Conclusion of Value and Opinion of Value are not recognized services provided for in the Professional Standards.

2. The Professional Standards are applicable when valuing the following:
   a. Real estate
   Incorrect—The Professional Standards are not applicable to the valuation of real estate.
   b. Intangible asset
   Incorrect—Although the Professional Standards are applicable to the valuation of an intangible asset, they are also applicable to the value of a business ownership interest, option "c".
   c. Business ownership interest
   Incorrect—The Professional Standards are applicable to the valuation of more than a business ownership interest; they are applicable to valuing a "*business, business ownership interest, security, or intangible asset.*" as discussed in Section III.A.
   d. B and C
   D is Correct—The Professional Standards are applicable when valuing a *business, business ownership interest, security, or intangible asset* (Sec. III.A.)

3. The Professional Standards are:
   a. Rules-based
      Incorrect—The Professional Standards are principle-based, taking the form of general principles, relying on the interpretation and professional judgment of the member in order to be implemented. Rules-based standards would limit the flexibility and use of the member's professional judgment in the performance of their services.
   b. Applicable to economic damages reports
      Incorrect—The Professional Standards are for Valuation or Calculation Engagements, not for economic damages engagements.
   c. Not applicable to valuations performed for transactions (M&A engagements)
      Incorrect—The Professional Standards should be followed by members performing Valuation or Calculation Engagements for transactional purposes.
   d. Principles-based
      D is Correct—The Professional Standards are principle-based, taking the form of general principles, relying on the interpretation and professional judgment of the member in order to be implemented.

4. If I am also a member of ASA must I still also follow the Professional Standards in a Valuation Engagement?
   a. No. As a member, you may select which organization's standards are most appropriate to the valuation you are performing and write your report in the manner prescribed by that organization.
      Incorrect—The member may not choose standards on a report by report basis. The member is bound by the standards of each organization to which the member belongs.
   b. No. This would confuse the requestor of the report.
      Incorrect—In fact, the report could well be in danger of being questioned as accurate or even totally denied by the report receiver if any standards by which the analyst is bound are callously ignored.
   c. Yes. If you are a member of more than one certifying organization with standards, you must adhere to all of them as required by that organization.
      C is Correct—You are required to follow the standards of each and every organization to which you belong. You should also state these organizations by name in your report.
   d. Yes. When the analyst is expressing a range of values, it is necessary to document the Professional Standards definition of a range of values.
      Incorrect—Documenting the Professional Standards definition—or any definition found in the International Glossary of BV Terms—is a good idea. This is not the reason why the member needs to adhere to professional standards of any certifying organization to which that member belongs.

5. Under the Professional Standards, when expressing a Conclusion of Value, the value amount may be communicated :
   a. As a range of values
      Incorrect—Although a Conclusion of Value may be communicated as a range of values, it may also be communicated as a single number as noted in Section IV.B.
   b. As a single number
      Incorrect—A Conclusion of Value may be communicated as either a single number or a range as noted in Section IV.B. of the Professional Standards.
   c. Orally
      Incorrect—The communication of a Conclusion of Value may be either oral or written as noted in Section V.B., the Reporting Standards, Form of Report.
   d. All of the above
      D is Correct—A conclusion of Value may be communicated as a single number or a range (Sec. IV.B) and either orally or in a written report (Sec. V.B).

6. When performing Other Services as defined by the Professional Standards, all of the Professional Standards shall apply except for:
   a. General and Ethical Standards
      Incorrect—General and Ethical Standards apply to all professional services performed by members (Sec. III.A.).
   b. Development Standards
      Incorrect—According to Section IV.A., the Development Standards apply when a member expresses a Conclusion of Value or a Calculated Value and do not necessarily apply to Other Services.
   c. Reporting Standards
      Incorrect—Like the Development Standards, the Reporting Standards apply when a member expresses a Conclusion of Value or a Calculated Value as noted in Section V.A. and do not necessarily apply to Other Services.
   d. A and B
      Incorrect—Whereas General and Ethical Standards apply to all professional services performed by members according to the Scope of Services (Sec. III.A), the Development Standards apply when a member expresses a Conclusion of Value or a Calculated Value, not when a member is providing Other Services.
   e. None of the above, all standards apply
      Incorrect—Development and Reporting Standards do not necessarily apply when performing Other Services.
   f. B and C
      F is Correct—When performing Other Services, the Development and Reporting Standards do not apply.

7. A member may perform a Valuation Engagement for a contingent fee when expressing a Conclusion of Value.
   a. True
      A is Correct—Under Reporting Standard Sec. V.C.1.(g)(2), a member may perform a valuation engagement for a contingent fee when expressing a conclusion of value, but must disclose such financial arrangements in his or her report.
   b. False
      Incorrect—Performing a valuation engagement for a contingent fee is not expressly prohibited under the Professional Standards.

8. According to the Development Standards, a member must identify all of the following except for:
   a. Subject to be valued
      Incorrect—Under the Development Standards the subject to be valued must be identified.
   b. Purpose and use of the valuation
      Incorrect—Under the Development Standards the purpose of the valuation must be disclosed.
   c. Premise of value
      Incorrect—Under the Development Standards the premise of value must be disclosed.
   d. Member's industry experience
      D is Correct—The member may include their industry experience on their CV but it is not required to be identified according to the Development Standards.

9. A member shall not express either a Conclusion of Value or a Calculated Value unless the member and the member's firm state whether or not the member or the member's firm has a financial interest in the subject of the engagement.
   a. True
      A is Correct—A member shall not express a Conclusion of Value or a Calculated Value unless the member or the member's firm state either of the following:
      "I (We) have no financial interest or contemplated financial interest in the subject of this report"
      "I (We) have a (specify) financial interest or contemplated financial interest in the subject of this report"
   b. False
      Incorrect—Without the independence statement, the valuator would violate the Professional Standards.

10. The Reporting Standards would NOT be exempt for a Valuation Engagement for what purpose?
   a. Gift tax
      A is Correct—Gift tax Valuation Engagements require a report for compliance and reporting purposes and are not exempt from the Reporting Standards.
   b. Family law
      Incorrect—The term "family law" implies a litigation engagement and as such, is exempt from the Reporting Standards as noted in Section V.D. of the Professional Standards.
   c. Shareholder oppression action
      Incorrect—A shareholder oppression action would be "*a valuation performed for a matter before a court, an arbitrator, a mediator, or other facilitator*" and therefore "*is exempt from the reporting provisions of these standards.*" (Sec. V.D.).
   d. Breach of contract litigation
      Incorrect—A breach of contract litigation is a litigation engagement and is exempt from the Reporting Standards but still must comply with the Development Standards and all other Professional Standards.

11. A report expressing a Conclusion of Value may be presented in a:
    a. Summary Report
    Incorrect—Although a Conclusion of Value may be presented in a written Summary Report, it may also be presented in a Detailed Report according to Section V.B., Form of Report.
    b. Detailed Report
    Incorrect—A Detailed Report is not the only form of report available for a Conclusion of Value, it may also be presented in a Summary Report which is an "*abridged version of the information that would be applied in a detailed report…*". (Sec. V.C.2.).
    c. Restricted Report
    Incorrect—The Professional Standards do not refer to a "Restricted Report."
    d. Letter Report
    Incorrect—The Professional Standards do not refer to a "Letter Report."
    e. A and B
    E is Correct—The Reporting Standards allow a Conclusion of Value to be presented in either a Summary Report or a Detailed Report.

12. The primary difference between a Valuation Engagement and a Calculation Engagement is that:
    a. A Calculation Engagement is a shorter form of a Valuation Engagement.
    Incorrect—A Calculation Engagement is where the client and member agree to specific valuation approaches, methods, and the extent of selected procedures and a Valuation Engagement requires that a member applies valuation approaches and methods deemed in their professional judgment to be appropriate.
    b. A Calculation Engagement can result in a range of values whereas a Valuation Engagement can only result in a single value.
    Incorrect—Both a Calculation Engagement and a Valuation Engagement can result in a range of values.
    c. The results of a Valuation Engagement can only be presented in a Detailed Report while the results of a Calculation Engagement can only be presented in a Summary Report.
    Incorrect—Detailed Reports and Summary Reports are used to present the results of a Valuation Engagement whereas a Calculation Report is used to present the results of a Calculation Engagement.
    d. A Valuation Engagement requires that a member applies valuation approaches and methods deemed in their professional judgment to be appropriate, whereas a Calculation Engagement occurs when the client and member agree to specific valuation approaches, methods, and the extent of selected procedures.
    D is Correct—According to the definitions of Valuation Engagement and Calculation Engagement as found in the Professional Standards.

Chapter 8 Bonus Questions Reponses

1. Why isn't Fair Value defined in the glossary?
   Because there are two types of Fair Value used as a Standard of Value, one for stautory purposes and two for financial statement reporting, there isn't a single definition that currently will fit all possible engagements. For statutory purposes, Fair Value may be defined differently by each state and juristiction. And the definition of Fair Value for financial statement reporting purposes is still subject to revisions by certain regulatory bodies.

2. Why doesn't the Professional Standards endorse USPAP?
   The Uniform Standards of Professional Appraisal Practice (USPAP) is applicable to the appraisal process for many different disciplines including real property, personal property, intangibles, and business valuation. It attempts to provide a set of quality control standards for the appraisal process. The Professional Standards does not endorse USPAP as it already adequately addresses the quality control standards and valuation processes and procedures specifically for the valuation of businesses, business ownership interests, securities, and intangible assets. Although there are some sections of USPAP which apply to valuation of a business, the Professional Standards already include these items in its content.

Review Questions Chapter 9 Valuation Engagement and Obtaining Information

1. External information includes all of the following except:
   a. General Economic Information
      Incorrect—Economic Information is external information.
   b. General Industry Information
      Incorrect—General Industry Information is external
   c. Local and Regional Economic and Industry Information
      Incorrect—These are all external information.
   d. History, nature and organization of the subject company
      D is Correct—The history, nature and organization of the subject is all internal information.

2. What is the main purpose of obtaining external information?
   a. To provide the analyst with the most recent 5 years of financial information
      Incorrect—Financial information would be provided by management and considered internal information.
   b. To gain an understanding of the company's operations and its products or services
      Incorrect—This is internal information
   c. To give the analyst knowledge of any outside factors that may directly or indirectly affect the future operations of the subject company
      C is Correct—The analyst must consider external factors in all valuation engagements.
   d. To comply with the report writing standards as set forth in the Professional Standards
      Incorrect—Analyzing external factors is part of the development standards.

3. The valuation engagement checklist for Adler-Cottino Wood Furniture, Inc. is found in Chapter 10. What Purpose, Standard**,** and Premise of Value (in that order) were determined for this case?
   a. FMV, Controlling Interest and Arms-Length Transaction
      Incorrect—FMV is a standard of value, Controlling interest relates to possible discounts or premiums, Arms-length transaction relates to FMV.
   b. Related Party, Estate and Going concern
      Incorrect—Related Party is not the purpose of the valuation, Estate is the purpose of the valuation not the standard of value and going concern is the premise of value.
   c. Buy-Sell, Capitalization of Earnings, Net Asset Value
      Incorrect—Buy-Sell is not the purpose of the valuation, Capitalization of Earnings is a method of valuation and Net Asset Value is a method of valuation.
   d. Estate Tax valuation for Form 706, FMV and Going Concern
      D is Correct—Estate Tax Valuation is the Purpose, FMV is the Standard and Going Concern is the premise of value.

4. What is the valuation analyst's main objective when gathering internal information?
   a. To examine historical and projected financial data including Financial Statements, Income Tax Returns and Budgets
      Incorrect—This is one of the steps in gathering internal information but not the main objective.
   b. To keep abreast of changing general economics to ascertain how it may impact the assumptions that are made during the valuation process
      Incorrect—This is an objective of examining external information.
   c. To gain an adequate understanding of the subject company's operational management and earnings ability
      C is Correct—This is the main objective when gathering internal information.
   d. To examine the current location(s) and physical condition of the subject company's facilities and operational assets
      Incorrect—This is a small part of the overall objective of obtaining adequate understanding of the subject company's operational management and earnings ability.

5. The Market Approach for valuing businesses utilizes information from Specific Comparable Companies. In order for a company to be truly comparable it must share all of the following characteristics with the subject company except:
   a. Companies must have similar capital structures
      Incorrect—Large, diversified publicly traded companies cannot be comparable to smaller closely held businesses without similar capital structures.
   b. Companies must have the same number of stockholders
      B is Correct—Although the capital structure must be similar: there are no requirements for a specific number of stockholders.
   c. Companies must be of similar size, relative to sales volume and total assets
      Incorrect—Although there is debate as to how large the comparable company can be (ex. 10 – 25x revenue), there are basic financial indicators to ensure comparability.
   d. Companies must have similar competitive positions within the industry.
      Incorrect—Having similar competitive positions within the industry is a characteristic of comparability.

6. Independence of the valuator will be impaired if:
   a. The member who performs the appraisal or the member's firm prepares the tax return of the subject entity
      Incorrect—Preparing a tax return will not result in a valuator's independence being impaired.
   b. The member or the member's firm performs an audit of the subject company's financial statement
      B is Correct—Independence will be impaired if the members firm performs the auditing of the client.
   c. Your neighbor's best friend owns 100% of the subject company
      Incorrect—This may end the friendship but will not impair you as a valuator.
   d. The member or member's firm performs a compilation of the subject company's financial statement
      Incorrect—A compilation of the subject company by your CPA firm will not result in a conflict of interest.

7. When defining the engagement the valuation analyst should identify:
   a. Purpose, ownership interest, and profitability of the subject entity
      Incorrect—It is not necessary for the firm to be profitable when defining the engagement. However, it may indicate whether there is money to pay you.
   b. Purpose, valuation date, and valuation approach to be utilized
      Incorrect—The valuation approach will be determined once the analyst gains an understanding of the unique nature of the subject company, not when defining the engagement.
   c. Purpose, ownership interest, and valuation date
      C is Correct—When defining an engagement all three items, purpose, ownership and interest to be valued should be determined.
   d. Ownership interest, report date, and valuation approach
      Incorrect—When defining the engagement most likely the valuation approach will not be determined at this stage.

8. Before starting an engagement, the valuation analyst must obtain an engagement letter.
   a. True
      Incorrect—Although not required, it cannot be emphasized enough how important a properly written engagement letter is.
   b. False
      B is Correct— The Professional Standards state *"A member shall establish, with the client, a written or oral understanding of the nature, scope, and limitations of services to be performed and the responsibilities of the parties."*

9. In a litigation engagement, a valuation analyst should be independent and objective; if an attorney wants the valuation analyst to give a specific and tailored answer, this will not impair independence or objectivity.
   a. True
      Incorrect—Although the reporting standards do not apply to litigation engagements, NACVA members are still required to adhere to §1.2(a) – Integrity & Objectivity.
   b. False
      B is Correct—If an attorney wants the valuation analyst to tailor his/her opinion to get the result the attorney wants, an objective and independent valuation analyst should decline this engagement.

10. Of the following sources of information, which source provides data which can be specifically compared to the subject company?
    a. U.S. Bureau of Census
       Incorrect—This is a good source of economic information for such items as construction spending, manufacturing, retail sales, etc.
    b. Federal Reserve Banks
       Incorrect—This is a good source of economic information for such items as consumer credit, industrial production, capacity utilization, etc.
    c. Ibbotson Valuation Yearbook
       Incorrect—This is a good source for cost of capital information.
    d. BIZCOMPS
       D is Correct—BIZCOMPS is a source of specific company information.

Review Questions Chapter 10 Search for Adjustments

1. After the historical financial statements have been adjusted for economic or normalizing items, the analyst should begin a thorough financial analysis of the adjusted financial statement data. Such analysis helps to identify all of the following trends except?
   a. Where has the company been?
   Incorrect—The historical performance of the company will be identified by a thorough financial analysis.
   b. Where is the company today?
   Incorrect—The financial condition of the company today will be identified by an analysis of its balance sheet.
   c. What are the current and future management needs?
   C is Correct—Current and future management needs are not determined by the valuation analyst.
   d. Where might the company be in the future?
   Incorrect—An analysis of the company's current balance sheet as well as its past performance through its historical income statements will assist in identifying the trends for its future.

2. When adjustments have been made to increase the value of assets to their appraised or market value, a corresponding adjustment recognizing the amount of deferred income taxes should also be made. There have been conflicting arguments for doing so in valuation literature. What is the most often cited argument against recording deferred income taxes on the increased value of assets over book values?
   a. When selling the stock of an entity and not the asset itself, the assets do not have to be adjusted to fair market value, therefore, deferred taxes would not need to be adjusted.
   Incorrect—Assets should be adjusted to fair market value for all valuations.
   b. Deferred taxes are only booked for timing issues related to the recognition of income statement items.
   Incorrect—Deferred taxes are recorded for balance sheet and income statement items.
   c. Deferred taxes should not be recorded unless the company has specific plans to liquidate within a reasonable period following the date of the valuation.
   C is Correct—The IRS, in Letter Ruling 9150001 (e) stated that ….income taxes are not taken into account where the event that would generate these expenses is speculative.
   d. The tax court has ruled in the *Estate of Dunn, Estate of Davis,* and the appeal of *Dunn* that no discount was given for taxes.
   Incorrect—In these three cases, a discount was given for income tax related to the trapped in gains.

3. Which of the following are categorized as "Risk" ratios of a company?
   a. Accounts Receivable Turnover Ratios and Current Liabilities as a percent of assets
   Incorrect—These are turnover ratios and balance sheet ratios, respectively.
   b. Total Debt as a percent of Assets and Long term Debt as a percent of Assets
   Incorrect—These are Balance Sheet ratios.
   c. Operating Profit as a percent of Sales and Interest Coverage Ratio
   Incorrect—These are Income statement ratios and Risk ratios, respectively.
   d. Current Ratio and Quick Ratio
   D is Correct—Both are considered risk ratios.

4. When comparing Adler-Cottino to the Industry in Exhibits 10-7 and 10-8, Chapter 10, which of the following statements is/are true:
   a. The Company's current, quick, and debt/equity ratios are all significantly favorable relative to the industry
      Incorrect—Although this is correct, all of the options listed are correct.
   b. The Company has a different asset mix than the companies that make up the median of the RMA data
      Incorrect—This is but one of the correct options available as an answer.
   c. The Company's long-term debt as a percentage of assets is lower than the industry median
      Incorrect—All of the statements are correct.
   d. The Company's operating performance is much better than the industry on average and is superior to the industry relative to financial strength, leverage and liquidity
      Incorrect—This option, although correct, is not the only correct option available.
   e. All of the above
      E is Correct—All of the statements are correct.

5. A Comparative Analysis utilizes information from two sources and can involve either a comparison of the subject company with specific comparable companies or with industry averages for a historical period of one or more years. Which two sources of the subject company are used to perform a Comparative Analysis?
   a. RMA and Integra
      Incorrect—These are databases for various public companies.
   b. Common-Size Analysis and Ratio Analysis
      B is Correct—Both are necessary to prepare a Comparative analysis.
   c. Historical and Normalized Financial Statements
      Incorrect—Not used in a comparative analysis.
   d. Forecasted and Budgeted Financial Statements
      Incorrect—These are examples of projections.

6. Normalized financial statements should allow the valuation analyst to:
   a. Present a financial picture which represents fair market values
      A is Correct—Normalized financial statements should allow a valuator to represent market value and make meaningful comparisons.
   b. Present a financial picture to appease the client
      Incorrect—Valuation analysts are supposed to be objective and independent and normalized financial statements should present a true picture of operations.
   c. Present a financial picture to reflect a predetermined answer
      Incorrect—Normalized financial statements should present a true picture of operations.
   d. To increase a valuation anlysts fees
      Incorrect—Although it takes time to identify and determine relevant normalization adjustments, they are not applied simply to increase the fee for the valuation engagement.

7. What is the best way to determine if a normalizing adjustment should be made to Accounts Receivable?
    a. Common size the balance sheet
       Incorrect—Common sizing would not indicate a collection issue
    b. Use trend analysis
       Incorrect—Trend analysis would not indicate a collection problem.
    c. Look at accounts receivable aging
       C is Correct—Looking at the accounts receivable aging is the first step in identifying if there is a collection issue.
    d. Discuss with management
       Incorrect—Although the valuation analyst should discuss the adjustment with management, if the valuation analyst does not first look at an aging report, the issue may never surface

8. In Exhibit 10-2, what would be a good reference source to use as a bench mark to determine excess cash?
    a. Ibbotson
       Incorrect—Ibbotson is a good reference side when determining a discount and capitalization rate.
    b. BizComps
       Incorrect—BizComps is a good reference when looking for market comparables to your subject company.
    c. RMA
       C is Correct—RMA is a good benchmark to use as a benchmark when determine average amounts of cash needed to operate the company.
    d. An inquiry with management provides enough support
       Incorrect—It is possible management will only tell you what they want you to hear.

9. Ratio Analysis can be an effective tool to compare how well a company is performing to industry bench marks.
    a. True
       A is Correct—Ratio Analysis can be an effective tool to compare how well a company is performing to industry bench marks.
    b. False
       Incorrect—Ratio analysis can be an effective tool, if properly applied, to compare how well a company is performing to industry bench marks.

Review Questions Chapter 11 Practice Case Workshop

1. In gathering the necessary information to complete Adler-Cottino as an example of a report you can use for later reference,
   a. It is necessary to be able to fully describe the history and nature of the business being valued.
   A is Correct—This is a necessary part of any valuation.
   b. It is not necessary to understand this business or any business, as the company's management is running the business.
   Incorrect—If you don't understand the type of business, find out what you need to have/attend to learn about it, and document what you did.
   c. A personal tour of the business can't be done, so there is not a way to put anything meaningful in the report.
   Incorrect—Although a personal tour of this imaginary business can't be done, you can piece together what you would find in a site-visit from the data provided in the worksheet.
   d. Note that the type of organizational structure will not be applicable to any other company you would value.
   Incorrect—Adler-Cottino is a C-corporation, with a board of directors, and will be similar to other C-corporations you encounter.

2. In defining the valuation engagement prior to issuing a valuation report:
   a. Ascertain whether the necessary client information and technical resources are available. If not, decline the valuation.
   Incorrect—In divorce valuations, information may not be available in the quality or quantity you would like. A valuation can (and perhaps in this example, should) be performed. Note in your report what data you were denied, and how it affected the outcome.
   b. Define the ownership interest to be valued as this will affect any premiums or discounts to be discussed in the final report.
   B is Correct—The percentage of ownership interest will definitely impact the outcome of your report, especially in the area of discounts.
   c. You must obtain a client representation letter.
   Incorrect—NACVA suggests obtaining such a letter if possible, but it is not mandated.
   d. You must obtain a client engagement letter
   Incorrect—If a full understanding and communication can be gotten without a letter, a letter isn't necessary. A letter is helpful if properly written, but not mandated.

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APPENDIX XI

Business Valuation Professional Services Agreement Template Calculation Engagement Oral Report / Written Report

NACV—BUSINESS VALUATION PROFESSIONAL SERVICES AGREEMENT TEMPLATE
CALCULATION ENGAGEMENT
ORAL REPORT/WRITTEN REPORT

DISCLAIMERS:

1. It is strongly suggested that all members submit their professional services agreement template to their attorney for review and comment on a regular basis.
2. The language included in this template is based on the NACVA *Professional Standards* and does not necessarily follow the *Statement on Standards for Valuation Services No. 1* (SSVS No.1) as published by the American Institute of Certified Public Accountants (AICPA) or any other standards. If the member is a Certified Public Accountant who is a member of the AICPA, the member should modify the template and include language necessary to comply with SSVS No.1.
3. This template to be used as guidance only, it is the members responsibility to insure the language used in their professional services agreements adhere to appropriate rules and regulations.

DATE

CLIENT
ADDRESS

Re: Calculation Engagement

Dear CLIENT/ATTORNEY:

OPTION 1: Engaged by Client
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide to you.

OPTION 2: Engaged by Attorney
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide to Law Firm, P.A. (hereinafter, "Counsel") on behalf of Joe Smith (hereinafter, "Client" or "Counsel's Client").

OPTION 3: Engaged by Client under Attorney's Direction
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide, as discussed with you and your attorney, Jane Doe, Esq., in the connection with the litigation matter of Smith v. Smith. Your attorney will direct our services.

CLIENT
DATE
Page 2

PURPOSE OF THE ENGAGEMENT

The objective of the calculation engagement is to provide to you with a calculated value of a [%INTEREST] (hereinafter, the "Subject Interest") in the [ENTITY] (hereinafter, the "Company", "Limited Partnership", etc.) as of [DATE] on a controlling/non-controlling, marketable/non-marketable basis for [STATE PURPOSE]. The results of the engagement will be expressed as a calculated value.

As stated in the NACVA *Professional Standards*, "A Calculation Engagement occurs when the client and member agree to specific valuation approaches, methods and the extent of selected procedures and results in a Calculated Value." [1]

[OPTIONAL] Since we will not be developing a conclusion of value, we will not provide any testimony related to this engagement.

The resulting calculated value should not be used for any other purpose or by any other party for any purpose. Client's use of the calculation report for any purpose except that set forth above shall constitute a material breach of this Agreement.

STANDARD AND PREMISE OF VALUE

OPTION 1: Fair Market Value Definition (International Glossary of Business Valuation Terms):

The engagement will use fair market value as the standard of value. Fair market value is defined in *The International Glossary of Business Valuation Terms*, issued by the American Institute of Certified Public Accountants (AICPA), the American Society of Appraisers, the Canadian Institute of Chartered Business Valuators, the National Association of Certified Valuators and Analysts and the Institute of Business Appraisers, as:

> **"The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."**

OPTION 2: Fair Market Value-Definition (Gift Tax):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 25.2512-1 of the U.S. Treasury regulations (Gift Tax Regulations) as:

> "The price at which such property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of relevant facts."

[1] NACVA *Professional Standards*, Section 2.1.b

CLIENT
DATE
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OPTION 3: Fair Market Value Definition (Estate Tax):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 20.2031-1(b) of the U.S. Treasury regulations (Estate Tax Regulations) as:

> **"The price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts."**

OPTION 4: Fair Market Value Definition (Charitable Contributions):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 1.170A-1(c)(2) of the U.S. Treasury regulations (Charitable Contributions) as:

> **"The price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts."**

OPTION 5: Fair Value (Shareholder Dissent and Oppression Litigation):

The engagement will use fair value as it relates to [shareholder dissent litigation / shareholder oppression litigation] as the standard of value. As the definition of fair value for these engagements is a judicially mandated concept, we will rely on the appropriate definition of fair value that will be provided to us by [ATTORNEY].

OPTION 6: Fair Value (Financial Reporting under U.S. GAAP):

The engagement will use fair value as the standard of value. The definition of fair value for financial reporting purposes under United States generally accepted accounting principles (GAAP) is found in *Statement of Financial Accounting Standards No. 157, Fair Value Measurements*, issued by the Financial Accounting Standards Board and is stated as:

> "The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

Our analysis will be based on the premise that the ENTITY [will continue to operate as going concern/is in forced/orderly liquidation] [OR OTHER APPLICABLE PREMISE OF VALUE].

SCOPE OF THE CALCULATION ENGAGEMENT

The client and the Firm will agree to specific valuation approaches and methods and the extent of procedures that will be performed. This calculation engagement and our report will be subject to the Statement of Assumptions and Limiting Conditions that we expect to be similar to those attached as Appendix A.

CLIENT
DATE
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The calculation engagement will use only the following valuation approaches/methods [SPECIFY APPROACHES/METHODS]:

FIRM REPRESENTATIONS

This engagement will be conducted in accordance with the *Professional Standards* of the National Association of Certified Valuators and Analysts, [INCLUDE OTHER STANDARDS IF APPLICABLE].

Valuation Advisors LLP agrees to hold in strict confidentiality all proprietary information provided by you in connection with the engagement.

Professionals and other resources of the Firm will be used in this engagement as we deem necessary and appropriate. We will use our professional judgment in determining what records and documents will be reviewed and relied on for the purpose of forming our conclusion of value.

The Firm, its officers, owners and staff [HAVE/HAVE NO] financial interest or contemplated financial interest in the property that is the subject of this [detailed / summary] valuation report. [IF A FINANCIAL INTEREST DOES EXIST, DISCLOSE]. We have no interest in or bias with respect to the Subject Interest or the owners thereof.

Fees paid to the Firm for the engagement will neither be dependent nor contingent upon any transaction or value.

Our engagement cannot be relied on to disclose errors, irregularities, or illegal acts, including fraud or defalcations that may exist. However, in the event something comes to our attention that we believe to be of interest, we will bring it to your attention. At the conclusion of the engagement we may ask you to sign a representation letter on the accuracy and reliability of the financial information used in the engagement.

Additional representations for this engagement can be found in Appendix A.

CLIENT RESPONSIBILITIES

You agree to provide financial and other information to us as reasonably necessary for us to complete our engagement. You will represent that all information and documentation provided or to be provided is true, correct and complete to the best of your knowledge and belief. You hereby agree that we may rely upon such information and documentation without independent investigation or verification.

You agree that we are not required to update our analyses and conclusion for events and circumstances occurring after the date of our report.

It is expressly understood that any reports or other documents produced by the Firm, will not be provided to any parties except the Client, Client's Counsel, or its other professional advisors. It is further understood that our valuation report is solely for the use of the Client, and that our report may not be reproduced, distributed, or extracted in whole or in part without the Firm's express

CLIENT
DATE
Page 5

written permission. If we grant such limited permission in this letter or elsewhere, and you reproduce any portion or all of our valuation report, we must approve the masters or printer's proofs of the report before they are published.

You agree that possession of the work papers or other written documentation regarding the engagement does not carry with it the right of publication of all or part of it, nor may it be used or relied upon without previous written consent for any purpose other than that set forth above. No third parties are intended to be benefited. Schedules, information and other work papers developed during the engagement by the Firm or supplied by you or the Companies are the sole property of the Firm and are not subject to examination or production to the client at any time during or after the engagement.

REPORTING RESULTS

OPTION 1 – WRITTEN REPORT

The calculated value of the Subject Interest will be expressed in a written calculation report as either a [SINGLE AMOUNT/RANGE OF VALUES]. Our report will include the following statement:

> "This Calculation Engagement did not include all of the procedures required for a Conclusion of Value. Had a Conclusion of Value been determined, the results may have been different."

OPTION 2 – ORAL REPORT

Our calculated value of the Subject Interest will be expressed in an oral report communicated to [CLIENT].

FEES AND BILLING

Our fees are based upon an estimate of the time necessary to prepare our analysis and document our findings. Our professional fees for this engagement are estimated to be $FEE, plus out-of-pocket costs. We will require a retainer of $RETAINER prior to the start of our engagement. We will not issue the final calculation report unless all invoices pertaining to this engagement have been paid in full.

If for any reasons beyond our control this engagement shall be delayed for more than twenty (20) consecutive business days, we shall issue a progress bill for the portion of the work completed at such time. This invoice must be paid before commencement of subsequent work. The quoted fee is subject to an increase if the scope or terms of this Agreement change. We will notify you in advance of any change in scope.

NOTE: The following section related to delinquent accounts and collections should be tailored to your Firm's and statutory collection practices and policies.

A PERCENT% service charge per month will be applied to all delinquent accounts that are 30 days or more past due. We reserve the right to suspend or terminate services, as well as to withdraw as experts, if our invoices are not paid within 30 days of the invoice date; accordingly, our engagement will be deemed to have been completed even if we have not completed a report. You will be

CLIENT
DATE
Page 6

obligated to compensate us for all time expended and to reimburse us for all out-of-pocket expenditures through the date of suspension/termination. You must notify our office within ten (10) business days of the date of an invoice should you have any questions regarding it and, upon such notification, we will review the invoice with you in detail. Accordingly, absent such a request, we will consider that you have accepted our invoice as presented.

If we deem it necessary to seek alternative means of collection relative to our invoices, we shall be entitled to recover attorney's fees and costs of collection in addition to our fees in any litigation in which we may prevail. Each of us hereby waives the right to a jury trial. You also agree to allow your attorney to include any unpaid balances due our Firm in any charging lien filed with the court. Additionally, you agree to forego any attempt to assert liability against our Firm for incidental damages.

If the Firm is called upon to render services, give testimony, produce documents, answer depositions or interrogatories, or otherwise become involved in connection with any administrative or judicial proceedings, investigations or inquiries relating to the engagement, you will pay, in addition to the fees herein, for the time reasonably required to be expended by any partner or employee of the Firm, at our standard hourly rates as then in effect, plus out-of-pocket expenses relating thereto. Professional fees for such services are independent of this engagement.

OPTIONAL: ARBITRATION PROVISION
All claims, disputes and other matters in question between Valuation Advisors LLP and you arising out of, or relating to, this engagement and engagement letter, or its breach, shall be decided by arbitration in [LOCATION]. Either Valuation Advisors LLP or you may serve upon the other by certified mail a written demand that the dispute, explaining in detail its nature, be submitted to arbitration. Within ten (10) days, after service of such demand, each of us shall appoint a neutral arbitrator from the approved list of mediators and arbitrators appointed by the [COURT] in and for [LOCATION]. If either of us fails within the specified time to appoint an arbitrator, the single appointed arbitrator will have the right to decide alone, and his/her decision will be binding on both of us. The two appointed arbitrators shall select and appoint an independent third arbitrator. The written, and signed under oath, decision of two arbitrators shall be final and binding upon us. The arbitrators shall decide the total of the expenses, including reasonable attorney's fees, and award them to the prevailing party. If the two appointed arbitrators fail to agree upon a third arbitrator within ten (10) days after their appointment, then either of us may apply, upon notice to the other, to any court of competent jurisdiction in [LOCATION], for the appointment of a third arbitrator, and any such appointment shall be binding upon us. Judgment on the arbitrators' decision, including the decision on who is to pay expenses, may be entered by any court of competent jurisdiction in [LOCATION].

<u>DELIVERY AND TIMING</u>
Our ability to deliver a final valuation report is dependent upon our timely receipt of the required information. We will use our best efforts to meet any reasonable deadlines. We are prepared to begin this assignment upon authorization and will deliver a draft report to you approximately [TIME ESTIMATE – NUMBER OF DAYS] after timely receipt of all requested information.

CLIENT
DATE
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TERMINATION
Failure to make the payments required by this agreement, or failure by you to comply with the terms of this agreement will give us the sole option to terminate the agreement.

ACCEPTANCE
This agreement will become effective when we receive a signed copy of this letter and the requested retainer. Please sign and return the enclosed copy of this letter, with the $RETAINER retainer, in the enclosed preaddressed envelope by [ENGAGEMENT CUTOFF DATE]. If we do not receive these items by this date, and you do not inform us otherwise, we will presume that you do not intend to engage our Firm. If the need for additional services arises, we will revise our agreement with you and we will enumerate these revisions in an addendum to this letter.

Thank you for the opportunity to be of service to you.

Very truly yours,

VALUATION ADVISORS LLP
For the Firm

Sarah Valuator, CPA, CVA
Partner

Accepted ____________________________________

Date _______________________________________

CLIENT
DATE
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APPENDIX A
ASSUMPTIONS & LIMITING CONDITIONS

NOTE: This is an illustrative list of assumptions and limiting conditions and is not meant to be all-inclusive. The member should include those assumptions and limiting conditions that are applicable to their engagement. The items included in this list may be duplicative.

The engagement is subject to the following assumptions and limiting conditions.

1. The calculated value arrived at herein is valid only for the stated purpose as of the date of the valuation.

2. Financial statements and other related information provided by the subject entity or its representatives, in the course of this engagement, have been accepted without any verification as fully and correctly reflecting the enterprise's business conditions and operating results for the respective periods, except as specifically noted herein. Valuation Advisors LLP has not audited, reviewed, or compiled the financial information provided to us and, accordingly, we express no audit opinion or any other form of assurance on this information.

3. Public information and industry and statistical information, if obtained, has been derived from sources we believe to be reliable. However, Valuation Advisors LLP makes no representation as to the accuracy or completeness of such information and has performed no procedures to corroborate the information.

4. This report and the calculated value arrived at herein are for the exclusive use of Valuation Advisors LLP's client for the sole and specific purposes as noted herein. They may not be used for any other purpose or by any other party for any purpose. Furthermore the report and calculated value are not intended by the author and should not be construed by the reader to be investment advice in any manner whatsoever. The estimate of value represents the considered opinion of Valuation Advisors LLP based on information furnished to them by Entity and other sources.

5. Neither all nor any part of the contents of this report (especially the calculated value, the identity of any valuation specialist(s), or the firm with which such valuation specialists are connected or any reference to any of their professional designations) should be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other means of communication without the prior written consent and approval of Valuation Advisors LLP.

6. No change of any item in this calculation report shall be made by anyone other than Valuation Advisors LLP, and we shall have no responsibility for any such unauthorized change.

7. Unless otherwise stated, no effort has been made to determine the possible effect, if any, on the subject business due to future Federal, state, or local legislation.

CLIENT
DATE
Page 9

8. Unless otherwise informed or determined independently by Valuation Advisors LLP, it is assumed that there are no regulations of any government entity to control or restrict the use of the subject business's underlying assets and that the underlying assets will not operate in violation of any applicable government regulations, codes, ordinances, or statutes. Valuation Advisors LLP also assumes that, unless otherwise informed or determined independently, the subject business is in compliance with all federal, state and local laws and regulations, as well as up to date in regard to all filing and reporting requirements.

9. If prospective financial information approved by the Client and/or the Company has been used in our work, Valuation Advisors LLP has not audited, reviewed, or compiled the prospective financial information and therefore, does not express an audit opinion or any other form of assurance on the prospective financial information or the related assumptions. Events and circumstances frequently do not occur as expected and there will usually be differences between prospective financial information and actual results, and those differences may be material. Valuation Advisors LLP does not provide any assurance on the achievability of forecasts provided. Achievement of the forecasted results is dependent on actions, plans, and assumptions of management.

10. An actual transaction involving the business, the business ownership interest, the security, or the intangible asset may occur at a higher or lower value, depending on the circumstances surrounding the business, the business ownership interest, the security, or the intangible asset, and the motivations and knowledge of both the buyers and sellers at that time. Valuation Advisors LLP makes no guarantees about what values individual buyers and sellers may reach in an actual transaction.

11. The calculated value reflects facts and circumstances existing as of the valuation date. Except as noted, Valuation Advisors LLP has not considered subsequent events and we have no obligation to update our calculation for such events.

12. Valuation Advisors LLP assumes there are no other hidden or unexpected conditions of the entity that would adversely affect value, other than those indicated.

13. No opinion is intended to be expressed for matters that require legal or other specialized expertise, investigation, or knowledge beyond that customarily employed by valuation specialists valuing a business, a business ownership interest, security, or intangible asset.

14. Valuation Advisors LLP has not knowingly withheld or omitted anything from our calculation that would affect the calculated value.

APPENDIX XII

Business Valuation Professional Services Agreement Template Valuation Engagement Oral Report / Written Report—Detailed / Summary

NACVA – BUSINESS VALUATION PROFESSIONAL SERVICES AGREEMENT TEMPLATE
VALUATION ENGAGEMENT
ORAL REPORT / WRITTEN REPORT – DETAILED / SUMMARY

DISCLAIMERS:

4. It is strongly suggested that all members submit their professional services agreement template to their attorney for review and comment on a regular basis.
5. The language included in this template is based on the NACVA *Professional Standards* and does not necessarily follow the *Statement on Standards for Valuation Services No. 1* (SSVS No.1) as published by the American Institute of Certified Public Accountants (AICPA) or any other standards. If the member is a Certified Public Accountant who is a member of the AICPA, the member should modify the template and include language necessary to comply with SSVS No.1.
6. This template to be used as guidance only, it is the members responsibility to insure the language used in their professional services agreements adhere to appropriate rules and regulations.

DATE

CLIENT
ADDRESS

Re: Business Valuation

Dear CLIENT/ATTORNEY:

OPTION 1: Engaged by Client
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide to you.

OPTION 2: Engaged by Attorney
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide to Law Firm, P.A. (hereinafter, "Counsel") on behalf of Joe Smith (hereinafter, "Client" or "Counsel's Client").

OPTION 3: Engaged by Client under Attorney's Direction
The purpose of this letter (hereinafter, the "Agreement") is to confirm our understanding of the terms of our engagement and the nature and limitations of the services Valuation Advisors LLP (hereinafter, the "Firm") will provide, as discussed with you and your attorney, Jane Doe, Esq., in the connection with the litigation matter of Smith v. Smith. Your attorney will direct our services.

CLIENT
COMPANY
DATE
Page 2 of 14

PURPOSE OF ENGAGEMENT

The objective of the valuation engagement is to provide to you with an independent conclusion of value of a [%INTEREST] (hereinafter, the "Subject Interest") in the [ENTITY] (hereinafter, the "Company", "Limited Partnership", etc.) as of [DATE] on a controlling/non-controlling, marketable/non-marketable basis for [STATE PURPOSE].

As stated in the NACVA *Professional Standards*, "A Valuation Engagement requires that a member apply valuation approaches or methods deemed in the member's professional judgment to be appropriate under the circumstances and results in a Conclusion of Value." [1]

The resulting conclusion of value should not be used for any other purpose or by any other party for any purpose. Client's use of the valuation report for any purpose except that set forth above shall constitute a material breach of this Agreement.

SCOPE OF THE ENGAGEMENT

It is anticipated that there will be no restrictions or limitations on the scope of this engagement. [IF RESTRICTIONS OR SCOPE LIMITATIONS EXIST, STATE HERE]. This valuation engagement and our report will be subject to the Statement of Assumptions and Limiting Conditions that we expect to be similar to those attached as Appendix A.

STANDARD AND PREMISE OF VALUE

OPTION 1: Fair Market Value Definition (International Glossary of Business Valuation Terms):

The engagement will use fair market value as the standard of value. Fair market value is defined in *The International Glossary of Business Valuation Terms*, issued by the American Institute of Certified Public Accountants (AICPA), the American Society of Appraisers, the Canadian Institute of Chartered Business Valuators, the National Association of Certified Valuators and Analysts and the Institute of Business Appraisers, as:

> **"The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."**

OPTION 2: Fair Market Value-Definition (Gift Tax):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 25.2512-1 of the U.S. Treasury regulations (Gift Tax Regulations) as:

[1] NACVA *Professional Standards*, Section 2.1.a

CLIENT
COMPANY
DATE
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> "The price at which such property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of relevant facts."

OPTION 3: Fair Market Value Definition (Estate Tax):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 20.2031-1(b) of the U.S. Treasury regulations (Estate Tax Regulations) as:

> **"The price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts."**

OPTION 4: Fair Market Value Definition (Charitable Contributions):

The engagement will use fair market value as the standard of value. Fair market value is defined in Section 1.170A-1(c)(2) of the U.S. Treasury regulations (Charitable Contributions) as:

> **"The price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts."**

OPTION 5: Fair Value (Shareholder Dissent and Oppression Litigation):

The engagement will use fair value as it relates to [shareholder dissent litigation / shareholder oppression litigation] as the standard of value. As the definition of fair value for these engagements is a judicially mandated concept, we will rely on the appropriate definition of fair value that will be provided to us by [ATTORNEY].

OPTION 6: Fair Value (Financial Reporting Under U.S. GAAP):

The engagement will use fair value as the standard of value. The definition of fair value for financial reporting purposes under United States generally accepted accounting principles (GAAP) is found in *Statement of Financial Accounting Standards No. 157, Fair Value Measurements*, issued by the Financial Accounting Standards Board and is stated as:

> "The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date."

Our analysis will be based on the premise that the ENTITY [will continue to operate as going concern/is in forced/orderly liquidation] [OR OTHER APPLICABLE PREMISE OF VALUE].

CLIENT
COMPANY
DATE
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FIRM REPRESENTATIONS

Valuation Advisors LLP will conduct this engagement in accordance with the *Professional Standards* of the National Association of Certified Valuators and Analysts [INCLUDE OTHER STANDARDS IF APPLICABLE SUCH AS "…and the *2008 Uniform Standards of Professional Appraisal Practice* as promulgated by the Appraisal Foundation].

Valuation Advisors LLP agrees to hold in strict confidentiality all proprietary information provided by you in connection with the engagement.

Professionals and other resources of the Firm will be used in this engagement as we deem necessary and appropriate. We will use our professional judgment in determining what records and documents will be reviewed and relied on for the purpose of forming our conclusion of value.

The Firm, its officers, owners and staff [HAVE/HAVE NO] financial interest or contemplated financial interest in the property that is the subject of this [detailed / summary] valuation report. [IF A FINANCIAL INTEREST DOES EXIST, DISCLOSE]. We have no interest in or bias with respect to the Subject Interest or the owners thereof.

Fees paid to the Firm for the engagement will neither be dependent nor contingent upon any transaction or value.

Our engagement cannot be relied on to disclose errors, irregularities, or illegal acts, including fraud or defalcations that may exist. However, in the event something comes to our attention that we believe to be of interest, we will bring it to your attention. At the conclusion of the engagement we may ask you to sign a representation letter on the accuracy and reliability of the financial information used in the engagement.

Additional representations for this engagement can be found in Appendix A.

CLIENT RESPONSIBILITIES

You agree to provide financial and other information to us as reasonably necessary for us to complete our engagement. You will represent that all information and documentation provided or to be provided is true, correct and complete to the best of your knowledge and belief. You hereby agree that we may rely upon such information and documentation without independent investigation or verification.

You agree that we are not required to update our analyses and conclusion for events and circumstances occurring after the date of our report.

CLIENT
COMPANY
DATE
Page 5 of 14

It is expressly understood that any reports or other documents produced by the Firm, will not be provided to any parties except the Client, Client's Counsel, or its other professional advisors. It is further understood that our valuation report is solely for the use of the Client, and that our report may not be reproduced, distributed, or extracted in whole or in part without the Firm's express written permission. If we grant such limited permission in this letter or elsewhere, and you reproduce any portion or all of our valuation report, we must approve the masters or printer's proofs of the report before they are published.

You agree that possession of the work papers or other written documentation regarding the engagement does not carry with it the right of publication of all or part of it, nor may it be used or relied upon without previous written consent for any purpose other than that set forth above. No third parties are intended to be benefited. Schedules, information and other work papers developed during the engagement by the Firm or supplied by you or the Companies are the sole property of the Firm and are not subject to examination or production to the client at any time during or after the engagement.

REPORTING RESULTS (Optional for Litigation)
OPTION 1 – DETAILED WRITTEN REPORT
Our conclusion of value of the Subject Interest will be expressed in a written detailed report. The report will express the conclusion of value as a [SINGLE AMOUNT/RANGE OF VALUES]. A detailed report is structured to provide sufficient information to permit the intended user to understand the data, reasoning, and analyses underlying our conclusion of value.

OPTION 2 – SUMMARY WRITTEN REPORT
Our conclusion of value of the Subject Interest will be expressed in a written summary report. The report will express the conclusion of value as a [SINGLE AMOUNT/RANGE OF VALUES]. A summary report is structured to provide an abridged version of the information that would be provided in a detailed report and, therefore will not contain the same level of information as a detailed report.

OPTION 3 – ORAL REPORT
Our conclusion of value of the Subject Interest will be expressed in an oral report communicated to [CLIENT].

FEES AND BILLING
Our fees are based upon an estimate of the time necessary to prepare our analysis and document our findings. Our professional fees for the engagement are estimated to be $FEE, plus out-of-pocket costs. We will require a retainer of $RETAINER prior to the start of our engagement. We will not

CLIENT
COMPANY
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issue the final valuation reports unless all invoices pertaining to this engagement have been paid in full.

If for any reasons beyond our control this engagement shall be delayed for more than twenty (20) consecutive business days, we shall issue a progress bill for the portion of the work completed at such time. This invoice must be paid before commencement of subsequent work. The quoted fee is subject to an increase if the scope or terms of this Agreement change. We will notify you in advance of any change in scope.

NOTE: The following section related to delinquent accounts and collections should be tailored to your Firm's and statutory collection practices and policies.
A PERCENT% service charge per month will be applied to all delinquent accounts that are 30 days or more past due. We reserve the right to suspend or terminate services, as well as to withdraw as experts, if our invoices are not paid within 30 days of the invoice date; accordingly, our engagement will be deemed to have been completed even if we have not completed a report. You will be obligated to compensate us for all time expended and to reimburse us for all out-of-pocket expenditures through the date of suspension/termination. You must notify our office within ten (10) business days of the date of an invoice should you have any questions regarding it and, upon such notification, we will review the invoice with you in detail. Accordingly, absent such a request, we will consider that you have accepted our invoice as presented.

If we deem it necessary to seek alternative means of collection relative to our invoices, we shall be entitled to recover attorney's fees and costs of collection in addition to our fees in any litigation in which we may prevail. Each of us hereby waives the right to a jury trial. You also agree to allow your attorney to include any unpaid balances due our Firm in any charging lien filed with the court. Additionally, you agree to forego any attempt to assert liability against our Firm for incidental damages.

If the Firm is called upon to render services, give testimony, produce documents, answer depositions or interrogatories, or otherwise become involved in connection with any administrative or judicial proceedings, investigations or inquiries relating to the engagement, you will pay, in addition to the fees herein, for the time reasonably required to be expended by any partner or employee of the Firm, at our standard hourly rates as then in effect, plus out-of-pocket expenses relating thereto. Professional fees for such services are independent of this engagement.

OPTIONAL: ARBITRATION PROVISION
All claims, disputes and other matters in question between Valuation Advisors LLP and you arising out of, or relating to, this engagement and engagement letter, or its breach, shall be decided by arbitration in [LOCATION]. Either Valuation Advisors LLP or you may serve upon the other by

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certified mail a written demand that the dispute, explaining in detail its nature, be submitted to arbitration. Within ten (10) days, after service of such demand, each of us shall appoint a neutral arbitrator from the approved list of mediators and arbitrators appointed by the [COURT] in and for [LOCATION]. If either of us fails within the specified time to appoint an arbitrator, the single appointed arbitrator will have the right to decide alone, and his/her decision will be binding on both of us. The two appointed arbitrators shall select and appoint an independent third arbitrator. The written, and signed under oath, decision of two arbitrators shall be final and binding upon us. The arbitrators shall decide the total of the expenses, including reasonable attorney's fees, and award them to the prevailing party. If the two appointed arbitrators fail to agree upon a third arbitrator within ten (10) days after their appointment, then either of us may apply, upon notice to the other, to any court of competent jurisdiction in [LOCATION], for the appointment of a third arbitrator, and any such appointment shall be binding upon us. Judgment on the arbitrators' decision, including the decision on who is to pay expenses, may be entered by any court of competent jurisdiction in [LOCATION].

DELIVERY AND TIMING
Our ability to deliver a final valuation report is dependent upon our timely receipt of the required information. We will use our best efforts to meet any reasonable deadlines. We are prepared to begin this assignment upon authorization and estimate that we will complete the engagement in approximately [TIME ESTIMATE – NUMBER OF DAYS] after timely receipt of all requested information.

GOOD FAITH OPINION OPTIONAL - DAUBERT CLAUSE
CLIENT acknowledges that the conclusion of value rendered by the valuation analyst is its good faith opinion supported by a reasonable amount of research and analysis, but it is only the unbiased judgment of the valuation analyst. Failure of its opinion to be accepted for any reason by any party, person, or government entity shall not constitute a breach of any of the valuation analyst's duties under this agreement, shall not constitute negligence of any kind on the part of the valuation analyst, shall not give rise to any cause of action by the client, and shall not relieve the client of any duties.

TERMINATION
Failure to make the payments required by this agreement, or failure by you to comply with the terms of this agreement will give us the sole option to terminate the agreement.

ACCEPTANCE
This agreement will become effective when we receive a signed copy of this letter and the requested retainer. Please sign and return the enclosed copy of this letter, with the $RETAINER retainer, in the enclosed preaddressed envelope by [ENGAGEMENT CUTOFF DATE]. If we do not receive these items by this date, and you do not inform us otherwise, we will presume that you do not

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intend to engage our Firm. If the need for additional services arises, we will revise our agreement with you and we will enumerate these revisions in an addendum to this letter.

Thank you for the opportunity to be of service to you.

Very truly yours,

VALUATION ADVISORS LLP
For the Firm

Sarah Valuator, CPA, CVA
Partner

Accepted ___________________________________

Date ______________________________________

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APPENDIX A
ASSUMPTIONS & LIMITING CONDITIONS

NOTE: This is an illustrative list of assumptions and limiting conditions and is not meant to be all-inclusive. The member should include those assumptions and limiting conditions that are applicable to their engagement. The items included in this list may be duplicative.

The engagement is subject to the following assumptions and limiting conditions.

1. a. The conclusion of value arrived at herein is valid only for the stated purpose as of the date of the valuation., or,

   b. This valuation is made for the purpose stated in the report and is to be used in its entirety. No third parties should rely on the information contained in this report without the advice of their attorney or accountant, and without confirming for themselves the information contained herein. Neither the report nor the information it contains should be used for any other purpose or function, and it is invalid if so used. Neither this appraisal nor any part of it shall be used separately or in connection with any other appraisal., or,

   c. This report and the conclusion of value arrived at herein are for the exclusive use of Valuation Advisors LLP's client for the sole and specific purposes as noted herein. They may not be used for any other purpose or by any other party for any purpose. Furthermore the report and conclusion of value are not intended by the author and should not be construed by the reader to be investment advice in any manner whatsoever. The conclusion of value represents the considered opinion of Valuation Advisors LLP based on information furnished to them by [CLIENT or ENTITY] and other sources.

2. Nothing came to our attention to cause us to believe that all facts and data set forth in this report are not true and correct. We have not knowingly withheld or omitted anything affecting value.

3. Valuation Advisors LLP and its associates have no present or contemplated future interest in the subject property of this report. We have no interest in or bias with respect to the subject property or to the owners thereof

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4. a. The fee for this valuation is not contingent upon value reported and is valid only for the purpose specified herein. We have no responsibility or obligation to update this report for events or circumstances occurring subsequent to the date of this report., or,

   b. The conclusion of value reflects facts and circumstances existing as of the valuation date. Except as noted, Valuation Advisors LLP has not considered subsequent events and we have no obligation to update our conclusion of value for such events.

5. All opinions as to values stated are presented as our considered opinion based upon the facts and data as set forth in the report. No responsibility is assumed for a seller's inability to obtain a purchaser at the values reported herein.

6. a. No opinion is intended to be expressed for matters that require legal or other specialized expertise, investigation, or knowledge beyond that customarily employed by valuation specialists valuing a business, a business ownership interest, security, or intangible asset., or,

   b. No responsibility is assumed for matters of a legal nature or other specialized expertise, investigation or knowledge beyond that customarily employed by appraisers valuing businesses. Valuation Advisors LLP assumes no responsibility for matters of a legal nature affecting the property appraised, nor is any opinion of title rendered. The appraisal assumes ownership in the highest form. Other than any specific exceptions described within the report, in reliance on management's representations, Valuation Advisors LLP has not reviewed any legal documents including, but not limited to, the articles of incorporation and bylaws (including amendments), minute books, distribution or franchise agreements, leases, employee or collective bargaining agreements, documents related to litigation or the like, warranties, guarantees, or loan agreements, or ESOP/ESOT agreements. To the extent Valuation Advisors LLP has reviewed such documents, it is acknowledged that evaluation of them, relative to any legal considerations or impact is outside the skills of the appraiser.

7. Financial statements and other related information provided by [CLIENT or ENTITY] or its representatives, in the course of this engagement, have been accepted without any verification as fully and correctly reflecting the enterprise's business conditions and operating results for the respective periods, except as specifically noted herein. Valuation Advisors LLP has not audited, reviewed, or compiled the financial information provided to us and, accordingly, we express no audit opinion or any other form of assurance on this information.

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8. Public information and industry and statistical information, if obtained, has been derived from sources we believe to be reliable. However, Valuation Advisors LLP makes no representation as to the accuracy or completeness of such information and has performed no procedures to corroborate the information.

9. We do not provide assurance on the achievability of the results forecasted by [ENTITY] because events and circumstances frequently do not occur as expected; differences between actual and expected results may be material; and achievement of the forecasted results is dependent on actions, plans, and assumptions of management.

10. This report is a valuation report designed to give a conclusion of value. It is not an accounting report and it should not be relied upon to disclose hidden assets or to verify financial reporting. The report is an opinion of value of the specific assets and liabilities considered by Valuation Advisors LLP.

11. The conclusion of value arrived at herein is based on the assumption that the current level of management expertise and effectiveness would continue to be maintained, and that the character and integrity of the enterprise through any sale, reorganization, exchange, or diminution of the owner's participation would not be materially or significantly changed.

12. Valuation Advisors LLP does not purport to be a guarantor of value. Valuation of closely held companies is an imprecise science, with value being a question of fact, and reasonable people can differ in their opinions of value. Valuation Advisors LLP has, however, used conceptually sound and commonly accepted methods and procedures of valuation in determining the opinion of value included in this report.

13. Neither all nor any part of the contents of this report (especially the conclusion of value, the identity of any valuation specialist(s), or the firm with which such valuation specialists are connected or any reference to any of their professional designations) should be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other means of communication without the prior written consent and approval of Valuation Advisors LLP.

14. This written business valuation contains historical and normalized financial statements, as well as other financial presentations, used solely in developing and presenting the valuation of the entity, specified assets, and/or equity interest of such entity. These financial statements may contain departures from generally accepted accounting principles (GAAP) or an other comprehensive basis of accounting (OCBOA) because the purpose of such

statements is solely to assist in developing and presenting the business valuation of an entity, specified assets, and/or equity interest of such entity. For this reason, it is understood by all parties that the financial statements, as well as other financial presentations, included in this written business valuation will not be used to obtain credit or for any purpose other than developing and presenting a business valuation of the entity, specified assets, and/or equity interest of such entity.

15. Users of this business valuation report should be aware that business valuations are based on assumptions regarding future earnings potential and/or certain asset values, which may or may not materialize. Therefore, the actual results achieved in the future will vary from the assumptions utilized in this valuation, and the variations may be material.

16. We have relied upon the representations of the owners, management, and other third parties concerning the value and useful condition of all equipment used in the business and any other assets or liabilities except as specifically stated to the contrary in this report. We have not attempted to confirm whether or not all assets of the business are free and clear of liens and encumbrances, or that the company has good title to all assets.

17. The valuation engagement and its conclusions are subject to review upon presentation of data, which may have been undisclosed or not available at the time of this report.

18. In connection with this engagement, Valuation Advisors LLP appraised none of the fixed assets.

19. Future services regarding the subject matter of this report, including, but not limited to testimony or attendance in court, shall not be required of Valuation Advisors LLP unless previous arrangements have been made in writing.

20. Valuation Advisors LLP is not an environmental consultant or auditor, and it takes no responsibility for any actual or potential environmental liabilities. Any person entitled to rely on this report, wishing to know whether any such liabilities exist, or the scope and their effect on the value of the property, is encouraged to obtain a professional environmental assessment. Valuation Advisors LLP does not conduct or provide environmental assessments and has not performed one for the subject property.

21. No change of any item in this appraisal report shall be made by anyone other than Valuation Advisors LLP, and we shall have no responsibility for any such unauthorized change.

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22. Unless otherwise stated, no effort has been made to determine the possible effect, if any, on the subject business due to future Federal, state, or local legislation.

23. Unless otherwise informed or determined independently by Valuation Advisors LLP, it is assumed that there are no regulations of any government entity to control or restrict the use of the subject business's underlying assets and that the underlying assets will not operate in violation of any applicable government regulations, codes, ordinances, or statutes. Valuation Advisors LLP also assumes that, unless otherwise informed or determined independently, the subject business is in compliance with all federal, state and local laws and regulations, as well as up to date in regard to all filing and reporting requirements.

24. Possession of this report, or a copy hereof, does not carry with it the right of publication of all or any part of this report without the expressed written consent of the Valuation Advisors LLP, and then only in the event of proper attribution. Should you provide copies, or the right to review, to others, said other parties may be assured that this report, while performed in the employ of our client, was prepared on a nonadvocacy basis. Said other parties, however, are cautioned that Valuation Advisors LLP has no duty to you, and therefore, no warranty is expressed or implied. Nothing in this report is intended to replace any third party's independent sole judgment, due diligence, or decision to seek legal, accounting or valuation counsel. All such other parties will be considered "unintended users" under the terms of our engagement.

25. This appraisal, unless specifically stated otherwise herein, assumes there are neither litigious, regulatory compliance and/or similar problems, nor restrictions or other qualifications within the documents referred to above, which could materially affect the value of the property being appraised. No representations or warranties are expressed or implied regarding such conditions and no consideration has been given to the possible effects of any such conditions.

26. Neither our opinion of value nor this report constitutes advice for any specific action.

27. Financial restructuring or a public offering has not been directly considered. If material changes, other than those specified herein, occur in the ownership, financing, or public offering opportunity, the impact upon value could be significant and some of the assumptions inherent in this valuation could be invalid.

28. In the event, differences exist between the financial data contained in a primary year's financial statements and the amounts shown for the same item in the prior year column of

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the following year's financial statements, it is understood we will use the amounts reflected in the prior year column of the following year's statements.

29. Valuation Advisors LLP has not made a specific compliance survey or analysis of the subject property to determine if it is subject to, or in compliance with, the American Disabilities Act of 1990, and this valuation does not consider the effect, if any, of noncompliance.

30. Unless otherwise provided for in writing and agreed to by both parties in advance, the extent of the liability for the completeness or accuracy of the data, opinions, comments, recommendations and/or conclusions contained in this report shall not exceed the amount paid to the appraiser for professional fees and, then only to the party(s) for whom this report was prepared.

31. If prospective financial information approved by the Client and/or the Company has been used in our work, Valuation Advisors LLP has not audited, reviewed, or compiled the prospective financial information and therefore, does not express an audit opinion or any other form of assurance on the prospective financial information or the related assumptions. Events and circumstances frequently do not occur as expected and there will usually be differences between prospective financial information and actual results, and those differences may be material. Valuation Advisors LLP does not provide any assurance on the achievability of forecasts provided. Achievement of the forecasted results is dependent on actions, plans, and assumptions of management.

32. The conclusion of value is based on the stated definition of value. An actual transaction involving the business, the business ownership interest, the security, or the intangible asset may occur at a higher or lower value, depending on the circumstances surrounding the business, the business ownership interest, the security, or the intangible asset, and the motivations and knowledge of both the buyers and sellers at that time. Valuation Advisors LLP makes no guarantees about what values individual buyers and sellers may reach in an actual transaction.

33. Valuation Advisors LLP assumes there are no other hidden or unexpected conditions of the entity that would adversely affect value, other than those indicated.

34. Valuation Advisors LLP has not knowingly withheld or omitted anything from our valuation that would affect the conclusion of value.

35. Valuation Advisors LLP did not consider the effect, if any, of Internal Revenue Code §2701 through §2704, nor do we express any opinion as to its applicability

APPENDIX XIII

The Core Body of Knowledge for Business Valuations

(Revised February 3, 2009)

SUBJECT MATTER	Percentage Emphasis on CVA/AVA Exam
I. OVERVIEW	**4%**
A. Purpose for business valuation	
1. Financial accounting	
2. Tax valuations	
3. Litigation	
4. Merger and acquisition	
B. Standards of value	
1. Definitions of standards of value, including	
a) Fair market value	
b) Fair value	
(1) Statutory	
(2) Financial reporting	
c) Investment (strategic) value	
d) Intrinsic (fundamental) value	
2. Relationship between purpose of the valuation and standard of value	
C. Premise of value	
1. Going concern	
2. Assemblage of assets	
3. Liquidation (orderly or forced)	
D. Levels of value	
1. Lack of control (minority) v. control	
2. Marketable v. non-marketable	
3. Strategic and investment value	
II. PROFESSIONAL RESPONSIBILITIES, QUALIFICATIONS, AND REGULATORY STANDARDS	**4.5%**
See Appendix I for country-specific professional responsibilities, qualifications, and regulatory standards.	
III. ENGAGEMENT ACCEPTANCE AND PLANNING	**3%**
A. Defining the engagement	
1. Valuation date and its importance	
B. Engagement Letters	
1. Purpose	
2. Content	
C. Acceptance	
1. Experience	
2. Staffing	
3. Expectations	
IV. QUALITATIVE ANALYSIS	**8%**
A. Sources of Data	
B. Economic Environment	
1. Macro-environment	

SUBJECT MATTER	Percentage Emphasis on CVA/AVA Exam

a) National economic data
b) Regional economic data
c) Metropolitan economic data
d) Relationship of economic activity to valuation
e) International elements and impact Competitive analysis

2. Micro-environment

C. Industry background
1. Economic data
2. Structure, trends, and life cycle

D. Company background
1. Site visit and discussions with management
2. History and nature
3. Economic data (cost structure, pricing power, marginal analysis)
4. SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats)

V. QUANTITATIVE ANALYSIS **16.5%**

A. Financial statements
1. Source (audited/reviewed/compiled/tax returns/internal)
2. Number of years to obtain
3. Common size
4. Trend analysis
5. Ratios
6. Comparative analysis
a) Specific company
b) Industry averages

B. Adjustments to financial statements
1. Normalizing
a) Control v. non-control
b) Discretionary
c) Reasonable compensation analysis
d) See Appendix II for country-specific accounting principles
e) Extraordinary/non-recurring
2. Operating v. non-operating items
3. Off-balance sheet and unrecorded items

C. Statistical Analysis
1. Measures of central tendency (arithmetic, harmonic, geometric means)
2. Measures of dispersion (including variance and standard deviation)
3. Statistical strengths of numerical relationships (including covariance, correlation, coefficient of determination, and coefficient of variation)
4. Linear regression

D. Types of benefit streams and selection
1. Selection of appropriate time periods (including mid-year convention)
2. Selection of appropriate type of income/cash flow
3. Growth assumptions

SUBJECT MATTER	Percentage Emphasis on CVA/AVA Exam

a) Trend line projected
b) Constant
c) Erratic
d) Level
e) Declining growth approaches

4. Historical v. projection based on considerations
5. Relating effects due to economic/industry events and trends
6. Pass-through entities—tax effecting of the benefit stream

VI. VALUATION APPROACHES **27.5%**

A. Income approach
1. General theory
2. Defining applicable income/cash flow
3. Sources of data
4. Capitalization/discount rates
5. Commonly used methods
   a) Capitalized economic income/cash flow method (CCF), including Gordon Growth Model (constant growth model)
   b) Discounted economic income/cash flow method (DCF), including Gordon Growth Model (two stage model)
   c) Excess earnings (cash flow) method
      (1) See Appendix III for country-specific applications of the excess earnings method
      (2) Reasonable rate method
   d) Dividend paying capacity

B. Market approach
1. General theory
2. Commonly used methods
   a) Transactions in subject company's stock
   b) Transactions/sales of companies similar to subject
      (1) Guideline public companies
         (a) General theory
         (b) Selecting guideline companies
            i) Sources of data
            ii) Size adjustments
         (c) Equity v. invested capital (including multiples)
         (d) Selection of appropriate time periods
         (e) Selection of appropriate multiples
            i) Adjusting for growth, size, and company specific risk
      (2) Guideline merged and acquired companies
         (a) General theory
         (b) Sources of data
         (c) Consideration of the selection of data points
         (d) Transactional databases

SUBJECT MATTER	Percentage Emphasis on CVA/AVA Exam

i) See Appendix IV for country-specific transactional databases

C. Asset Approach
1. General theory
2. Sources of data
3. Commonly used methods
a) Book value
b) Adjusted net asset method
c) Excess earnings method
(1) See Appendix III for country-specific applications of the excess earnings method
(2) Reasonable rate method
d) Liquidation method (forced or orderly)
4. Identifying and valuing intangible assets
a) Approaches and methods
b) Estimated life
c) Impairment
5. Tax effecting the balance sheet (built-in capital gains)

D. Sanity Checks
1. General theory
2. Sources of data
3. Commonly used methods
a) Industry formulas ("Rules of Thumb")
b) Justification of purchase

E. Reconciliation of indicated values

VII. COST OF CAPITAL CONCEPTS AND METHODOLOGY, AND OTHER PRICING MODELS — **15%**

A. Build-up method
1. Risk free rate
2. Equity risk premium
3. Size risk premium
4. Industry equity risk premium
5. Company specific risk
6. Supply side equity risk premium
7. Long-term sustainable growth
8. Other
9. See Appendix V for country-specific sources of risk premiums

B. Capital asset pricing model (CAPM) and Beta (ß) including un-levered and re-levered Betas

C. Weighted average cost of capital

D. Converting after tax risk rates to pre-tax rates

E. Other recognized methods

VIII. DISCOUNTS, PREMIUMS, AND OTHER ADJUSTMENTS — **15.5%**

A. Levels of value and effect on discounts and premiums
1. Synergistic value

SUBJECT MATTER	Percentage Emphasis on CVA/AVA Exam
2. Control value	
3. Non-controlling, marketable value	
4. Non-controlling, non-marketable value	
B. Adjustments for Control Issues	
1. General theory	
2. Sources of data	
3. Ownership characteristics	
4. Magnitude	
5. Relationship to how benefit stream is defined	
C. Adjustments for Marketability Issues	
1. General theory	
2. Sources of data	
3. Ownership characteristics	
4. Restrictions on transferability	
5. Magnitude	
6. Models	
D. Discounts and premiums—understanding the empirical studies	
E. See Appendix VI for country-specific entity structures	
F. Allocation between Voting and Non-voting stock	
G. Professional v. practice goodwill	
H. Other valuation discounts and adjustments	
I. Current issues	
J. Subsequent events	
IX. RELATED TOPICS	**6%**
A. Case law—See Appendix VII for country-specific case law issues	
B. Intellectual property	
1. General theory	
C. See Appendix VIII for country-specific financial reporting issues	
D. See Appendix IX for country-specific judicial guidance information	
E. Roles of the valuation analyst in litigation services	
1. Expert witness	
2. Consultant	
3. Fact witness	
4. Other practitioner role	
F. See Appendix X for country-specific special classes of securities	

Appendices for Valuations in the United States

APPENDIX I

In the United States, the following bodies issue statements on professional responsibilities, qualifications, and regulations:

A. NACVA—National Association of Certified Valuators and Analysts
B. AICPA—American Institute of Certified Public Accountants
   1. Code of Professional Conduct
   2. Statement on Standards for Consulting Services, No. 1
   3. Statement on Standards for Valuation Services, No. 1
C. ASA—American Society of Appraisers
D. IBA—Institute of Business Appraisers
E. The Appraisal Foundation (USPAP—Uniform Standards of Professional Appraisal Practice)
   1. General and ethical
   2. Standard No. 9
   3. Standard No. 10
F. IRS—Internal Revenue Service
   1. Circular 230
   2. Business Valuation Guidelines
   3. Preparer penalties and disbarment
G. SEC—Securities and Exchange Commission
   1. Sarbanes-Oxley Act of 2002 and related SEC Rules
H. FASB—Financial Accounting Standards Board
I. DOL—Department of Labor
J. Ethical considerations
   1. Advocate v. expert
   2. Independence
K. Other Applicable rules, requirements, and authoritative sources

APPENDIX II

In the United States, financial statement adjustments include changes to put the statements in compliance with Generally Accepted Accounting Principles (GAAP)

APPENDIX III

In the United States, use of the excess earnings method should include consideration of the Treasury Method.

APPENDIX IV

In the United States, examples of transactional databases include:

1. BIZCOMPS®
2. Institute of Business Appraisers
3. Pratt's Stats
4. Done Deals
5. Mergerstat
6. Others

APPENDIX V

In the United States, Morningstar/Ibbotson and Duff & Phelps are two standard sources of risk rates.

APPENDIX VI

In the United States, examples of business entities include:

1. S-corporation
2. C-corporation
3. Partnership
4. Limited liability company
5. Proprietorship

Special issues for the various forms should be considered.

APPENDIX VII

In the United States, case law directly related to business valuations is found for:

1. Income taxation
2. Estate and gift taxation
3. Employee Stock Ownership Plans
4. Family law
5. Commercial law
6. Other

APPENDIX VIII

In the United States, special valuation issues arise when reporting Fair Value for financial reporting purposes.

APPENDIX IX

In the United States, the Federal Rules of Civil Procedure (Rule 26) provide judicial guidance.

APPENDIX X

In the United States, there are several special classes of securities:

1. Preferred stock
2. Convertible instruments
3. Stock options and other derivative instruments

— Approved by the Valuation Credentialing Board
January 21, 2009

APPENDIX XIV

Instructions For Self–Study Participants

Self–Study Instructions:

- After studying each chapter of the text, complete the Chapter Review Exam provided at the end of each chapter to determine your level of understanding.
- Compare your answers to those provided at the back of the text and reread the applicable materials again as needed.
- When you've finished your review of all chapters and appendices, complete the CPE "Self–Study" Exam provided near the back of the text.

    - Mark your answers by circling the correct answer for each question.
    - Mail the exam to:

CPE Exam Coordinator
NACVA
5217 South State Street, Suite 400
Salt Lake City, UT 84107

PLEASE NOTE: NACVA does not provide answers to its exams to participants. You will be graded pass/fail. Passing requires 70% of the answers to be correct.

BUSINESS VALUATIONS:

Fundamentals, Techniques and Theory (FT&T)

CPE Exam for Self Study Participants Only

BUSINESS VALUATIONS:
FUNDAMENTALS, TECHNIQUES AND THEORY
SELF-STUDY EXAM

This examination **must be completed and returned** to the Consultants' Training Institute **within one (1) year of the date the exam was issued, or the date this course was purchased in order to receive CPE**. Passing grades will receive 12 hours of Continuing Professional Education (CPE) credits. The CTI is an approved sponsor under the Quality Assurance Service program (QAS), offering the highest caliber of self-study courses and recognized by the National Association of State Boards of Accountancy.

Name: ____

Firm Name: ____

City: _________________________________ State: _______________ ZIP: ____________

Tel: ____________________ Fax: _____________________ E-mail: _______________________

Please Complete: I hereby attest that I have completed the course of study as prescribed by NACVA/CTI and have completed the exam being submitted herein. To study the materials, along with completing this examination, has taken me _____ total hours. *In accordance with the standards of the National Registry of CPE Sponsors, self-study CPE credits have been granted based on a 50-minute hour*.

Signature: ____ Date: ______________________

Earn 12 Hours of CPE for COMPLETING THIS EXAM*

The Cost is only (check applicable)

❑ $85.00 for non- NACVA/IBA Members

❑ $76.50 for NACVA/IBA Members

Please complete the information requested below and return the exam for grading *:

Check #**:** ________ (payable: NACVA) *or* ❑ VISA ❑ MasterCard ❑ AMEX ❑ Discover ❑ Diners Club

Credit Card #: ____ Expiration Date: ____________

Address: ❑ Same, or ___________________________ City: ____________ State: ______ ZIP: _______

Authorized Signature† ____ Date: __________________

***** If you paid for CPE with your original purchase of this course, you do not need to complete this section. If additional staff in your firm also want CPE credit for studying this course, simply have them copy and take this exam and submit it to NACVA with the appropriate fee. Please allow 4 to 6 weeks for grading.

† By signing this form, you are authorizing the National Association of Certified Valuators and Analysts (NACVA) and/or the Consultants' Training Institute (CTI) to charge your account for the amount indicated above. In addition, your signature will authorize NACVA and/or the CTI to confirm the above information via e-mail and/or fax, if necessary, and authorize NACVA and/or the CTI to use either medium for future communication. NACVA and/or the CTI will not disclose or share this information with third parties to secure confidentiality.

MAIL EXAM TO:

Consultants' Training Institute
5217 South State Street, Suite 400
Salt Lake City, UT 84107-4812
Tel: (801) 486-0600; Fax: (801) 486-7500
E-mail: Info@TheCTI.com

Circle the correct answer

1. The development of the capitalization or discount rate requires which of the following?

   a. Identification of cash flow
   b. Retention as a business valuation analyst
   c. A determination of risk
   d. None of the above

2. Which body issues regulations pertaining to Employee Stock Ownership Plans (ESOP)?

   a. NACVA
   b. DOL
   c. FASB
   d. AICPA

3. Which factors have dramatically expanded the demand for business valuation?

   a. More marketing by NACVA
   b. Increase in the number of available BV analysts
   c. IRS requirements
   d. Economic instability and age demographics

4. What event in the 1920s forced the need for valuations of closely held businesses?

   a. Prohibition
   b. The depression
   c. The end of World War I
   d. The creation of the AICPA

5. Which standard provides authoritative guidance for gift, estate, and inheritance taxes?

   a. RR 69-50
   b. ASC 805
   c. TAM 69543330005
   d. RR 59-60

6. The most common reasons for non-tax valuations are:

   a. Estates, gifts, and lump sum purchase price
   b. Gift, ESOP, and charitable contributions
   c. Buy/sell agreements, litigation, and marital dissolution
   d. FASB 142, gifting, and purchase agreements

7. The liquidation value is:

   a. The value of a business enterprise that is expected to continue to operate in the future. The intangible elements of going concern value result from factors such as having a trained work force, an operational plant, and the necessary licenses, systems, and procedures in place.
   b. The value that includes all costs of duplicating a business rather than acquiring a business.
   c. The value of a business enterprise that is not expected to continue future operations.
   d. The value of a business enterprise set by a judge to satisfy a judgment in a marital dissolution.

8. Which IRS pronouncement is considered the most valuable piece of IRS literature as it pertains to business valuations?

   a. RR 59-60
   b. ARM 34
   c. RR 68-609
   d. RR 98-34

9. Which IRS pronouncement is referred to as the Excess Earnings Method?

   a. RR 59-60
   b. ARM 34
   c. RR 68-609
   d. RR 98-34

10. Which IRS pronouncement introduced the concept of Goodwill?

    a. RR 59-60
    b. ARM 34
    c. RR 68-609
    d. RR 98-34

11. Which IRS pronouncement sets forth a methodology to value certain compensatory stock options?

    a. RR 59-60
    b. ARM 34
    c. RR 68-609
    d. RR 98-34

12. The 5 major steps of a valuation engagement are:

    a. Write the engagement letter, gather the information, define the value, prepare the data, and issue the valuation report
    b. Define the engagement, gather the information, analyze the information, estimate enterprise value, and prepare/issue the valuation report
    c. Define the engagement, write the valuation engagement letter, gather company information, prepare the data, and issue the valuation report
    d. Gather information on the industry and the company, analyze the information, estimate company value, delineate all the limiting conditions, and issue the valuation report

13. Three basic economic statements which you might include in your valuation are:

    a. Income statement, balance sheet, depreciation/amortization schedule
    b. Balance sheet, income statement, cost of sales statement
    c. Balance sheet, income statement, cash flow statement
    d. Income statement, balance sheet, debit/credit journal

14. Which of the following are typical categories to review in normalizing accounts for a valuation:

    a. Doubtful accounts, notes receivable, leases, and taxes
    b. Notes receivable, leases, compensation but not liabilities and insurance
    c. Inventory methods, depreciation methods but not non-operating items
    d. Capitalization and expensing, recognition of income, and expenses and taxes but not non-recurring or extraordinary costs

15. The formula to calculate the percentage growth in sales from period one to period two is:

    a. Period 2 net sales less period 1 net sales divided by period 1 net sales
    b. Period 1 net sales less period 2 net sales divided by period 1 net sales
    c. Period 1 net sales less period 2 net sales divided by period 2 net sales
    d. Period 2 net sales less period 1 net sales divided by period 2 net sales

16. The formula for calculating gross margin percentage is:

    a. Net sales less cost of sales divided by cost of sales
    b. Net sales less cost of sales divided by net sales
    c. Cost of sales less net sales divided by cost of sales
    d. Cost of sales less net sales divided by net sales

17. The formula for calculating the operating margin percentage is:

    a. Income from operations divided by cost of sales
    b. Income from operations divided by sales commissions
    c. Income from operations divided by number of sales per year
    d. Income from operations divided by net sales

18. To calculate inventory turnover:

    a. Multiply the cost of goods sold by half the sum of beginning and ending inventory
    b. Divide the operating margin plus cost of goods sold by the sum of beginning inventory plus ending inventory
    c. Divide the sales commissions plus cost of goods sold by the ending inventory less the beginning inventory
    d. Divide the cost of goods sold by the sum of beginning inventory and ending inventory divided by two

19. Current assets divided by current liabilities calculates:

    a. Debt to equity ratio
    b. Current ratio
    c. Return on equity
    d. Net fixed assets ratio

20. Return on assets is calculated by:

    a. Obtaining net income divided by the product of total assets at the beginning of the period plus total assets at the end of the period divided by two
    b. Obtaining gross income divided by one half of the total assets at the end of the period
    c. Obtaining gross income plus total debt divided by one half of the total assets at the beginning of the period and one half of the total assets at the end of the period
    d. Obtaining net income plus net sales and dividing by one half of the total assets at the beginning of the period plus total assets at the end of the period

21. Earnings per share is:

    a. The price of risk-the difference between the expected rate of return on a portfolio and the reasonable rate
    b. The price of the dividend divided by the price
    c. The market price per share divided by the book value per share
    d. The net income less preferred stock dividends divided by the number of common shares outstanding

22. One of the factors the analyst should review in order to define the benefit stream (future income) potential of a company is:

    a. The amount the analyst is being paid for the valuation
    b. The method used by the listing broker to estimate the price of the business
    c. The need to use either earnings or cash flow as well as whether the valuation is using sellers discretionary cash/income EBIT, EBITDA or another type of earnings
    d. Net income after tax plus non-cash charges, less applicable capital expenditures, less additions to net working capital to support operations plus changes in long-term debt from borrowings required for operations less changes in long-term debt for repayments equals net cash flow to equity

23. Using the Weighted Average Method (placing the greatest predictive value on the most current year, 20X3) estimate the future benefit for Jennings Baker Company:

Year	Earnings
20X1	($15,300)
20X2	32,400
20X3	89,600

a. 43,050
b. 53,050
c. 63,050
d. 73,050

24. Historical earnings are often used to estimate future income, when:

a. The purpose for the valuation is tax, buy-sell, or divorce
b. When history represents future operations and the future benefit stream is linear
c. When industry changes are minimal or don't affect the subject company in a material manner
d. When the local economic forecast for the area does not adversely affect the subject company
e. All of the above

25. Projected earnings are often used to estimate future income, when:

a. The purpose for the valuation is tax, buy-sell, or divorce
b. The history represents future operations and future benefit stream is linear
c. The industry changes are minimal or don't affect the subject company and it is mature
d. The economic forecasts for the area of domicile do not adversely affect the subject company so history is a good proxy
e. None of the above

26. Jason Consulting has the following normalized net cash flow to equity:

Year	Benefit Stream
1992	120,100
1993	(12,300)
1994	135,900
1995	57,900
1996	(25,600)
1997	10,700
1998	55,600
1999	117,800
2000	122,300
2001	175,000

What is the weighted average cash flow (rounded) for the period?

a. $120,000
b. $188,000
c. $88,000
d. $100,000

27. The capitalization rate and discount rate is actually a yield rate based on:

    a. Safe or reasonable rate plus compensation for investment
    b. Safe or reasonable rate plus compensation for risk
    c. Safe or reasonable rate plus compensation for inventory loss
    d. Safe or reasonable rate plus compensation for amortization and depreciation

28. Earnings for Deft Company are as follows:

Year	Earnings
1999	2,230,000
2000	2,240,000
2001	1,245,000
2002	1,230,000
2003	1,230,000

    If the capitalization rate is 16%, the trend for the earnings in the future is:

    a. Slightly down
    b. Stagnant
    c. Slightly up
    d. Increased by 16%
    e. None of the above

29. Earnings for Deft Company are as follows:

Year	Earnings
1999	2,230,000
2000	2,240,000
2001	1,245,000
2002	1,230,000
2003	1,230,000

    If the discount rate is 19% and the capitalization rate is 16%, using the year 2003, and the 5th year present value factor of .747258, the present value of the terminal value is:

    a. 4,983,000
    b. 7,918,000
    c. 5,917,000
    d. 5,745,000
    e. None of the above

30. In addition to the type of earnings selected, what are the two primary criteria for determining a capitalization or discount rate?

    a. Yield currently offered to attract capital or investment to the subject business type plus a risk factor relative to the company being valued
    b. Yield currently offered to attract capital or investment to the subject business type plus the public P/E ratio average of companies in the same business
    c. A risk factor relative to the company being valued plus the average of the historical growth rates of companies in the same business
    d. All of the above

31. The beta for Left Hand Glove Company is -0.8. This means:

    a. The company is slightly more volatile than its industry
    b. The company carries the same volatility as its industry
    c. The company is slightly less volatile than its industry
    d. Nothing. Beta measures terminal value

32. The price earnings ratios for 4 public companies are: 5.2, 4.6, 3.4, 4.86. The after-tax capitalization rate is:

    a. 16.00%
    b. 18.08%
    c. 20.19%
    d. 22.15%

33. What are the three approaches to a valuation?

    a. Asset, Market, Going Concern
    b. Income, Market, Tax
    c. Market, Asset, Tax
    d. Asset, Market, Income

34. Is valuation an art or a science?

    a. Neither
    b. Both
    c. An art but not a science
    d. A science but not an art

35. The Adjusted Net Asset Valuation Method is used:

    a. When the valuation analyst needs a minimum or floor value for the company, there are no earnings, the business is a holding company or an investment firm
    b. When the business was liquidated prior to valuation and the earnings met the market test
    c. When assets are under-performing according to the owner and the bank carries a mortgage on the business assets
    d. When the asset method of valuation is the easiest way to perform the calculations of value on the company

36. In Geri Co, the 5 year weighted average historical pretax economic earnings are $1,250,000. The tax rate is 28%. The hurdle and debt rate are 12.25%. The adjusted net assets from prior year-end is $2,050,000. The cap rate applicable to this kind of company is 25% pretax. Determine the value of this business using reasonable rate return on assets.

    a. $3,995,500
    b. $2,050,000
    c. $6,045,500
    d. Cannot be determined from the information provided

37. What is/are the primary factor(s) in determining the magnitude of a discount for lack of control (DLOC)?

    a. The ability to file a dissenting shareholder action
    b. The degree of control the interest holder possesses
    c. The ability to have a vote for each share held
    d. The knowledge management can do whatever it wants

38. What is "DLOM"?

    a. Discount for lack of mobility
    b. Discount for lack of minority interest
    c. Discount for lack of marketability
    d. Discount for lack of maintenance

39. What step(s) must precede the application of applicable discounts?

    a. Gather as much data as possible to support discounts
    b. Determine the base value of the equity or enterprise first
    c. Determine the growth rate of the entity
    d. Insure the hypothetical transaction is not seller financed

40. Which statement(s) is(are) correct?

    a. If the arm's length sale is on a minority basis, then a "discount" will apply to a majority interest
    b. If the arm's length sale is on a majority basis, then a "premium" will apply to a minority interest
    c. None of the above
    d. Both a and b

41. Restricted Stock Studies are considered when quantifying which of the following?

    a. Discounts for minority positions
    b. Discounts for lack of control
    c. Discounts for lack of marketability
    d. Both b and c
    e. Both a and c

42. Which item is true about a *lack of control*?

    a. No voting rights
    b. Usually not to be able to set management compensation
    c. Will receive dividends subordinate to the controlling interests
    d. Can purchase and sell assets held by the company

43. Flotation costs may be described as:

    a. Costs associated with listing a business for sale
    b. Costs associated with obtaining debt financing
    c. Costs associated with creating flotation debentures
    d. Costs associated with taking a closely held business public

44. Which of the following best describes the concept of *marketability*?

    a. The price that is paid for a bundle of rights
    b. The best listing price marketed to the greatest number of buyers
    c. How quickly an interest can be sold and converted to cash
    d. Having control of the assets of a business

45. Which studies or methods are applicable to quantifying the DLOC?

    a. Mergerstat Review Control Premium
    b. Cost of Flotation
    c. Restricted Stock Studies
    d. Pre-IPO Studies
    e. Both a and d

46. What is DLOC?

    a. Discount for lack of control
    b. Discount for lack of cash
    c. Discount for lack of carry-forward tax break
    d. Discount for lack of credit

47. Which of the following is true for a conclusion of value?

    a. A conclusion of value can include a minimum and maximum value.
    b. A conclusion of value includes two recognized levels: opinion of value or estimate of value.
    c. A conclusion of value which includes three recognized levels, one based upon a qualified valuation report, one based on a single expression of value and one determined by the trier of fact in a court of law.
    d. The two levels of a conclusion of value are determined by the method chosen by the analyst using either the Asset, Income or Market approach.

48. What is the difference between a conclusion of value and a calculated value?

    a. A conclusion of value is intended to be the most unambiguous expression of value and, therefore, can only be expressed as a single value. A calculated value may be stated as a range of values when, in the sole professional judgment of the valuation analyst, a conclusion of value cannot be stated
    b. A calculated value is the value provided initially by the analyst before completing all the required procedures. A conclusion of value is provided by the analyst in the valuation report. These two values will always be different but both are valid
    c. A calculated value is intended to be the most unambiguous expression of value and, therefore, can only be expressed as a single value. A conclusion of value may be stated as a range of values when, in the sole professional judgment of the valuation analyst, a calculated value cannot be stated
    d. A calculated value is a single number, as calculated by the analyst. A conclusion of value is a single number, which is approximately midway between a range of values estimated by the analyst
    e. None of the above

49. Per the Professional Standards, engagement letters are:

    a. Not required in litigation cases. The understanding may be oral
    b. Required for each valuation the analyst accepts
    c. Not required by law
    d. Required by law
    e. Required if the analyst is also a CPA

50. An opinion of value is intended by the Professional Standards to be the most unambiguous expression of a conclusion of value.

    a. As such, it should always be the one used by the valuation analyst.
    b. As such, it should be used only when the analyst is absolutely certain all reasonable valuation analysts will agree with the opinion.
    c. As such, it should be used in all long form valuation reports.
    d. An opinion of value is not defined nor referred in the Professional Standards effective January 1, 2011.

51. In litigation related engagements, if the valuation analyst is required to provide a written report, what reporting standards apply?

    a. USPAP
    b. The Professional Standards reporting standards
    c. Whether the analyst needs to provide a written report and what form such written report should take, depends upon the agreement between the client(s) and the analyst. No other standards apply
    d. In addition to complying with any agreement between the parties, the analyst is encouraged to clarify and consider the expectations of the client(s). Therefore, the lawyer's standards apply
    e. None of the above

52. When a valuation analyst is hired to critique a valuation report or reports prepared by another analyst, providing a commentary to the requestor:

    a. This may constitute providing a (an alternative) conclusion of value and, therefore, the Professional Standards' reporting standards may apply.
    b. This constitutes providing a conclusion of value but the Professional Standards' reporting standards do not apply to report review services.
    c. This does not constitute providing an engagement to value a company so none of the Professional Standards apply.
    d. This constitutes providing consulting services therefore, only the Professional Standards' ethics standards apply.

53. In determining the value of an enterprise:

    a. Value the enterprise using the three primary standards of value. Select the standard that provides the highest and best use of value.
    b. Be sure proper care is taken to encompass all possible valuation outcomes even though you may use only one upon which to base your conclusion of value.
    c. Be sure to follow IRS Revenue Ruling 59-60 or document your reasons for deviating from this principle standard.
    d. Remember to keep the same standard of value throughout your report.

54. Proper financial data for a valuation report should include:

    a. Obtain (if at all possible) the most recent five years of the company's financial statements
    b. Determine the accounting basis used and compare the performance to typical industry conventions
    c. Normalized comparable companies for comparison and multiple calculation purposes
    d. Both a and b
    e. None of the above

55. In writing a business valuation report use of third party research firm information:

    a. Is unethical because it means the analyst did not properly research the subject company
    b. Is ethical but creates a red flag that the analyst did not independently research the subject company
    c. Is ethical and an accepted practice. The analyst should read, understand, and directly correlate the material provided by the outside resources to the subject company
    d. Is ethical if the business owner provides the analyst with the research data

56. To convert pretax rates to after-tax rates:

    a. Multiply the pretax rate by 1 minus the tax rate
    b. Divide the after-tax rate by 1 minus the tax rate
    c. Multiply the pretax rate by 1 plus the tax rate
    d. Divide the after-tax rate by 1 plus the tax rate

57. If an analyst determines that the earnings stream of a company is the most appropriate estimate of future benefits, in general, which earnings stream do analysts believe is the most reliable and stable?

    a. Net income from operations
    b. Net income before tax
    c. Net income before tax, depreciation, and amortization
    d. Net income
    e. Net income adjusted for extraordinary items

58. When utilizing a discounted cash flow methodology, ___________ value represents the capitalized economic income once the benefit stream stabilizes, remains constant, grows, or declines at a constant rate.

    a. terminal
    b. fair market
    c. stabilized cash flow
    d. linear benefit stream

59. The only difference between the Build-up Method and the Modified Capital Asset Pricing Model is:

    a. Risk free rate
    b. Size premium
    c. Equity risk premium
    d. Beta
    e. Company specific risk factor

60. A company has a five year weighted average after-tax cash flow for the next year of $125,000. It has been determined the discount rate is 19%, short term expected growth is 11%, and long-term sustainable growth is 3%. The analyst has also determined excess cash of $25,000. Retained Earnings are $452,000 as of the valuation date. What is the value of the company based on the capitalization of after-tax cash flows?

    a. $625,000
    b. $657,895
    c. $781,250
    d. $806,250
    e. $1,258,250
    f. $1,233,250

61. ABC Company has projected the following cash flows:

    Year 1: $85,000
    Year 2: 105,000
    Year 3: 109,000
    Year 4: 115,000

    The analyst has determined an appropriate discount rate is 26% and the long-term growth rate is 2%. What is the terminal value?

    a. $442,300
    b. $488,750
    c. $451,200
    d. $479,200
    e. $217,700

62. In addition to control and marketability discounts/premiums, other modifications may include:

    a. Key person discounts
    b. Lack of diversification discount
    c. Build-in gains discounts
    d. Both a and b
    e. Both b and c
    f. All of the above

63. When the standard of value is fair market value, the three generally accepted levels of value under include:

    a. Controlling interest, marketable minority interest, and non-marketable control interest
    b. Marketable, non-marketable, and specific investor
    c. Controlling interest, non-marketable control value, and marketable control value
    d. Controlling interest, marketable minority, and non-marketable minority

64. The value of a 37% interest in Take'm or Leave'm Corp. was $675,000 before discounts and premiums. Using Mergerstat data the control premium was 34%. In addition the applicable marketability discount was determined to be 35%. What is the fair market value of Take'm or Leave'm?

    a. 289,575
    b. 209,250
    c. 307,250
    d. 335,205

65. Restricted stock studies and pre-IPO studies aid the analyst in quantifying the:

    a. Control premium
    b. Discount for minority interest
    c. Marketability discount
    d. Capitalization rate

66. The three behavioral standards defined by NACVA are:

    a. General, development, and reporting
    b. General, ethical, and reporting
    c. Reporting, developmental, and valuation methods
    d. Ethical, independence, and reporting

67. On an engagement letter, it is encouraged to include:

    a. Purpose of the engagement
    b. Fees for the engagement
    c. Your curriculum vitae
    d. The number of valuations you have performed
    e. Both a and b

68. *The Technical Resource Handbook* is:

    a. A standard issued by the AICPA that all CPAs must follow in addition to the NACVA standards
    b. A reference guide published by NACVA
    c. A handbook on ethical considerations when valuing a business
    d. A keep you out of jail reference card
    e. A resource of unethical analysts

69. Normalized financial statements should allow the analyst to:

    a. Present a financial picture which better represents the economic earning capacity of the entity
    b. Present the subject company in its best financial footprint
    c. Better compare the subject company to appropriate comparable companies
    d. All of the above
    e. Both a and c

70. In Exhibit 10-2, what would be a good reference source to use as a benchmark to determine excess cash?

    a. Ibbotson
    b. BIZCOMPS
    c. RMA
    d. An inquiry with management provides adequate support

71. Ratio Analysis may identify:

        i. Strengths and weaknesses of a company
        ii. How well the company is performing
        iii. Company trends

    a. i and ii
    b. ii and iii
    c. i, ii, and iii
    d. i and iii

72. Which three build-up models are based on the premise of adding a weighted average risk premium based on competition, financial strength, depth and ability of management, earnings, and the national and local economic efforts king to the risk free rate?

   a. Black/Green, Value-Netex, and RRCM
   b. Ibbotson, Black/Green, and Value-Netex
   c. Schilt's Risk Premiu, RRCM, and Black/Green
   d. Schilt's Risk Premium, Value-Netex, and RRCM
   e. Asset, Market, and Income

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FUNDAMENTALS, TECHNIQUES & THEORY

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