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:

1. Asset Based Approach
    a. Book Value Method
    b. Adjusted Net Asset Method
        i. Replacement Cost Premise
        ii. Liquidation Premise
        iii. Going Concern Premise
2. Income Approach
    a. Capitalization of Earnings/Cash Flows Method
    b. Discounted Earnings/Cash Flows Method
3. Market Approach
    a. Guideline Public Company Method
    b. Comparable Private Transaction Method

c. Dividend Paying Capacity Method
d. Prior Sales of interest in subject company

4. Other Approaches

a. Income/Asset

i. Excess Earnings/Treasury Method[1]
ii. Excess Earnings/Reasonable Rate Method[1]

b. Sanity Checks

i. Justification of Purchase
ii. 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 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

[1] Excess Earnings methods may be classified as hybrid methods as they include consideration of both net assets and earnings capacity of the enterprise.

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 the 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]

[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

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 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:

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

- 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:

(Numbers rounded)

Net earnings to equity	$	591,000
Capitalization rate	÷	21.32%
Total (rounded)		2,772,000
Value of non-operating assets	+	771,000
Marketable controlling interest value	$	3,543,000

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

a) Calculate the present value of the annual cash flows:

End of Year	Net Cash Flow	Present Value Factor	Present Value
1	$10,500	0.8065	$ 8,468
2	40,700	0.6504	26,470
3	80,600	0.5245	42,274
4	110,100	0.4230	46,572
5	150,300	0.3411	51,268
			$175,052

b) Calculate the present value of the terminal value:

End of Year	Terminal Value	Present Value Factor	Present Value
5	$626,250	0.3411	$213,614

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:

PV of annual cash flows	$175,052
PV of terminal value	+ 213,614
TOTAL VALUE OF BUSINESS	**$ 388,666**

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:

$$\text{Present Value} = \frac{CF_o (1 + g)}{k - g}$$

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):

$$\text{Present Value} = \frac{CF_1}{(1+k)} + \frac{CF_2}{(1+k)^2} + \ldots + \frac{CF_n}{(1+k)^n} + \frac{\frac{CF_n(1+g)}{k-g}}{(1+k)^n}$$

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 ($CF_n (1+g)/k-g/(1+k)^n$) 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:

$$PV = \frac{CF_1}{(1+k)^{.5}} + \frac{CF_2}{(1+k)^{1.5}} + \frac{CF_3}{(1+k)^{2.5}} + \ldots + \frac{CF_n}{(1+k)^{n-0.5}}$$

The Mid-year Capitalization Convention is written similarly to the traditional capitalization convention; however, it reflects the receipt of CF throughout the year:

$$PV = \frac{CF1(1+k)^{.5}}{k-g}$$

The Mid-year Convention in the two- stage model is written as follows:

$$PV = \frac{CF_1}{(1+k)^{.5}} + \frac{CF_2}{(1+k)^{1.5}} + \frac{CF_3}{(1+k)^{2.5}} + \ldots + \frac{CF_n}{(1+k)^{n-0.5}} + \frac{\left[\frac{CF_n(1+g)}{k-g}\right]}{(1+k)^{n+0.5}}$$

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:

$$\text{Value} = (\text{Price/Parameter})_{comp} \times \text{Parameter}_{Subject}$$

(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™ (ValueSource)
f) Mergerstat®

The IBA and BIZCOMPS® databases cover transactions of relatively small companies. For example, the BIZCOMPS database has over 8,880 transactions, with a median selling price of $135,000. The median revenue of the companies included was $360,000.

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.

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) Alacra
b) Compustat
c) Disclosure
d) Reuters
e) Mergent Company Data Direct
f) OneSource
g) 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	.10	=	(105,000)
(cost of debt in this example)*			
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[7] 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.

[7] 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.

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.

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[8]

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) Value of Intangibles = $\frac{\text{Excess Earnings}}{\text{Capitalization Rate}}$

(2) Value of Intangibles = Excess Earnings x Earnings Multiples

(3) Value of Intangibles = Present Value of Excess Earnings[9]

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.

[8] Goodwill and going concern value are amortizable for tax purposes under Section 197, but tested for impairment under GAAP.
[9] Discounted at an appropriate discount rate, plus the terminal value of the intangible discounted to the present.

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.