APPENDIX X

FT&T
Answers To
Chapter Review Questions
Review Questions Chapter 1 Introduction to Business Valuation

1. Primary opportunities for the valuation analyst can be found in working with:
   a. Business owners, investors, attorneys, and individuals performing valuations for a variety of reasons including estate planning and taxation, litigation support, mergers and acquisitions, and financial statement reporting
      **A is Correct**—As described on page 13 of Chapter One, there are many different purposes for valuations. It should be noted that this list is not comprehensive, there are many other sources of valuation work.
   b. Business owners as only the owner of a business can engage a valuation analyst for a valuation engagement of a business
      **Incorrect**—Though the valuation analyst is often engaged by the owner of the business being valued, this is not the only way a valuation analyst may be engaged. In a divorce case, for example, the marital judge may order a valuation to be performed for the non-owner spouse.
   c. Other CPA firms as every privately held company is required to estimate the value of its intangible assets for financial statement reporting purposes
      **Incorrect**—Although privately held companies may need to determine the value of its intangible assets under FASB Accounting Standards Codification 805 or 350, this is not a requirement nor does this represent the primary opportunity for valuation analysts.
   d. Business owners in order to estimate the value of a group of assets as allocated on Form 8594.
      **Incorrect**—Although Form 8594 is the Asset Acquisition Statement used in allocation of purchase price, this is not a primary source of engagements for valuation analysts.

2. What is the basic difference between an appraisal and a valuation?
   a. The act or process of determining the value of a business, business ownership interest, security, or intangible asset is an appraisal whereas a valuation is the process of determining the value of gems, equipment, furnishings, and other tangible assets to be used in determining the value of a business.
      **Incorrect**—The definitions for a valuation and an appraisal are reversed.
   b. Nothing; they are the same thing.
      **Incorrect**—There are times when valuation analysts will use the term “appraisal report” of a business but never “valuation report” of gems or other tangible assets. Tangible assets (whether used as part of the value of a business or not) require an appraisal by a qualified tangible asset valuator before they can be included in the business valuation. A valuation analyst is not qualified by this training to place a value on a tangible asset, only to place a value on the value of a business, business ownership interest, security or intangible asset.
   c. Appraisal is usually for a tangible asset and a valuation is usually for stock or interest in stock of a company or other intangible asset.
      **C is Correct**—Although the terms are often interchanged in a business valuation, a valuation analyst should define the meaning of each term in any written report, so as to prevent confusion by the report reader.
   d. Valuation is usually for stock or bond or other public security and an appraisal is usually for a non-public asset, stock or bond.
      **Incorrect**—Whether or not a company is public or non-public (private) does not change the meaning of the words valuation and appraisal.
3. Risk management in the valuation niche demands solid training and staying current through continuing education.
   a. True
      A is Correct—The depth of training, along with continuing one’s learning and education helps the valuation analyst better evaluate the risks related to a particular engagement and make better choices.
   b. False
      Incorrect—Lack of appropriate training and not staying current with continuing education increases the risks of misapplying methods, using outdated techniques, and issuing incorrect conclusions of value.

4. A buy/sell agreement:
   a. Avoids litigation
      Incorrect—An agreement, properly drawn and executed, often can prevent litigation if it is entered into at the beginning of a business relationship. Some buy/sell agreements are themselves are subjects of litigation, especially if they do not establish a methodology to be followed by the parties to the agreement.
   b. Notes that an independent valuation is to be performed, when, and why
      Incorrect—Although this seems to be a logical step in any buy/sell agreement, the majority do not contain reference to a business valuation, or reasons under which a valuation should be performed.
   c. Identifies when or what events trigger a buyout, identifies how any buyout will be funded, and identifies the timing of any buyout
      C is Correct—Business owners, especially those in partnerships, or of owners close to retirement, use a buy/sell agreement to define who the new owners of the business will be, how they will pay or be paid for it. What is missing in many is the way to amicably establish the value of the business, often resulting in shareholder disputes.
   d. Always identifies the interest rate, if any, applicable
      Incorrect—Although many modern buy-sell agreements do peg the interest rates to be used, not all of them do so.

5. The most commonly quoted regulatory and professional bodies for business valuation are:
   a. NACVA, AICPA
      Incorrect—The National Association of Certified Valuators and Analysts and American Institute of CPAs are member organizations for valuation analysts and do not regulate conduct of non-members.
   b. IRS, DOL, FASB
      B is Correct—The Internal Revenue Service, Department of Labor and Financial Accounting Standards Board provide regulations for all practitioners to heed.
   c. ASA, IBA
      Incorrect—The American Society of Appraisers and the Institute of Business Appraisers are member organizations for valuation analysts, and do not regulate conduct of non-members.
   d. IACVA, ABV
      Incorrect—The International Association of Consultants, Valuation Analysts is a member organization and does not regulate conduct of non-members. A CPA may be Accredited in Business Valuations by the AICPA, and having an accreditation does not allow that individual to regulate valuations.
6. Three theoretical standards of value are:
   a. Investment value, going concern value, and fair market value
      \textbf{Incorrect}—Going concern value is premise of value
   b. Fair market value, investment value, and fair value
      \textbf{B is Correct}—The theoretical standards of value include fair market value, fair value and investment value
   c. Going concern value, asset value, and fair value
      \textbf{Incorrect}—Both going concern value and asset value are premises of value and not Standards of value.
   d. Book value, fair market value, and liquidation value
      \textbf{Incorrect}—According to the text, book value and liquidation value are both a premise of value; fair market value is the only standard of value listed

7. Fair Market Value is based upon:
   a. In business valuation, a legally created standard of value that applies to specific statutory transactions
      \textbf{Incorrect}—Fair Value is a legally created standard of value that applies to specific statutory transactions.
   b. The market value, the standard of value applicable in cases of dissenting stockholders’ valuation rights. Fair market value, with respect to a dissenter’s shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable
      \textbf{Incorrect}—It is Fair Value (the statutory value) which defines dissenting stockholders’ valuation rights.
   c. The value described by an arms length transaction between a knowledgeable willing buyer and a knowledgeable willing seller
      \textbf{C is Correct}—In its broadest definition, FMV is the amount, price, highest price, most probable price, cash or cash-equivalent price at which property would change hands or the ownership might be justified by a prudent investor or at which a willing buyer and seller would exchange, would agree to exchange, possibly with equity to both and both fully aware of having knowledge or at least acting knowledgeable of the relevant facts, possibly even acting prudently and for self-interest and with neither being under compulsion, abnormal pressure, undue duress or any particular compulsion.
   d. The value described by an arm’s length transaction involving a willing buyer or a willing seller—and depends upon the reason you have been retained to perform a business valuation
      \textbf{Incorrect}—Fair market value, per RR 59-60, mandates both a willing knowledgeable buyer and seller, and is independent of the reason for the valuation.
8. A valuation analyst must match the appropriate standard of value to the purpose for which the valuation engagement is performed.

   a. If the context in which the valuation is to be used is not critical and no lawsuit is in process, then the valuation analyst will always select fair value.
      Incorrect—Fair value will likely be the standard of value described by statute but not always. The valuation analyst must work with the client (and client attorneys if needed) to define the standard of value to be used—it is they who determine the standard of value, not the valuation analyst.

   b. A valuation for buying a business will be the same as for selling that business. It is the nature of the business that defines the standard of value.
      Incorrect—A buyer and seller have differing points of view and will view the subject company differently. A buyer, for example, will look at the synergy element whereas a seller may be looking at retirement. The business is a vehicle, not the determining factor.

   c. A valuation for securing a new loan should be done the same as a valuation in a divorce.
      Incorrect—Mortgage companies do look for investment value. Although both valuations may imply using investment value as the standard of value, for a divorce valuation, state law defines the standard of value to be used in valuing a business in a divorce. The analyst must look to applicable state law for the definition of the standard of value to be used.

   d. The valuation is to be used only for the purpose for which it was done and will likely be inappropriate for another use even by the same company or client.
      D is Correct—Valuations are specific to a point in time and to the reason the valuation was performed. For example, the valuation cannot be re-used, even by the same entity, at a different point in time, as the financial data underlying the analysis will have changed.

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

   a. Does essentially the same thing for a specific client
      Incorrect—It is not the client but the professional situation which defines whether the valuator is or is not an advocate. Although valuation analysts do (and should) advocate their own position, that position should be arrived at objectively.

   b. Introduces subjective factors and attempts to rely more heavily on qualitative factors
      B is Correct—An advocate, such as an attorney, attempts to use objective data in such a way as to assist his client in “looking good” and to place the opposing client in an unfavorable light.

   c. Is a valuator who works only for attorneys
      Incorrect—A valuator should strive to be objective at all times, whether or not the client is an attorney.

   d. Is an attorney who works for a valuation firm to edit valuation reports to prevent ambiguous terms and advocate the use of proper legal terms so the firm won’t be sued
      Incorrect—Such an attorney-editor might become an advocate of some kind when in a court of law, but as an editor, advocacy would not be an issue.
10. What are the three main reasons for tax related valuations?
   a. Estate tax, gift tax, and allocation of purchase price  
      A is Correct—All three valuations would be performed for tax purposes.
   b. Estate tax, buy/sell agreements, and litigation  
      Incorrect—Valuations in buy/sell agreements and litigation are performed for non-tax reasons, and whether or not tax is involved is secondary to the reason for the valuation.
   c. ASC 805 (formerly FASB 141), ASC 350 (formerly FASB 142), and estate tax  
      Incorrect—Valuations performed under FASB regulations are performed for regulatory reasons. And whether or not tax is involved is secondary to the reasons for the valuation.
   d. ASC 350 (formerly FASB 142), litigation, and gift tax  
      Incorrect—FASB valuations are performed for regulatory reasons, and whether or not tax is involved is secondary. Litigation valuations are performed for a variety of reasons, some of which will have tax consequences, but tax issues are secondary.

11. The American Medical Association refers to going concern value as an “in-place value.”
   a. True  
      A is Correct—They consider the assets, assembled, in place, licensed, known systems and procedures set up so the buyer does not have to start over from scratch.
   b. False  
      Incorrect—The American Medical Association refers to going concern value as an “in-place value,” because they consider the assets, assembled, in place, licensed, known systems and procedures set up so the buyer does not have to start over from scratch.

12. The major point(s) of Internal Revenue Code §2703 is/are:
   a. For estate, gift and other tax purposes, the value of any property is determined without regard to any right or restriction relating to the property  
      Incorrect—Although this is partially true, there are exemptions under section (b) that would make this statement false.
   b. An exception to restrictions on property exists for any option, agreement, right or restriction which (1) is a bona fide business arrangement, (2) is not a device to transfer property for less than its fair market value, (3) is comparable to similar arm’s length arrangements; and (4) these safe harbors must be independently satisfied. The mere showing that a right or restriction to property is a bona fide business arrangement is not sufficient to establish the absence of a device  
      Incorrect—Although this is partially true, the text must be considered in light of the general rule.
   c. Each right or restriction must be tested separately. A right or restriction is considered to meet the three ‘safe harbor’ requirements if more than 50% of the applicable property is owned by individuals who are not members of the transferor’s family. Property owned by non-family members must be subject to the same rights or restrictions  
      Incorrect—It is a partial and incomplete answer. IRC §2703 is a complex code, and a valuer needs to be aware of the full impact of issues raised in IRC §2703.
   d. Both a and b, but not c  
      Incorrect—C is incorporated into IRC §2703, providing two key issues valuation analysts relating to family ownership a valuer should be aware of. A valuer should be certain family and non-family ownership are subject to the same rights/restrictions.
   e. a, b, and c  
      E is Correct—All issues listed are key parts of IRC §2703. Valuation analysts must carefully address each of the issues raised with input form legal counsel when performing a valuation engagement for tax purposes.
13. The Internal Revenue Service first introduced the concept of goodwill and excess earnings when they issued:
   a. ARM 34
      A is Correct—ARM 34 was issued in 1920 as a result of the enactment of prohibition to assist the taxpayer in dealing with excess earnings and intangibles such as goodwill.
   b. Revenue Ruling 59-60
      Incorrect—RR 59-60 was issued in 1959 and outlined factors to be used in valuing a closely held business, involved itself with Estate and Gift Taxes and is widely accepted for tax and non-tax purposes.
   c. Revenue Ruling 68-609
      Incorrect—Revenue Ruling 68-609 was issued after ARM 34 but did address intangibles specifically goodwill and introduced a formula to determine value and sometimes referred to as the “excess earnings method” or “treasury method”.
   d. APB Opinion 16
      Incorrect—APB Opinion 16 was issued by the Financial Accounting Standards Board and dealt with business combinations later superseded by FAS 141.

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

   a. i, ii, and iv
      A is Correct—Revenue ruling 59-60 lists the following factors, which require careful analysis:
      1. The nature and history of the business
      2. The economic outlook and outlook of the specific industry
      3. The book value of the stock and the financial condition of the business
      4. The earnings capacity of the company
      5. The dividend-paying capacity of the business
      6. Existence of goodwill value
      7. Sales of the stock and the size of the block of stock to be valued
      8. The market price of stocks of corporations engaged in a similar line of business.
   b. ii, iii, and iv
      Incorrect—Methods to calculate preferred stock are included in Revenue Ruling 83-120, and are not part of revenue Ruling 59-60.
   c. i, ii, and iii
      Incorrect—Although the nature and history of the business and earnings capacity of the company are covered under Revenue Ruling 59-60, methods to calculate preferred stock are included in Revenue Ruling 83-120.
   d. All of the above
      Incorrect—Methods to calculate preferred stock are included in Revenue Ruling 83-120.
15. If a valuator is retained to value a company for estate tax purposes, it is acceptable for the valuator to value the business as a/an:
   a. Advocate  
      **Incorrect**—When valuing a company for estate and gift tax purposes the valuator must appear as an expert. This includes being objective and independent.  
   b. Independent expert  
      **B is Correct**—When valuing a business for estate and gift tax purposes an expert wants to appear objective and independent compared to being an advocate.  
   c. Related party  
      **Incorrect**—As a related party the valuator’s independence would be impaired therefore implying a position of advocacy for the client.  
   d. Employee of the company  
      **Incorrect**—As an employee of the Company the valuator’s independence would be impaired therefore implying a position of advocacy for the client.

16. IRC Section 401(a)(28)(C) requires the use of an “independent appraiser.” For ESOP valuations to be independent, the following conditions must be met:
   a. The valuator is qualified, performs appraisals on a regular basis, and is not a related party  
      **A is Correct**—A firm will be treated as an independent valuator under Sec. 401(a)(28)(C) if all of the following conditions are met; (a) The firm represents itself to the public as a valuator or performs appraisals on a regular basis, (b) The valuator is qualified to value the type of property, (c) The valuator is not a related party.  
   b. The valuator is qualified, may be a related party, and performs appraisals on a regular basis  
      **Incorrect**—The valuator is a related party it would project the appearance of advocacy and independence would be impaired.  
   c. The valuator is qualified, does not perform appraisals on a regular basis, and is not a related party  
      **Incorrect**—The valuator does not perform appraisals on a regular basis this would impair the qualifications of an independent valuator. (Note: A valuator does not have to perform appraisals on a regular basis to be independent; a valuator may be able to obtain the necessary assistance by using the mentoring program through NACVA to obtain the necessary support.  
   d. The valuator does not need to be qualified, but must perform appraisals regularly and is not a related party  
      **Incorrect**—Under the IRS regulation the valuator must now be qualified to meet the requirements of independence.

17. Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide “appraisal valuation services, fairness opinions or contribution-in-kind reports” for any of its audit clients.
   a. True  
      **A is Correct**—Under Sarbanes-Oxley, an independent auditor is explicitly forbidden to provide “appraisal or valuation services, fairness opinions, or contribution-in-kind reports” for any of its audit clients.  
   b. False  
      **Incorrect**—If an auditor performed valuation services for their audit clients, they would no longer be independent or able to issue an audit opinion.
18. Before the valuation analyst can proceed in valuing a business, the first step an analyst must determine is:
   a. The purpose of the valuation
      **A is Correct**—Once the purpose of the valuation is determined, the valuator may be able to determine what the appropriate standard of value is, a method to apply and if any discounts or premiums should be applied.
   b. The best method to apply
      **Incorrect**—The valuator cannot determine the best methods to apply without first understanding the purpose of the valuation.
   c. The standard of value
      **Incorrect**—The first step in any valuation process should be determining the purpose.
   d. The appropriate marketability discount
      **Incorrect**—Determining discounts for marketability and control would not be considered until the enterprise value has been established.

19. Which of the following cases provides guidance as to the admissibility of expert testimony in appraising a business:
   a. **Daubert v. Merrill Dow**
      **A is Correct**—The court held that the Federal Rules of Evidence, not Frye, provide the standard for admitting expert scientific testimony in a federal trial; nothing in the rules gives any indication that “general acceptance” is a necessary precondition to the admissibility of scientific evidence. While *Daubert* itself did not address the admissibility of expert testimony in appraising a business, it is generally accepted that it provides guidance for valuation purposes.
   b. **Estate of Walter Gross v. Commissioner**
      **Incorrect**—Court ruling related to tax effect of S Corporation.
   c. **Estate of Davis v. Commissioner**
      **Incorrect**—Court ruling related to discounts for trapped-in gains.
   d. **Estate of Roark v. Commissioner**
      **Incorrect**—Case related to the failure to properly substantiate a donation results in denial of charitable tax deductions.

20. The United States Department of Labor issues regulations specifically pertaining to business valuations for:
   a. Employee Stock Ownership Plans
      **A is Correct**—The Department of Labor issues regulations specifically pertaining to business valuations for Employee Stock Ownership Plans.
   b. Gift and estate tax returns
      **Incorrect**—The Internal Revenue Service issued Revenue Ruling 59-60 which applies to valuing business for gift and estate tax returns.
   c. Merger and acquisitions
      **Incorrect**—The Internal Revenue Service has issued guidance a valuator would apply for merger and acquisitions.
   d. Partner disputes
      **Incorrect**—The Internal Revenue Service and state law may provide guidance a valuator would apply for partner disputes.
21. Value equals the benefit stream divided by a required rate of return is an example of what principle?
   a. Alternative principle
      Incorrect—The alternative principle applies the concept a buyer and seller has alternatives.
   b. Principle of substitution
      Incorrect—The principle of substitution implies the value of a thing tends to be determined by
      the cost of acquiring an equally desirable substitute.
   c. Investment value principal
      C is Correct—The investment principle is based on the difficulty of valuing a closely held
      business because there a lack of an active free trading market. Therefore closely held
      businesses are valued based on the investment value principle. The simplified formula is:
      \[
      \text{Value} = \frac{\text{Benefit Stream}}{\text{Required Rate of Return}}
      \]

22. A fundamental relationship exists between rate of return from an investment and the amount of risk
    in the investment. Therefore:
   a. An investor would expect a higher rate of return from a treasury note compared to large
      company stock
      Incorrect—The Treasury note is considered a riskless investment; therefore an investor would
      require less of a return from a treasury note than company stock.
   b. An investor would expect a higher rate of return from a six month CD compared to a 5-year
      treasury bond
      Incorrect—A six month CD would be considered more liquid than a 5-year treasury bond, therefore
      the rate of return from a 6 month CD would be less.
   c. An investor would expect a higher rate of return from a publicly traded company compared to a
      privately held company
      Incorrect—The publicly traded stock could be converted to cash in a couple of days. There is a
      market to trade a publicly traded stock. Whereas a privately held corporation does not have
      such a market and it is uncertain whether a market actually exists for a privately held company
      and the time it would take an investor to convert their investment to cash would take longer,
      therefore requiring a higher rate of return for an investment in a private company.
   d. An investor would expect a higher rate of return from a publicly traded stock compared to a 5-
      year treasury bond
      D is Correct—Due to the nature of the investment a treasury bond is less risky than a publicly
      traded stock and therefore a publicly traded stock would require a higher rate of return.

23. Strategic/Investment value is defined as:
   a. The amount at which property would change hands between a hypothetical willing buyer and a
      willing seller
      Incorrect—Fair market value is defined as “the price at which the property would change
      hands between a willing buyer and a willing seller, when the former is not under any
      compulsion to buy and the latter us not under any compulsion to sell both parties having
      reasonable knowledge of relevant facts.”
   b. An amount determined under statutory standard of value
      Incorrect—Fair Value has several meanings, in most states fair value is the statutory standard
      of value applicable in cases of dissenting stockholders’ valuation rights.
   c. The value to a particular investor based on individual investment requirements and expectations
      C is Correct—Strategic or Investment value is the value to a particular investor based on
      individual investment requirements and expectations.
   d. The value as if the business is going to continue operating as it presently is operating
      Incorrect—Going Concern value is a premise of value based on the notion the business is
      going to continue to operate as it presently is operating.
24. Revenue Ruling 93-12 was a significant benefit to taxpayers as it allowed that:
   a. Valuation of a minority (i.e., non-controlling) interest in an entity will not have to consider
      either the transferor or the transferee as they relate to control of the entity
      **A is Correct** – Revenue Ruling 93-12 eliminated the “family attribution rule” and states that
      “A minority discount will not be disallowed solely because a transferred interest, when
      aggregated with interests held by family members, would be a part of a controlling interest.”
      This greatly enhanced estate and gift tax planning opportunities for individual taxpayers.
   b. Valuation of an ownership interest in a business for gift tax purposes would always allow rates
      of return on tangible assets between 8% and 10%
      **Incorrect** – The rates of return on tangible assets, provided for illustrative purposes only, are
      found in Revenue Ruling 68-609 in the discussion of the “excess earning” or “Treasury”
      method of valuation.
   c. Contributions of non-cash property for federal income tax purposes shall always be valued
      based on the historical cost of the property
      **Incorrect** – Contributions of non-cash property for federal income tax purposes is discussed in
      Revenue Procedure 66-49 and provided information and guidelines relative to appraisals of
      contributed property.
   d. Adopted the “family attribution” rule, which states that no minority interest discount is available
      for blocks of stock transferred to family members when the family holds a controlling interest
      in the entity
      **Incorrect** – Revenue Ruling 93-12 eliminated the “family attribution rule” as defined in this
      option which was introduced in Revenue Ruling 81-253.


1. Chianti Corp. reports the following items in their Balance Sheet: $70,000 fixed assets, $3,500 cash,
   $1,200 short term marketable securities, $4,500 in accounts receivables, $6,000 in inventories,
   $1,000 in prepaid expenses, $4,000 accounts payable and $2,100 in current notes payable. What is
   Chianti Corp.’s Current Ratio?
   a. 7.24
      **Incorrect**—This appears to be a mathematical error.
   b. 2.65
      **B is Correct**—See calculation below.
   c. 2.49
      **Incorrect**—This answer does not include short term marketable securities.
   d. 1.51
      **Incorrect**—This answer does not include either inventory or prepaid expenses.

<table>
<thead>
<tr>
<th>Cash</th>
<th>$ 3,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term marketable securities</td>
<td>1,200</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>4,500</td>
</tr>
<tr>
<td>Inventories</td>
<td>6,000</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td><strong>$16,200</strong></td>
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<table>
<thead>
<tr>
<th>Accounts payable</th>
<th>$ 4,000</th>
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</thead>
<tbody>
<tr>
<td>Short-term notes payable</td>
<td>2,100</td>
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<tr>
<td><strong>Total current liabilities</strong></td>
<td><strong>$ 6,100</strong></td>
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</tbody>
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<table>
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<tr>
<th>Current assets</th>
<th>16,200</th>
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<tbody>
<tr>
<td>Current liabilities</td>
<td>6,100</td>
</tr>
<tr>
<td></td>
<td><strong>= 2.65</strong></td>
</tr>
</tbody>
</table>
2. Assume the same facts as in question number one, what is Chianti Corp.’s Cash Ratio?
   a. 1.51
      Incorrect—This answer includes all assets except inventory and prepaid insurance.
   b. 1.75
      Incorrect—This answer includes all assets except accounts receivable and prepaid insurance.
   c. 2.49
      Incorrect—This answer includes all assets except prepaid insurance.
   d. 0.77
      D is Correct—Cash ratio equals cash & cash equivalents/current liabilities

                  Cash + short-term marketable securities ($3,500 + 1,200)
                  Current liabilities ($6,100)
                  = 0.77

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

<table>
<thead>
<tr>
<th>Receivables Turnover</th>
<th>Avg. Rec. Collection Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 10.0</td>
<td>36.5 Incorrect—The receivable turnover calculation appears to be a mathematical error.</td>
</tr>
<tr>
<td>b. 11.61</td>
<td>31.5 Incorrect—This answer assumes the numerator is cost of goods sold rather than sales.</td>
</tr>
<tr>
<td>c. 6.25</td>
<td>58.4 Incorrect—This answer subtracts cost of goods sold from sales prior to dividing by average accounts receivable.</td>
</tr>
</tbody>
</table>
| d. 17.9              | 20.4 D is Correct—Receivable Turnover: Sales/Average Receivables
                        Receivable Turnover = $100,000 / $5,600
                        Receivable Turnover = 17.9
                        Avg. Rec. collection period = 365/17.9
                        Avg. Rec. Collection Period = 20.4 days |

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

<table>
<thead>
<tr>
<th>Inventory Turnover</th>
<th>Avg. Inventory. Processing Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 12.4</td>
<td>29.4 Incorrect—This appears to be a mathematical error based on the numbers provided.</td>
</tr>
<tr>
<td>b. 26.5</td>
<td>13.8 Incorrect—This answer divides sales by the average inventory.</td>
</tr>
</tbody>
</table>
| c. 17.11           | 21.3 C is Correct—Inventory Turnover = Cost of Goods Sold / Average inventory
                        Inventory Turnover = $65,000 / $3,800
                        Inventory Turnover = 17.11
                        Average Inventory Processing Period = 365 / Inventory Turnover
                        365 / 17.11
                        Average Inventory Processing Period = 21.3 days |
| d. 13.4            | 27.2 Incorrect—This appears to be a mathematical error based on the numbers provided. |
5. Assuming the same facts as in question three, what is Chianti Corp.’s Cash Conversion Cycle?
   a. 7.24 days  
      **Incorrect**—This implies that the payable payment period is 34.5 days.
   b. 26.1 days  
      **Incorrect**—This implies that the payable payment period is 15.6 days.
   c. 9.7 days  
      **C is Correct**—Cash conversion cycle = inventory turnover period + days to collect receivables – payable payment period 
      
      Cash conversion cycle = 21.3 (see #4) + 20.4 (see #3) – 32  
      (see payable payment calculation below)
      
      Cash conversion cycle = 9.7  
      Payable payment period = (365/(cost of goods sold/avg payables)) or (365/($65,000/$5,700))
   d. -5.67 days  
      **Incorrect**—This implies that the payable payment period is 46.4 days.

6. Assuming that Chianti Corp. Reports Net Income of $5,200 and that its average total equity is $49,000, what is Chianti’s Return on Equity?
   a. 9.42%  
      **Incorrect**—This calculation incorrectly reverses the formula and calculates the return on equity as average total equity/net income.
   b. 21.20%  
      **Incorrect**—This calculation incorrectly doubles the net income amount to $10,400 before applying the formula.
   c. 10.61%  
      **C is Correct**—Return on equity = net income/average total equity 
      Return on equity = $5,200 / $49,000  
      Return on equity = 10.61%
   d. 11.51%  
      **Incorrect**—This implies that the net income amount is incorrectly stated as $5,640.

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

<table>
<thead>
<tr>
<th>Net Profit Margin</th>
<th>Equity Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.42%</td>
<td>2.13</td>
</tr>
<tr>
<td><strong>Incorrect</strong></td>
<td>This uses an erroneous net profit margin from question 6 and a mathematical error in the equity turnover calculation.</td>
</tr>
<tr>
<td>5.2%</td>
<td>2.04</td>
</tr>
</tbody>
</table>
| **B is Correct**  | Net profit margin = Net income/sales  
                      Net profit margin = $5,200 / $100,000  
                      Equity turnover = Sales / Average equity  
                      = $100,000 / $49,000  
                      = 2.04 |
| 10.61%            | 2.04           |
| **Incorrect**     | The equity turnover calculation is correct, but the return on equity is used in place for the net profit margin. |
| 8.0%              | 4.32           |
| **Incorrect**     | Both answers appear to be mathematical errors. |
8. The conversion of the balance sheet and income statement line items to percentages based on total assets or total sales is often referred to as:
   a. Trend analysis
      Incorrect—Trend analysis analyzes the financial statements over time.
   b. Common-size analysis
      B is Correct—Common-size analysis is the process of converting the balance sheet and income statement line items to percentages of total assets or total sales.
   c. Financial ratio analysis
      Incorrect—Financial Ratio Analysis is based on specific formulas and looks at profitability, leverage, equity, etc. of a company.
   d. Comparative analysis
      Incorrect—Comparative analysis is comparing the company’s financial statements from year to year and to industry averages.

9. A financial analysis of any business would include all of the following EXCEPT for:
   a. An analysis of each balance sheet item over the period being analyzed
      Incorrect—The valuation analyst should analyze the balance sheet over each period being analyzed.
   b. An analysis of industry ratios in the same NAICS code as the company being analyzed
      Incorrect—This type of financial analysis should be performed.
   c. An analysis of the income statement, where each item is reported as a percentage of sales
      Incorrect—This common size analysis should be performed.
   d. An investigation as to the existence of inventory as of the valuation date
      D is Correct—The valuation analyst would rely on representations of management regarding the existence of inventory; a financial analysis would not detect the existence of inventory, however a physical inspection of the inventory may take place during a site visit.

10. Ratio analysis will assist the valuation analyst in determining the following:
    a. The financial condition of the company
       Incorrect—Ratio analysis could indicate how well the company is doing but C is also correct making E the best answer.
    b. Identifying all the strengths and weaknesses of the company
       Incorrect—An analysis of financial ratios will help identify a company’s strengths and weaknesses, it has limitations and will not necessarily identify all strengths and weaknesses.
    c. The relative operating risks of the company
       Incorrect—Because A is also correct.
    d. Both a and b
       Incorrect—An analysis of financial ratios will help identify a company’s strengths and weaknesses, it has limitations and will not necessarily identify all strengths and weaknesses.
    e. Both a and c
       E is Correct—This is the best answer to the question because ratio analysis may indicate how well the company is doing and identify some of the operating risks of the Company.
    f. Both b and c
       Incorrect—An analysis of financial ratios will not necessarily identify all of a company’s strengths and weaknesses.
11. The most conservative ratio in measuring a company’s solvency is the:
   a. Current ratio
      **Incorrect**—The current ratio is determined by dividing all current assets by current liabilities, because this includes items such as inventory and accounts receivable, this is not the most conservative ratio for measuring a Company’s solvency.
   b. Quick ratio
      **Incorrect**—The quick ratio is determined by dividing current assets less inventory by current liabilities. This ratio is more conservative than the current ratio, however because it includes accounts receivable it is not the most conservative.
   c. Cash ratio
      **C is Correct**—The cash ratio is the most conservative measure of solvency because it includes only cash and marketable securities in its measurement of liquidity.
   d. Turnover ratio
      **Incorrect**—Turnover ratios apply to accounts receivable, inventory and accounts payable and do not indicate the solvency of a Company.

12. A high inventory turnover can indicate all of the following EXCEPT:
   a. Better liquidity
      **Incorrect**—A high inventory turnover ratio would indicate better liquidity. Inventory turnover is cost of sales for the time period analyzed divided by the average of beginning plus ending inventory. Therefore the higher the turnover the quicker inventory is being sold and therefore the more frequently inventory is converted into cash.
   b. Superior merchandising
      **Incorrect**—A high inventory turnover ratio would be an indication of superior merchandising. The higher the inventory turnover ratio the more frequently inventory is being sold and it therefore is a good indication of superior merchandising by the company.
   c. Shortage of inventory
      **Incorrect**—A high inventory turnover ratio would indicate a potential shortage of inventory.
   d. Obsolete inventory
      **D is Correct**—A low inventory turnover can indicate poor liquidity or obsolete inventory.

13. What type of ratios may a valuation analyst generally use to evaluate management performance?
   a. Operating profitability ratios
      **A is Correct**—Operating profitability ratios are used in the evaluation of management performance. These ratios include Cost of sales/Sales and Gross margin analysis.
   b. Liquidity ratios
      **Incorrect**—These ratios are used to measure a firm’s ability to pay its near term financial obligations.
   c. Financial risk ratios
      **Incorrect**—These ratios measure a firm’s degree of operating leverage.
   d. Business risk analysis
      **Incorrect**—These ratios assess the business risk.
14. Which of the following statements is correct?
   a. A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produce a satisfactory return on total assets.
      A is Correct—A high inventory turnover and a low gross profit may indicate that a higher volume is necessary to produce a satisfactory return on total assets.
   b. The net fixed asset turnover ratio is crucial when appraising a service business.
      Incorrect—Fixed assets usually do not drive the profits of a service business.
   c. If a company’s cost of sales/sales ratio is decreasing, it may indicate competition is forcing the company to cut profit margins or it may indicate the company is unable to pass its increasing costs to its customers.
      Incorrect—If a company’s cost of sales as a % of sales is increasing, it may indicate competition is forcing the company to cut profit margins or the company cannot pass increasing costs to its customers.
   d. Companies with significant fixed operating costs in proportion to variable costs can better weather an economic downturn.
      Incorrect—A company with significant fixed costs could not trim costs in a downturn.

15. Which ratio measures the ability to service total interest-bearing debt?
   a. Interest coverage ratio
      Incorrect—This ratio is a measure of a firm’s ability to meet its interest payments.
   b. Operating cash flow ratio
      Incorrect—This ratio measures a firm’s ability to generate the resources required to meet its current liabilities.
   c. Operating cash flow to long-term debt
      Incorrect—This ratio measures the ability to service total long-term debt.
   d. Operating cash flow to total debt ratio
      D is Correct—Operating cash flow to total debt ratio measures the ability to service total interest-bearing debt.

16. What is the purpose of dividing a receivable or inventory turnover ratio by 365?
   a. We can never do enough math, so why not add another equation
      Incorrect—Math is always fun, and the purpose of dividing a turnover ratio by 365 days is to determine how long it may take to convert a current asset into cash.
   b. To determine the number of days it may take to convert a current asset into cash
      B is Correct—By dividing a receivable or inventory turnover ratio by 365 days a valuation analyst can determine how many days it will take to convert the current asset into cash.
   c. To determine if a company is effectively utilizing its fixed assets
      Incorrect—A fixed asset turnover could indicate any obsolete equipment, however the business is usually not in the business of selling fixed assets for a profit. Therefore dividing a fixed asset turnover ratio by 365 days would not applicable to this type of ratio.
   d. To determine a company’s operating efficiency.
      Incorrect—Operating efficiency ratio analyze how efficient the company utilizes assets compared with converting assets into cash.
Review Questions Chapter 3 Economic/Normalized Financial Statements

1. Using the above illustration for sample year 2013, a comparative analysis for the Advanced Products Company, Inc. shows the industry profit margin per RMA to be 44.1%, whereas Advanced shows:
   a. 36.00%
      Incorrect—36% is for 1999.
   b. 37.00%
      Incorrect—37% is for 2011.
   c. 37.33%
      Correct—37.33% is for 2013.
   d. 38.24%
      Incorrect—38.24% is for 2012.

2. Using the illustration for year 2013, a comparative analysis for the Advanced Products Company, Inc. RMA shows the median industry accounts receivable turnover ratio to be 11.8 and Advanced accounts receivable turnover ratio to be 9.9.
   a. This indicates industry as a whole is better managing accounts receivable than Advanced.
      A is Correct—The higher turnover ratio of the industry indicates it is better at managing accounts receivable than the Advanced. A higher ratio indicates more efficient credit management or that the company operates on a cash basis.
   b. This indicates Advanced is better at managing accounts receivable than the industry as a whole.
      Incorrect—The lower turnover ratio by itself indicates Advanced is not better at managing accounts receivable than the industry as a whole. A lower ratio indicates inefficient credit management or that the company does not operate on a cash basis.
   c. This indicates that the industry as a whole and Advanced both carefully monitor accounts receivable.
      Incorrect—There is not enough information in the calculated ratios to discover the degree of monitoring by either the industry or any one industry member.
   d. This indicates that the industry as a whole and Advanced do not monitor accounts receivable with enough care, and both need to strive toward 5.0 as the ideal.
      Incorrect—There is not enough information to determine that there is an ideal for the industry.

3. The valuation analyst needs historical performance data in order to:
   a. Decide whether or not the subject company is using the proper taxed based accounting
      Incorrect—Although the historical data may indicate what the valuation analyst believes to be incorrection basis; this is a matter for an auditor or other internal control, not for the valuation analyst.
   b. Check and see whether or not the owner is taking too much in salary
      Incorrect—If, after all fiscal and economic analysis is complete, the valuation analyst believes salary to be an issue important to the reason for the valuation, the valuactor may want to adjust salary. If salary is not an issue important to the reason for the valuation, no adjustment will likely be made.
   c. Find whether or not national economic reality may be properly reflected in the current year data
      Incorrect—There would not be enough information in the data itself to judge whether or not it is realistic from a national economic standpoint; other research would have to be done in order to form an opinion on this issue.
   d. Analyze and compare various years in the company history to identify trends, strengths, weaknesses, and look for potential adjustments to normalize if adjustments are necessary and/or deemed appropriate
      D is Correct—The valuation analyst with access to historical financial data is better able to determine trends and to look for potential adjustments to normalize.
4. Advanced Product’s accounting shows various items of machinery that were purchased three years ago for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000. Would a balance sheet adjustment be advised?
   a. Yes. The valuation analyst should adjust the balance sheet to fair market value and consider adjustment of depreciation expense on the income statement as well as the related tax affect on both the balance sheet and income statement.
      A is Correct—This would be a typical adjustment for a valuation analyst to make in valuing a company.
   b. No. Valuation analysts do not have control over equipment, and adjusting the balance sheet would negatively skew company value.
      Incorrect—Whether or not the valuation analyst has control is not the issue. In looking at the company and analyzing its value as of the date of valuation, the analyst should consider depreciation and amortization, normalizing both if needed in order to calculate an unbiased value for the company.
   c. Yes. Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory in 1980. This data shows the adjustment was already made by the company.
      Incorrect—Changing how inventory costing is done is not related to net book value of machinery.
   d. No. The company owns two of its three facilities and leases the other. Advanced is not likely to update machinery for a leased facility.
      Incorrect—Leasing of facilities is not related to machinery book value.

5. Net Income can be based on GAAP (Generally Accepted Accounting Principles) or TBA (Tax Basis Accounting), but neither may be economic reality.
   a. This is true because TBA is done to minimize payments to banks and other lending institutions.
      Incorrect—Tax based accounting is to save/minimize payment of taxes.
   b. This is true as GAAP is too specific, and each company is unique. Therefore—even using the same set of accounting practices—no two companies will keep their books in the same exact way.
      Incorrect—GAAP is too general and it is this general form applied to a unique company which causes differences among companies as to how they keep their books.
   c. This is true as corporations (all kinds), public companies, partnerships, sole proprietorships, privately held family businesses, and any varying degrees in between, all have different rules and principles under which they are found. These affect fiscal statements, and the valuation analyst must know what the underlying concept of any given company is as opposed to what it may state in the numbers.
      C is Correct—Individualized companies have different rules, different numbers, and different principles. This creates a difference in economic reality for any given company.
   d. This is true as GAAP accounting is so similar to TBA that the numbers for one company in the same year will be different. Economic reality does not need to be reflected in either GAAP or TBA.
      Incorrect—Actually GAAP and TBA are so different numbers for one company in the same year will be different. TBA is used to minimize tax payments, and this definitely makes a difference in how the numbers are calculated. And neither may reflect economic reality.
6. When a valuation analyst is able to obtain audited GAAP compliance financial statements, most likely, normalized adjustments will not be necessary because of the high level of confidence placed on these issued financial statements.
   a. True
      **Incorrect**—Audited financial statements provide a very high level of confidence on the financial information. However, the valuator may still have to make normalizing and controlling adjustments for items such as officer’s compensation, non-operating income & expense, and excess assets.
   b. False
      **B is Correct**—Even if financial statements are prepared under GAAP, these statements often present a picture that is different from economic reality.

7. The main objective for adjusting the financial statements of a closely held company is:
   a. To determine if the owner is taking unreasonable compensation
      **Incorrect**—This may be a type of normalizing adjustment but it is not the main objective.
   b. To adjust the financial statements of a business to more closely reflect its true economic financial position and results of operations on a historical and current basis
      **B is Correct**—The main objective for adjusting the financial statements of a closely held company is to more closely reflect its true economic financial position and results of operations on a historical and current basis.
   c. To adjust the financial statements to ensure the financial statements are in conformity with Generally Accepted Accounting Principles
      **Incorrect**—GAAP financial statements may not present a picture of economic reality.
   d. To adjust the financial statements so there is consistency in the financial statements over the time period the valuator is analyzing
      **Incorrect**—The valuator is trying to depict “a true economic picture” not consistency.

8. Which one of the following is NOT a general category of normalized adjustments?
   a. Removal of excess cash
      **Incorrect**—Excess cash could be considered a non-operating asset. The valuator may adjust excess cash from the balance sheet but will add this back into the conclusion of value.
   b. Inventory adjustment when inventory is recorded on a FIFO basis
      **B is Correct**—If inventory is recorded under LIFO an valuator may make a normalized adjustment.
   c. Reasonable compensation for owners
      **Incorrect**—Adjusting for owners’ compensation would be described as a control adjustment. A control adjustment may be made based on the level of value being appraised.
   d. Bad debt adjustment for a significant write off due to an unexpected bankruptcy filing by a major customer
      **Incorrect**—An adjustment for a significant amount of bad debts would be an adjustment for non-recurring or extraordinary events.
9. Which of the following are considered “control” adjustments?
   a. Officers’ compensation and depreciation adjustments
      **Incorrect**—An adjustment to officer’s compensation would be considered a control adjustment however an adjustment of depreciation would not be controlling but considered a normalizing adjustment.
   b. Discretionary spending and depreciation adjustments
      **Incorrect**—An adjustment to discretionary spending would be a control adjustment and an adjustment of depreciation would not be controlling but considered a normalizing adjustment.
   c. Discretionary spending and officers’ compensations
      **C is Correct**—Adjustments to discretionary spending and officers compensation would be considered control adjustments.
   d. Depreciation adjustments and bad debt adjustments
      **Incorrect**—Adjustments for depreciation expense and bad debts would be considered normalizing adjustments.

10. A pending lawsuit, unrecorded pension liabilities, and capital gains tax on unrealized appreciation of assets are what type of normalized adjustments?
    a. Non-operating adjustments
       **Incorrect**—Non operating adjustments would be made for assets recorded on the balance sheet which are not necessary for the normal operations of the business.
    b. Non-reoccurring adjustments
       **Incorrect**—Examples would include sale of fixed assets and recognizing bad debts.
    c. Contingent liability adjustments
       **C is Correct**—The purpose of these adjustments is for the valuation analyst to determine if any contingent liabilities exist that are not recorded on the balance sheet.
    d. Timing adjustments
       **Incorrect**—Examples of timing adjustments include long term contracts and installment sales. The objective is for the valuator to understand revenue and expenses are recorded in the proper periods.

11. The cost to replace an asset under a particular fact situation is known as:
    a. Fair market value
       **Incorrect**—Fair market is defined as the price property would change hands between a hypothetical willing buyer and willing seller, both not under any compulsion to buy or sell and have the knowledge.
    b. Fair value
       **Incorrect**—Fair value is mainly a statutory value which can vary from state to state.
    c. Replacement cost
       **C is Correct**—Replacement cost is the cost to replace an asset under a particular fact situation.
    d. Strategic value
       **Incorrect**—Strategic value is the value to a particular investor.
12. In 2006, a company purchased a new operating press costing $300,000. The company elected Section 179 depreciation for this piece of equipment. An appropriate normalization adjustment would be:
   a. Do nothing
      Incorrect—When a company depreciates equipment using 179 bonus depreciation a valuator should adjust depreciation expense to accurately reflect depreciation over the assets useful life.
   b. Adjust the income statement, only to add back Section 179 depreciation
      Incorrect—Not only should the valuator adjust the income statement a balance sheet adjustment should be made to reflect the adjusted net book value of the asset.
   c. Adjust the income statement to add back the Section 179 depreciation and adjust the balance sheet to reflect the fair market value of the asset
      C is Correct—The valuator should adjust both the income statement and the balance sheet.
   d. Adjust the balance sheet only to reflect the fair market value of the equipment
      Incorrect—The valuator not only should adjust the balance sheet the income statement should be adjusted to reflect the annual depreciation expense based on the useful life of the asset.
Issues to Consider in Chapter 3–Bonus Question

Item 1  The estimated reserve for non-collectible accounts receivable is $50,000 and is based on approximately 1% of the company's most recent annual gross sales. Both the company and its auditors believe that the reserve is reasonable. However, after reviewing the receivable list, the president of the company estimates that actual bad debts on existing receivables will be only about $20,000.

Note  Consider if the President has knowledge that supersedes the company and the auditors’ position on the non-collectible accounts. Will this adjustment be self-serving to the President or does it accurately reflect the current financial position?

Item 2  Since the company's inception, it has witnessed continually increasing costs for its inventory. As a result of these cost pressures, Advanced decided to convert to the LIFO method for costing its inventory in 1980. Therefore, it is determined that Advanced's actual current inventory is understated by $80,000.

Note  Consider an adjustment to inventory for the LIFO reserve. Consider if an adjustment must be made for each year or only the current year.

Item 3  The company owns two of its three facilities and leases the other. Due to a recent refinance proposal, the company obtained an MAI appraisal on both of the properties it owns. The total MAI appraisal for both properties is $250,000 and the current book value for both properties is $125,000.

Note  Adjust the property to fair market value. Consider adjustment for deferred taxes on the built-in gains of the property.

Item 4  The company has various items of machinery that were purchased three years earlier for $100,000. Their net book value today is $50,000. To replace the machinery today would cost $130,000. The estimated market value today (if sold as is today) is $100,000.

Note  Adjust the balance sheet to fair market value. Consider adjustment of depreciation expense on income statement as well as the related tax effect on the balance sheet and income statement.

Item 5  The company has a negotiable note receivable, received in an arms-length transaction, bearing 12% interest over 5 years. If this note represents a safe loan with minimal risk of non-collection, its value is determined by comparison with similar safe notes. If the going rate for similar safe notes is 18% to 20%, then the face value of the note must be discounted to account for the interest rate differential.

Note  Consider reducing the face value of the note to reflect the present value at 12% versus similar safe notes at 18%.

Observation (regarding #5 above):
In the above example the valuation dispute will probably center around one of two points: determination of the going interest rate for other safe loans and determination of the appropriate discount rate. In order to determine a safe rate, consideration should be given to the rates in effect for government securities, prime commercial paper, and corporate bond yields with similar maturity dates. There will probably be no precise comparable, and as such, an acceptable range should be developed. The calculation should be based upon present value factors and not a flat percentage reduction because the note is payable over a future period of time.
Review Questions Chapter 4 Defining and Estimating the Future Benefit Stream

1. Cash flows that are calculated as: net income after tax plus non-cash charges, less applicable capital expenditures, less additions to net working capital to support operations, plus changes in long-term debt from borrowings required for operations, less changes in long-term debt for repayments:
   a. Equals net cash flow to equity
      **A is Correct**—The valuation analyst should be aware that other definitions may be used which are part the body of knowledge, and should always define how the valuation analyst determined net cash flow to equity.
   b. Equals equity to debt ratio
      **Incorrect**—The debt to equity ratio is calculated by dividing total debt by total equity.
   c. Equals invested equity
      **Incorrect**—Return on equity is calculated by dividing net income by ½ of beginning common equity and ending common equity.
   d. Equals operations equity
      **Incorrect**—If you were calculating the operating margin ratio, you would divide the income from operations by net sales.

2. The formula for net cash flow to invested capital can be calculated as:
   a. Net income before tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
      **Incorrect**—One must consider net income after tax, i.e., taxes must be paid to properly calculate net cash flow. If taxes are not paid, cash or other equity must be adjusted.
   b. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, plus interest expense (tax-affected)
      **B is Correct**—The valuation analyst should be aware that other definitions may be used which do fit within the body of knowledge and should always define how the valuation analyst determined net cash flow to invested capital.
   c. Net income after tax, plus non-cash charges, less capital expenditures, less additions to net working capital for operations, less interest expense (tax-affected)
      **Incorrect**—One must include interest expense and it should be tax-affected. EBITDA should not be treated as if it were free cash flow.
   d. Net income after tax, plus non-cash charges, plus capital expenditures, plus additions to net working capital for operations, less interest expense (tax-affected)
      **Incorrect**—Interest expense (tax-affected) should be *added back* in the formula.
3. Bell Landscape Company has the following historical earnings:

<table>
<thead>
<tr>
<th>Year</th>
<th>Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$75,400</td>
</tr>
<tr>
<td>2</td>
<td>65,200</td>
</tr>
<tr>
<td>3</td>
<td>87,600</td>
</tr>
<tr>
<td>4</td>
<td>90,500</td>
</tr>
<tr>
<td>5</td>
<td>53,900</td>
</tr>
</tbody>
</table>

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

a. Weighted average method
   Incorrect—Weighted average method is used when the analyst can see past earnings indicated a pattern likely to recur in the future. This is not the observed pattern in this historical data set.

b. Unweighted average method
   B is Correct—Unweighted average method is probably the most appropriate method because no historical pattern or trend exists that would suggest any year or years results are any more indicated than the rest of the historical data.

c. Trend Line—static method
   Incorrect—Trend line—static methods best fit data increasing at a steady but declining rate. This is not the observed pattern in this historical data set.

d. Gompertz curve method
   Incorrect—Gompertz curves best fit periods of slow growth followed by rapid growth followed by slowdown in growth and a declining growth rate. This is not the observed pattern in this historical data set.

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

a. $73,340
   Incorrect—This answer would be calculated using a weighted average method where the most recent year is given the greatest weight (5), declining by one (1) for each prior year with the oldest year given the least weight (1). The pattern of data does not suggest this to be the best method to use to calculate future benefits.

b. $75,700
   Incorrect—This answer is calculated based on an inverse weighted average method, and does not fit the data pattern.

c. $93,150
   Incorrect—This is not the amount calculated using an unweighted average method.

d. $74,520
   D is Correct—This amount is calculated using an unweighted average method as follows: $75,400 + 65,200 + 87,600 + 90,500 + 53,900 equals $372,600 divided by 5 (the total number of years of data used) equals $74,520.
5. Start-up Jennings Baker Company provided you the following historical data:

<table>
<thead>
<tr>
<th>Year</th>
<th>Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>($15,300)</td>
</tr>
<tr>
<td>2</td>
<td>32,400</td>
</tr>
<tr>
<td>3</td>
<td>89,600</td>
</tr>
</tbody>
</table>

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

a. Weighted average method  
   **A is Correct**—Weighted average method is typically used when the analyst concludes more recent past earnings/losses are more representative of the expected future results, or the historical data demonstrates a trend (profitability) that is expected to continue in the future. The startup costs in year 1 are not likely to recur, and profitability seems more likely.

b. Unweighted average method  
   **Incorrect**—No historical pattern or trend exists in this historical data which would suggest any year or years’ results are any more indicated than the rest of the historical data.

c. Trend Line—static method  
   **Incorrect**—Trend line—static methods best fit data increasing at a steady but declining rate. This is not the observed pattern in this historical data set.

d. Gompertz curve method  
   **Incorrect**—Gompertz curve best fits periods of slow growth followed by rapid growth followed by slowdown in growth and a declining growth rate. This is not the observed pattern in this historical data set.

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

a. Invested capital  
   **Incorrect**—Net cash flow to invested capital will result in value of invested capital.

b. Equity  
   **B is Correct**—The net cash flow to equity will result in a value of equity capital.

c. Controlling interest  
   **Incorrect**—Controlling interest relates to the nature of the ownership interest being valued. The value of equity capital can be determined on a controlling or non-controlling basis.

d. Non-controlling (i.e., minority) interest  
   **Incorrect**—Non-controlling (i.e., minority) interest relates to the nature of the ownership interest being valued. The value of equity capital can be determined on either a controlling or non-controlling basis.
7. When discounting cash flow to invested capital, the appropriate discount rate is:
   a. Cost of equity  
      **Incorrect**—The appropriate discount rate when discounting cash flow to equity is cost of equity  
   b. Weighted average cost of capital  
      **B is Correct**—When discounting cash flow to invested capital, the appropriate discount rate is the weighted average cost of capital (WACC). As its name implies, WACC blends a company’s cost of equity with its cost of debt to arrive at the company’s overall cost of capital. WACC adds versatility to the valuation in that it can be developed based on a number of assumptions involving the company’s debt in its capital structure. These assumptions can include greater debt, less debt, or debt under different terms.  
   c. Capital asset pricing model  
      **Incorrect**—The capital asset pricing model does not consider the cost of debt, which is necessary to estimate the value of invested capital.  
   d. Ibbotson build-up method  
      **Incorrect**—This is an appropriate method in determining a discount rate to be used when discounting cash flows to equity  

8. Generally, an estimated future benefit stream is based on historical economic income when:
   a. There is a lack of historical information  
      **Incorrect**—Used when historical information is indicative of future benefits, if there is a lack of historical information, estimated future benefits would be based on projected income.  
   b. Start up or development stage companies  
      **Incorrect**—If valuing a start up or development stage company future benefits would generally be based on projected income.  
   c. The future benefit stream is estimated to be non-linear  
      **Incorrect**—If estimated future benefits are based on historical economic income the future benefit stream is generally estimated to be linear.  
   d. The future benefit stream is estimated to be linear  
      **D is Correct**—Estimated future benefits are based on historical income when future benefits are linear.  

9. A linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate.  
   a. True  
      **Incorrect**—A linear benefit stream is a stream of future benefits that is expected to grow or decline at a constant rate  
   b. False  
      **B is Correct**—A non-linear benefit stream is a stream of future benefits that is expected to grow or decline at a variable rate.
10. Two most commonly used methods to estimate future benefits based on a linear benefit stream are:
   a. Weighted average method and unweighted average method
      **A is Correct**—Two of the most commonly used methods to estimate future benefits based on a linear benefit stream are weighted average method and unweighted average method.
   b. Weighted average method and projected cash flow method
      **Incorrect**—The weighted average method is used when the analyst concludes one or more of the historical years are more representative of the future estimated benefits or that a trend or pattern exists and is expected to continue. The projected cash flow method is the most commonly used method to determine future benefits of a non-linear benefit stream.
   c. Unweighted average method and projected cash flow method
      **Incorrect**—An unweighted average method is typically used when the analyst concludes all of the past earnings are representative of the expected future benefits and no existing pattern or trend would suggest that any one year or years’ results are more indicative than the rest of the historical data. Projected cash flow would be used when the benefit stream is non-linear.
   d. Projected cash flow method and projected earnings method
      **Incorrect**—The projected cash flow and projected earnings method are most commonly used methods to determine future benefits of a non-linear benefit stream.

11. Using a weighted average method to determine a future benefit stream, a valuation analyst assigns more weight to the most recent years. This indicates:
   a. The valuation analyst determined the most recent year is the most indicative of future years
      **A is Correct**—The weighted average of historical economic earnings is most appropriately used for calculating future earnings when there appears to be a general pattern that may be extrapolated into the future.
   b. All of the past earnings are representative of the expected future benefits
      **Incorrect**—A weighted average method is typically used when the valuation analyst concludes that certain past earnings are more representative.
   c. No existing pattern or trend would suggest that any one year or years is more indicative than the rest of the historical data
      **Incorrect**—This would be unweighted average method.
   d. There is no apparent trend in the historical earnings
      **Incorrect**—The weighted average method is used when there appears to be a general pattern.

12. Using the Trend Line Projected Method, growth or data is:
   a. Increasing at a declining rate
      **A is Correct**—The trend line projected method is used where it is expected that growth is increasing at a declining rate.
   b. Increasing at an increasing rate
      **Incorrect**—When data is increasing at an increasing rate this is known as a Geometric method.
   c. Increasing at a constant rate
      **Incorrect**—When data is increasing at a constant rate this is known as the Projected Growth Rate in Earnings Methods.
   d. Increasing at an increasingly declining rate
      **Incorrect**—When data is increasing at an increasingly declining rate this is referred to as logarithmic projection.
13. Projected economic income in constant real dollars is based on real dollars in the first year without regard for inflation.
   a. True
      A is Correct—Project economic income in constant real dollars is based on real dollars in the first year without regard for inflation.
   b. False
      Incorrect—If projected economic income in calculated in nominal dollars, then that would include inflation in the projected income

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

   a. 5 years for tax valuation per the Internal Revenue Service, 10 years for all other types of valuations
      Incorrect – There are no certain requirements for the number of years included in a forecast or projection for tax valuations or other types of valuations.
   b. A minimum of 10 years for all valuations
      Incorrect – There is no such minimum number of years requirement.
   c. Number of years based on the owner’s investment horizon.
      Incorrect – The owner’s investment horizon is not relevant as to the valuation based on a projection or forecast.
   d. The number of years until it is assumed the benefit stream becomes linear
      D is correct – The projection or forecast period should be as long as it takes until the benefit stream stabilizes and becomes linear, at which point the valuation analyst can then capitalize the benefit stream to determine the “terminal value.”

Chapter 4 Bonus Question Responses:
Calculate the equity value using net cash flows to equity as the benefit stream. Assume a 20% after–tax net cash flow capitalization rate and a 15.58% weighted average cost of capital. Assume the net income (after–tax) is $500,000. Assume the non-cash charges are $250,000 a year, the expected capital expenditures to support the projected operations is $100,000 a year, the working capital necessary to support the projected operations is $50,000 a year, and the annual debt repayments are $250,000. Assume that the annual interest expense (tax effected) is $140,000 and that the debt capital is $3,000,000.

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

**ANSWER:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income (after-tax)</td>
<td>$ 500,000</td>
</tr>
<tr>
<td>Non-cash charges (e.g., depreciation, amortization, deferred revenue, deferred taxes)</td>
<td>250,000</td>
</tr>
<tr>
<td>Capital expenditures necessary to support projected operations</td>
<td>(100,000)</td>
</tr>
<tr>
<td>Additions to net working capital necessary to support projected operations</td>
<td>(50,000)</td>
</tr>
<tr>
<td>Interest expense (net of tax deduction)</td>
<td>140,000</td>
</tr>
<tr>
<td>Net cash flow to equity</td>
<td>740,000</td>
</tr>
<tr>
<td>After-tax net cash flow capitalization rate</td>
<td>15.58%</td>
</tr>
<tr>
<td>Invested capital (rounded)</td>
<td>4,750,000</td>
</tr>
<tr>
<td>Debt</td>
<td>(3,000,000)</td>
</tr>
<tr>
<td>Equity capital</td>
<td>$ 1,750,000</td>
</tr>
</tbody>
</table>

| Debt                          | 63.00%   |
| Equity                        | 37.00%   |
| Total                         | 100.00%  |

| Debt - cost of capital (after-tax) | 4.17%   |
| Equity - cost of capital (after-tax) | 35.00% |

Weighted cost of capital

| Debt   | 2.63%   |
| Equity | 12.95%  |
| Total  | 15.58%  |

This chart of trend line data (created in Excel) indicates this set of data probably doesn’t lend itself well to linear analysis. Given trend linear analysis is inappropriate, how is the above chart useful to the valuation analyst? Or is it useful at all?

The type of data being charted is not identified. That is the first thing a valuation analyst must determine. What is being measured? It may be useful in showing the analyst a trend that might exist, or that something (seasonality) is affecting the
numbers, or that there was some kind of change at the company for which the learning curve was very steep.

This unidentified data set also tells a valuation analyst to be certain to title as many of the charts as possible within the chart, so that when it is separated from any report, it is not misleading to another reader or user.

Review Questions Chapter 5 Capitalization/Discount Rates

1. What is a capitalization rate?
   a. The calculated external factor and internal factor multiplied by the investment factor.
      Incorrect—These are three of the factors that must be reviewed as they will influence the capitalization rate.
   b. Divisor (or multiplier) used to convert a defined stream of income to present value.
      B is Correct—The capitalization rate is a divisor or multiplier used to convert a defined stream of income (or benefit stream) determined by the valuation analyst to its present value.
   c. The price/earnings ratio divided by the dividend paying capacity.
      Incorrect—This formula will not yield a capitalization rate, although one may use P/E ratios or dividend ratios in the market method of valuation.
   d. Rate of return used to convert a series of future income amounts to their present value.
      Incorrect—This is not the definition of a capitalization rate.

2. What is a discount rate?
   a. The calculated external factor and internal factor multiplied by the investment factor.
      Incorrect—These are three of the factors that must be reviewed as they will influence the discount rate.
   b. Divisor or multiplier used to convert a defined benefit stream to present value.
      Incorrect—This is the definition of a capitalization rate.
   c. The price/earnings ratio divided by the dividend paying capacity.
      Incorrect—This formula will not yield a discount rate, although one may use PE ratios or dividend ratios in the market method of valuation.
   d. A rate of return used to convert a series of future income amounts to their present value.
      D is Correct—A discount rate is the rate of return used by the valuation analyst to convert a series of future benefit streams to their present value.
3. Earnings for Jasper Company for the last five years are shown below: What are the weighted average historical earnings?

<table>
<thead>
<tr>
<th>Year</th>
<th>Earnings</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1,230,000</td>
<td>1</td>
</tr>
<tr>
<td>2000</td>
<td>1,240,000</td>
<td>2</td>
</tr>
<tr>
<td>2001</td>
<td>1,245,000</td>
<td>3</td>
</tr>
<tr>
<td>2002</td>
<td>1,230,000</td>
<td>4</td>
</tr>
<tr>
<td>2003</td>
<td>1,230,000</td>
<td>5</td>
</tr>
</tbody>
</table>

a. 1,230,000  
   **Incorrect**—$1,230,000 is an unweighted average amount  

b. 1,234,333  
   **B is Correct**—The formula is the total of each earnings amount multiplied by its assigned weight divided by the sum of the weights.

c. 3,703,000  
   **Incorrect**—This is triple the average.

d. 7,714,581  
   **Incorrect**—This is not the weighted average.

4. Using the weighted average historical earnings from question #3, if the calculated discount rate is 15% and long-term growth is 3%, what is the indicated value of Jasper Company based on a capitalization of single-period earnings method?

a. $8,228,900  
   **Incorrect**—This figure is obtained by capitalizing 1,234,333 by 15%.

b. $15,429,200  
   **Incorrect**—This figure is unchanged and a terminal value represents the value of a company in the terminal year of an earnings forecast.

c. $10,286,100  
   **Incorrect**—This amount incorrectly uses the capitalization for next year without increasing the weighted average historical earnings by 3% to represent the estimated future benefit stream.

d. $10,594,700  
   **D is Correct**—This amount is calculated by increasing the weighted average historical earnings by the estimated long-term sustainable growth of 3% to determine the estimated future benefit stream for then dividing the amount by the capitalization rate of 12% (discount rate of 15% minus long-term sustainable growth rate of 3%). Another calculation would be to take the capitalization rate for next year of 12% and divide it by one plus the estimated long-term sustainable growth rate (12% / (1+.03) = 11.65%) and using the result to capitalize the weighted average historical earnings of $1,234,333 without adjusting for growth. Both methods will result in the same indicated value.

5. A capitalization rate and a discount rate are essentially the same thing.

a. True  
   **Incorrect**—A capitalization rate can be used to determine a value where the anticipated growth in the benefit stream is stable while a discount rate is used to convert a series of future benefit streams to a present value.

b. False  
   **B is Correct**—Discount rates are applied to convert a series of future income amounts to present value whereas capitalization rates are applied to a single-period benefit stream to convert to a value.
6. The price earnings ratios for five public companies are: 8.20, 4.60, 5.00, 4.86, and 2.10. The after-tax capitalization rate is:
   a. 16.00%
      **Incorrect**—This is a generic number used in text examples as a given rate.
   b. 18.08%
      **Incorrect**—This answer is the result of a higher average and likely due to mathematical errors.
   c. 20.19%
      **C is Correct**—The formula to determine a capitalization rate from a series of price/earnings ratios is: \( 1 / (\text{sum of P/E ratios} / \text{number of P/E ratios}) \). Here the calculation is \( 1 / ((8.20 + 4.60 + 5.00 + 4.86 + 2.10)/5) = 20.19\% \)
   d. 24.76%
      **Incorrect**—This number does not correctly apply the formula but is simply the sum of the P/E ratios themselves.

7. The primary formula for the Capital Asset Pricing Model (CAPM) is:
   a. Expected return = risk-free rate divided by beta multiplied by the expected return on a market portfolio.
      **Incorrect**—The market portfolio in this definition would be overvalued.
   b. Expected return = risk-free rate multiplied by beta multiplied by the expected return on a market portfolio less the risk-free rate.
      **Incorrect**—The beta-adjusted market return should be added to the risk-free rate, not multiplied
   c. Expected return = risk-free rate plus beta multiplied by the expected return on a market portfolio less the risk-free rate.
      **C is Correct**—Some valuation analysts substitute the average pre-tax return on equity for the market portfolio in CAPM. The valuation analyst needs to define which is used and why.
   d. Expected return = beta divided by the risk-free rate multiplied by the expected return on a market portfolio less the risk-free rate.
      **Incorrect**—Beta is not divided by the risk-free rate

8. To calculate the weighted average cost of capital (WACC):
   a. Calculate the cost of debt plus the cost of equity in proportion to their book values.
      **Incorrect**—The weights of both the cost of debt and the cost of equity are measured based on fair market value, not book value.
   b. Calculate the weighted average earnings and divide by the ratio of debt to equity.
      **Incorrect**—To calculate the WACC, the after-tax weighted cost of debt is added to the weighted cost of equity.
   c. Calculate the after-tax weighted cost of debt and add the weighted cost of equity.
      **C is Correct**—Formula for weighted average cost of capital is cost of capital = after tax weighted cost of debt + weighted cost of equity. The weights of both the debt and equity components are measure at fair market value.
   d. Calculate the interest rate on a mid-range treasury bond and divide by beta.
      **Incorrect**—Beta is important in many financial calculations, but is not appropriate in calculating debt or equity; the treasury rate may be useful in calculating debt but it does not factor directly into the general calculation for cost of capital.
9. An estimate of a long-term sustainable growth rate should:
   a. Equal inflation plus the real volume growth that can be achieved with additional capital investment
      **Incorrect**—Growth should include inflation and what the analyst can see as real growth by using only currently invested capital.
   b. Equal inflation less the real volume growth that can be achieved with additional capital investment
      **Incorrect**—Growth plus inflation must be taken into account in a growth rate used by the valuation analyst.
   c. Equal inflation plus the real volume of growth that can be achieved without additional capital investment
      **C is Correct**—The theoretical basis for long-term sustainable growth is that it cannot exceed the outlook for inflation plus the outlook for growth in the real gross domestic product (GDP).
   d. None of the above
      **Incorrect**—A long-term sustainable growth rate can be estimated based on expected inflation and growth in real gross domestic product (GDP)

10. Earnings per share is:
    a. The price of risk less the difference between the expected rate of return on a portfolio and the reasonable rate.
       **Incorrect**—This is the definition of a market risk premium, not earnings per share.
    b. The price of the dividend divided by the price.
       **Incorrect**—This is the definition of dividend yield.
    c. The market price per share divided by the book value per share.
       **Incorrect**—This is the definition of price to book ratio.
    d. The net income less preferred stock dividends divided by the number of common shares outstanding.
       **D is Correct**—This is the definition of earnings per share (EPS)

11. To convert a pre-tax capitalization rate to after-tax capitalization rate:
    a. Multiply the pre-tax capitalization rate by 1 minus the expected tax rate.
       **A is Correct**—The formula to convert an after-tax capitalization rate to a pre-tax capitalization rate is to multiply the pre-tax capitalization rate by 1 minus the expected tax rate.
    b. Divide the after-tax capitalization rate by 1 minus the expected tax rate.
       **Incorrect**—This is the formula to convert an after-tax capitalization rate to a pre-tax capitalization rate.
    c. Multiply the pre-tax capitalization rate by 1 plus the expected tax rate.
       **Incorrect**—In conversion, subtract the actual tax rate from one.
    d. Divide the after-tax rate by 1 plus the expected tax rate.
       **Incorrect**—This is not a formula for converting to either an after-tax capitalization or pre-tax capitalization rate.
12. Answer To Practice Exercise

**Benefit Stream**

<table>
<thead>
<tr>
<th>Capitalization of Earnings/Cash Flow</th>
<th>Discount/Capitalization Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-tax earnings (income before taxes)</td>
<td><strong>Ibbotson Build-Up Approach</strong></td>
</tr>
<tr>
<td>After-tax earnings (net income)</td>
<td>+ Risk-free rate</td>
</tr>
<tr>
<td>Net cash flow to invested capital</td>
<td>+ Equity risk premium</td>
</tr>
<tr>
<td>Net cash flow to equity (current year)</td>
<td>+ Size premium</td>
</tr>
<tr>
<td>Pre-tax excess earnings</td>
<td>+ Company specific risks</td>
</tr>
<tr>
<td>After-tax excess earnings</td>
<td>= After-tax net cash flow discount rate</td>
</tr>
<tr>
<td>Discounting Future Cash Flows</td>
<td>− Long-term sustainable growth rate</td>
</tr>
<tr>
<td>Projected cash flows</td>
<td>= After-tax net cash flow capitalization rate for next year</td>
</tr>
<tr>
<td></td>
<td>+ Adjustment for current year</td>
</tr>
<tr>
<td></td>
<td>= After-tax net cash flow capitalization rate for current year</td>
</tr>
<tr>
<td></td>
<td>+ Cash to earnings factor</td>
</tr>
<tr>
<td></td>
<td>= After-tax net income capitalization rate for current year</td>
</tr>
<tr>
<td></td>
<td>+ Intangible earnings factor</td>
</tr>
<tr>
<td></td>
<td>= After-tax intangible capitalization rate for the current year</td>
</tr>
</tbody>
</table>

**Discounting Future Cash Flows**

<table>
<thead>
<tr>
<th>Projected cash flows</th>
<th>Weighted Average Cost of Capital (WACC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+ Weighted Cost of Debt</td>
</tr>
<tr>
<td></td>
<td>+ Weighted Cost of Equity</td>
</tr>
<tr>
<td></td>
<td>= WACC</td>
</tr>
</tbody>
</table>

13. General expectations of the particular business being valued, the size of the business being valued, and the nature of the business being valued are examples of:

a. External factors that may influence the capitalization or discount rate
   **Incorrect**—External factors include; expectations of the general economy, existing conditions of the economy, expectations of the industry and existing conditions of the particular industry.

b. Internal factors that may influence the capitalization or discount rate
   **B is Correct**—General expectations, size, and nature of the business being valued are internal factors that may influence the capitalization or discount rate.

c. Investment factors that may influence the capitalization or discount rate
   **Incorrect**—Investment factors include risks associated with the investment itself, expectations as to the capital appreciation and liquidity of the investment and level of the expected management burden of the investment.

d. Marketability factors which affect the capitalization or discount rate
   **Incorrect**—Marketability relates to converting and investment into cash.
14. It is generally accepted that the capitalization rate is equivalent to the discount rate less:
   a. Short-term growth rate  
      **Incorrect**—The short-term growth rate does not adequately consider the long-term sustainable growth rate necessary for accurate valuation calculations.
   b. Long-term sustainable growth rate  
      **B is Correct**—The discount rate less the long term sustainable growth rate equals the capitalization rate.
   c. Equity risk premium  
      **Incorrect**—The equity risk premium is a factor used to determine a discount rate and unrelated to the company specific growth rate.
   d. Risk free rate  
      **Incorrect**—The risk free rate is generally the long-term governmental bond rate and should not be confused with the growth rate.

15. Which variable below is NOT included in the Ibbotson Build-Up Method?
   a. Risk free rate of return  
      **Incorrect**—The risk free rate is the starting point for the Build-Up Method.
   b. Beta  
      **B is Correct**—Beta is a component of the capital asset pricing model and is not included in the Ibbotson Build-up Method.
   c. Size premium  
      **Incorrect**—Size premiums are included in the Build-Up Method, generally after the equity risk premium.
   d. Specific company risk  
      **Incorrect**—The factors included in the Ibbotson Build-Up formula include the risk free rate of return, the equity risk premium, size premium, industry risk premium and company specific risk.

16. Which component of the Ibbotson Build-Up Method relates to the “unsystematic risk” associated with a particular business entity?
   a. Risk free rate  
      **Incorrect**—The risk free rate relates to maturity risk. Maturity risk is the risk that the value may fluctuate due to changes in interest rates.
   b. Equity risk premium  
      **Incorrect**—The equity risk premium relates to systematic risk. Systematic risk is uncertainty of future returns based on movements of the market.
   c. Beta  
      **Incorrect**—Beta is not a component of the Ibbotson Build-Up Method.
   d. Specific company risk premium  
      **D is Correct**—The specific company risk premium relates to the unsystematic risk of a particular business entity.
17. Which of the following is not an assumption of the Capital Asset Pricing Model (CAPM)?
   a. Investors are risk averse
      Incorrect—The Capital Asset Pricing Model assumes all investors are risk averse.
   b. There are no taxes and no transactional costs
      Incorrect—The Capital Asset Pricing Model assumes there are no taxes or transactional costs.
   c. The rate received from lending money is the same as the cost of borrowing
      Incorrect—The Capital Asset Pricing Model assumes the rate received from lending money is
      the same as the cost of borrowing.
   d. All investors do not have identical investment holding periods
      D is Correct—The Capital Asset Pricing Model assumes all investors have identical holding
      periods.

18. Using the Modified Capital Asset Pricing Model a valuation analyst determines beta = 1.08, this
    means:
   a. The subject company is no more or no less volatile than the industry
      Incorrect—This would represent a beta of 1.0
   b. The subject company is less volatile than the industry
      Incorrect—This would be a beta less than 1.0
   c. The subject company is more volatile than the industry
      C is Correct—When beta is 1.08 this is representative that the company is more volatile or
      more risky than the overall industry.
   d. The subject company has no relative market risk
      Incorrect—This would mean the company has a zero beta which is equivalent to the risk free
      rate.

19. WACC can add versatility to the valuation, in that a valuation analyst could change the capital
    structure of an entity when valuing a non-controlling (i.e., minority) interest.
   a. True
      Incorrect—When valuing a non-controlling interest the valuator cannot change the capital
      structure of an entity.
   b. False
      B is Correct—A non-controlling (i.e., minority) interest, by its nature, would not have the
      ability to change the capital structure of an entity.

20. If a valuation analyst uses the weighted average cost of capital (WACC) and is valuing only the
    equity of the company, the valuation analyst would:
   a. Capitalize equity and ignore the debt
      Incorrect—This method would yield an incorrect value as the debt would be included in the
      WACC, but not the benefit stream.
   b. Capitalize invested capital then subtract existing debt
      B is Correct—Using the WACC method and valuing only the equity of the company the
      valuation analyst must calculate the value of the company’s entire capital structure and then
      subtract the debt.
   c. Determine the present value of the debt only
      Incorrect—Using the WACC the valuation analyst must determine the present value of
      invested capital.
   d. Capitalize the cash flow net of debt
      Incorrect—if valuing the equity using the WACC, the valuation analyst should use cash flow
      to invested capital and value the entire capital structure and then subtract the company’s debt.
21. The criteria for companies included in the measurement data used to determine the equity risk premiums found in the Duff & Phelps Risk Premium report would include all EXCEPT:
   a. Must be publicly traded for 5 years  
      **Incorrect**—Companies included in the measurement data must meet certain criteria including must be publicly traded for 5 years.
   b. Must have sales greater than $1 million in any of the previous 5 years  
      **Incorrect**—This is to ensure companies in bankruptcy or liquidation are not used for analysis. The Risk Premium report has a separate “high financial risk” portfolio for those companies.
   c. Cannot be a financial service company  
      **Incorrect**—Because financial service companies are excluded from the measurement data
   d. EBITDA can either be negative or positive based on the most recent 5 year average  
      **D is Correct**—Companies must have a positive 5 year average EBITDA for the previous five fiscal years

22. The Duff & Phelps equity risk premium measurements are sorted into ________________ measures of size.
   a. five  
      **Incorrect**—This is the number of criteria in the “high financial risk” category.
   b. eight  
      **B is Correct**—The Duff & Phelps equity risk premium measurement data is sorted into eight (8) measurements of size.
   c. ten  
      **Incorrect**—This is the number of size premium deciles in the Ibbotson data.
   d. twelve  
      **Incorrect**—This is an incorrect number as there are only eight criteria.

23. What component of cost of capital using a build-up method would the Duff & Phelps data help you determine:
   a. Company specific risk  
      **Incorrect**—This factor is used to estimate the unsystematic risk of the target company.
   b. Equity risk premium  
      **B is Correct**—The Duff & Phelps data was developed to measure the equity risk premium in determining the cost of capital.
   c. Risk free rate  
      **Incorrect**—The risk free rate is generally the long-term governmental bond rate.
   d. Beta  
      **Incorrect**—Beta is used in the Modified CAPM, not the Build-Up Method.
24. What are the four general risk factor categories of the risk rate component model (RRCM)?
   a. Competition, financial strength, profitability and stability of earnings, and management ability and depth
      **A is Correct**—The primary factors of the RRCM include competition, financial strength, management ability and depth, and profitability and stability of earnings.
   b. Competition, national economic effects, local economic effects, and depth of management
      **Incorrect**—National and local economic effects would not be considered primary factors of the RRCM.
   c. Local economic effects, financial strength, market stability, and profitability and stability of earnings
      **Incorrect**—Local economic effects and market stability are not considered primary factors of the RRCM.
   d. National and local economic effects, financial strength, management ability, and competition
      **Incorrect**—National and local economic effects would not be considered primary factors of the RRCM.

**Review Questions Chapter 6 Commonly Used Methods of Valuation**

1. The three general approaches that need to be considered by the valuation analyst in each valuation engagement include:
   a. Income, Asset Based, and Excess Earnings
      **Incorrect**—Excess Earnings is a method, not an approach to valuation.
   b. Market, Treasury, and Income
      **Incorrect**—Treasury is a method, not an approach to valuation.
   c. Income, Going Concern, and Market
      **Incorrect**—Going Concern refers to a premise of value, not an approach to valuation.
   d. Income, Asset Based, and Market
      **D is Correct**—Income, Asset Based and Market refer to the three general approaches to valuation which a valuation analyst must consider in each valuation engagement.
2. As a component of the capitalization of future earnings or cash flows method, the future earnings or cash flows as estimated by the valuation analyst:
   a. Are always calculated on an after-tax basis  
      **Incorrect**—The future earnings or cash flows may be calculated on a pre-tax or after-tax basis (be careful of the word “always” in business valuation). It is extremely important, however, that the valuation analyst ensure that the basis of the benefit stream, either pre-tax or after-tax, match the basis of the capitalization rate.
   b. Exclude any income or expense items generated from non-operating assets and liabilities  
      **B is Correct**—As their name implies, non-operating assets and liabilities do not contribute to the operations of a business, and any income or expense items related to them should not be included in the benefit stream in the capitalization of earnings/cash flows method. The value of any non-operating assets or liabilities are added back to the calculated value of the operating business to determine the overall.
   c. Are based only on the historical results of operations in the fiscal year closest to the valuation date  
      **Incorrect**—Any number of fiscal years, weighted or unweighted, can be used to estimate the future earnings or cash flows in this method.
   d. Exclude any compensation to the owner(s) of the business  
      **Incorrect**—Compensation to the owner(s) of the business should be included in the estimation of future earnings or cash flows. However, based on the facts and circumstances of the particular valuation engagement, the compensation amounts may be adjusted as a normalizing adjustment by the valuation analyst.

3. If the capitalization of future earnings/cash flows method is used in a valuation engagement for U.S. Gift Tax purposes, the valuation analyst is required to include how many historical years in the estimate of the future earnings/cash flows?
   a. At least three years, based on Treasury Regulations  
      **Incorrect**—The Treasury Regulations do not specify a particular number of historical years which are required to be included in the estimate of future earnings/cash flows.
   b. As many years as the valuation analyst deems appropriate, based on his/her professional judgment  
      **B is Correct**—The valuation analyst, in their financial analysis, will need to use his/her professional judgment in the determination of how many historical years are relevant in the calculation of the estimate of future earnings/cash flows.
   c. Five years, based on requirements of the Internal Revenue Service.  
      **Incorrect**—The Internal Revenue Service does not specify a particular number of historical years which are required to be included in the estimate of future earnings/cash flows.
   d. Two to five years, based on Treasury Regulations.  
      **Incorrect**—There is no specific requirement noted in the Treasury Regulations.
4. In the discounted earnings/cash flows method, the Gordon Growth Model is used:
   a. To determine the period of stabilized earnings/cash flows of the company
      Incorrect—The period of stabilized earnings/cash flows is based on assumptions developed for the projection period, not through use of the Gordon Growth Model, which is one possible method used to calculate the “terminal value” in the discounted earnings/cash flows method.
   b. To determine the number of periods (years) needed in the projection period
      Incorrect—The number of periods (years) needed in the projection period are based on assumptions used by management as to how long it will take the company to achieve a stabilized level of operations. The Gordon Growth Model is one possible method used to calculate the “terminal value” in the discounted earnings/cash flows method. In closely held businesses, the owner and owner’s family may be the only stockholder(s) and may have approved this debt.
   c. To calculate the “terminal value” of the company
      C is Correct—The Gordon Growth Model is one possible method used to calculate the “terminal value” in the discounted earnings/cash flows method.
   d. To calculate the present value factor based on an assumed rate of return
      Incorrect—The present value factors are calculated based on the developed discount rate, not by the Gordon Growth Model, which is one possible method used to calculate the “terminal value” in the discounted earnings/cash flows method.

5. To find useful and relevant comparable guideline publicly traded companies to use in the market approach is:
   a. Relatively easy because numerous comparable guideline publicly traded companies exist for the privately held businesses that are the subject of the valuation analysts valuation engagements
      Incorrect—There are relatively few, if any, guideline publicly traded companies that are comparable to the privately held companies that are the subject of the typical valuation engagement.
   b. Relatively easy because finding comparable guideline publicly traded companies is quick and inexpensive as the information is readily available from public sources
      Incorrect—Finding comparable guideline publicly traded companies is a time consuming and costly approach. The valuation analyst must perform significant financial analysis of the subject company and each potential comparable company.
   c. Relatively difficult because the methodology relies on explicit financial forecasts which are not readily available for the comparable companies
      Incorrect—Although the market approach requires significant financial and operational analysis to determine the comparable companies, it does not rely on explicit financial forecasts but uses relatively simple financial ratios in order to determine a value.
   d. Relatively difficult because company size differential, management depth, product and services diversity and access to debt capital will seldom match the privately held company being valued
      D is Correct—These reasons and others require the valuation analyst to understand, reconcile, and adjust for any perceived differences and similarities between the guideline comparable publicly traded companies and the company being valued.
6. The primary methods used to calculate the value of privately held business interests in the income approach are:
   a. Capitalization of Earnings/ Cash Flows Method and Excess Earnings/Treasury Method  
      Incorrect—The Excess Earnings methods are hybrid methods, containing elements of both the  
      Income and Asset Approaches.
   b. Excess Earnings/Treasury Method and Discounted Earnings/Cash Flows Method  
      Incorrect—The only income approach method noted in this option is the Discounted  
      Earnings/Cash Flows method.
      C is Correct—These are the two primary methods within the income approach.
   d. Discounted Earnings/Cash Flows Method and Price/EBITDA Method  
      Incorrect—The Price/EBITDA Method is a market approach, not an income approach.

7. According to Russel L. Parr in *Investing in Intangible Assets*, there are ten essential characteristics of  
   an intangible asset. One such essential characteristic is:
   a. To provide an economic advantage in the form of lower manufacturing or operating costs such  
      as substituting high cost high quality materials for low cost materials enabling a higher quality  
      product  
      Incorrect—Actually the opposite would be true—enabling the use of low cost materials to  
      maintain a product of equal quality—would be an intangible asset.
   b. To provide an economic advantage in the form of lower manufacturing or operating costs such  
      as reducing the amount of labor required to manufacture, inspect, package or account for a  
      product  
      B is Correct—This is one of the ten essential characteristics of an intangible asset per Parr’s  
      *Investing in Intangible Assets*.
   c. To provide an economic advantage in the form of lower manufacturing or operating costs such  
      as lowering high manufacturing speeds by reducing fuel or electric power requirements  
      Incorrect—the opposite is correct—producing higher manufacturing speeds and still being  
      able to reduce fuel or electric power requirements—would be what is needed.
   d. To provide an economic advantage in the form of lower manufacturing or operating costs such  
      as reducing shipping costs by eliminating manufacturing environmental hazards  
      Incorrect—the two issues—shipping a product and an environmental hazard created by  
      manufacturing—do not directly relate.
8. The Financial Accounting Standards Board (FASB) has issued Accounting Standards Codifications that address valuation considerations for goodwill and other intangible assets. Which of the following is correct?
   a. ASC 830 did not affect valuations based on arms-length bargaining.  
      Incorrect—ASC 830 deals with foreign currency translation and not valuation issues.
   b. ASC 59-60 does affect valuations, and the valuation analyst must take care to follow the eight factors outlined in ASC 59-60.  
      Incorrect—There is no ASC 59-60. The answer is confusing the ASC with Revenue Ruling 59-60 which is often quoted as the basis for valuing a business.
   c. ASC 66-49 outlined procedures to all types of non-cash property for which an appraisal is required for gifting and/or charitable contribution.  
      Incorrect—There is no ASC 66-49. The answer is confusing the ASC with Revenue Ruling 66-49 which outlines procedures for all types of non-cash property being gifted and/or charitably donated.
   d. ASC 350 addresses how intangible assets acquired with a group of assets (but not those required in a business combination) should be accounted for upon their acquisition.  

9. When valuing the stock of a real estate holding company, most likely the valuator will give the greatest weight to which method?
   a. Capitalization of earnings method  
      Incorrect—When valuing a real estate holding company, the value of the stock is most closely related to the underlying assets owned by the company and not the earnings generated from the asset. Therefore an asset approach would be most appropriate.
   b. Book value method  
      Incorrect—The book value method is based on the company’s book value and does not take into account fair market value as of the valuation date.
   c. Adjusted net assets method  
      C is Correct—The Adjusted Net Assets Method is a sound method for estimating the value of a non-operating business such as a real estate holding company.
   d. Rule of thumb  
      Incorrect—Rules of thumb are not valid valuation methods and should only be used as a sanity check.

10. Using the adjusted net asset method, the valuation analyst only values the tangible assets of the company.
   a. True  
      Incorrect—if only tangible assets are used, there will likely be significant differences between the other methods (income and market) due to the missing identifiable intangible asset values.
   b. False  
      B is Correct—Both tangible and identifiable intangible assets are valued in determining total adjusted net assets.
11. The adjusted net assets method generally sets a ______________ for determining total entity value.
   a. floor value
      **A is Correct**—The adjusted net assets method generally sets a floor or the minimum value for determining the total entity value.
   b. high value
      **Incorrect**—The adjusted net assets method generally sets a floor value or minimum value an owner with a controlling interest would sell their ownership interest for.
   c. forced liquidation value
      **Incorrect**—In a forced liquidation a shareholder may not be able to obtain the fair market value of the underlying assets.
   d. investment value
      **Incorrect**—Investment value represents the value to a particular investor.

12. Which one of the following adjustments would be a normalized adjustment to the balance sheet in the adjusted net assets method?
   a. Convert inventory from FIFO to LIFO
      **Incorrect**—Inventory should be valued on a FIFO basis; the carrying cost of inventory on the balance sheet should be representative of the most recent prices to acquire the inventory.
   b. Remove excess cash
      **B is Correct**—If the valuator identifies excess cash, the excess cash would be considered a non operating asset and removed from a normalized balance sheet.
   c. Adjust owner’s compensation
      **Incorrect**—An adjustment to owner’s compensation would be an appropriate adjustment on the income statement not the balance sheet.
   d. Remove expenses related to fire damage of a Company’s manufacturing plant
      **Incorrect**—An adjustment for expenses due to a fire would be adjusted on the income statement.

13. Which method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value?
   a. Capitalization of earnings
      **Incorrect**—The capitalization of earnings is determined based on a single earning stream and divided by the discount rate less a long term growth rate.
   b. Discounted cash flows
      **B is Correct**—The Discounted cash flow method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value.
   c. Excess earnings
      **Incorrect**—The excess earnings method is a formula method that combines both an income and asset approach.
   d. Adjusted net assets method
      **Incorrect**—The adjusted book value method is based on the fair market value of the company’s net assets.
14. The mid period method of discounting should be used when the equity holder:
   a. Has access to cash flows at the end of the year (or period)
      Incorrect—If the equity holder only has access to the cash flows at the end of the year, then the
      valuator should use an end of period discount rate.
   b. Has access to cash flows throughout the year (or period)
      **B is Correct**—The mid period discounting method should be used when the equity holder has
      access to the cash flow throughout the year to receive dividends
   c. Does not have access to any cash flows
      Incorrect—The mid period discounting method should be used when the equity holder has the
      ability to receive cash flows throughout the year, when the company does not generate any cash
      flows this method would not be appropriate.
   d. A and B
      Incorrect—This answer cannot be correct, as the items described in A and B cannot occur at
      the same time.

15. Advantages of the market approach include:
   a. It uses actual data, it is relatively simple to apply, and it is inexpensive to determine.
      Incorrect—The market approach is a costly approach, when done correctly, the analyst must
      perform significant financial analysis on the subject company.
   b. It uses actual data, it is inexpensive to determine, the data obtained via transaction databases are
      very reliable.
      Incorrect—The market approach is costly to implement when done correctly and the reliability
      of transactional data is questionable.
   c. It uses actual data, it is relatively simple to apply, and it does not rely on explicit forecasts.
      **C is Correct**—The market approach uses actual data for comparison purposes, it can be
      relatively simple to apply and does not rely on explicit forecasts.
   d. It is user friendly, relatively inexpensive to determine, and simple to apply.
      Incorrect—in order to identify comparable companies, verify comparability, and identify the
      underlying assumptions built into the pricing model, the market approach is often very time
      consuming and costly.

16. Which two private company transactional databases cover relatively small companies?
   a. IBA Market Database and Done Deals
      Incorrect—The BIZCOMPS database covers transactions of relatively small companies, however, the DoneDeals database includes deal prices ranging from $1 million to $1 billion.
   b. BIZCOMPS and IBA Market Database
      **B is Correct**—The BIZCOMPS and IBA databases cover transactions of relatively small
      companies.
   c. IBA Market Database and Mergerstat
      Incorrect—The IBA database covers transactions of relatively small companies, however, Mergerstat data generally include transactions where one of the companies was publicly traded.
   d. Mergerstat and BIZCOMPS
      Incorrect—The BIZCOMPS database cover transactions of relatively small companies, however, Mergerstat data generally include transactions where one of the companies was publicly traded.
17. Using the market approach, “price” should be matched to the appropriate parameter based on which
distributors of capital in the numerator will be paid with the monies given in the denominator. Market
value of invested capital (MVIC) is usually the numerator that is paired with ____________ in the
denominator.
   a. EBITDA
      A is Correct—Any denominators that exclude interest should usually be matched with a
      corresponding numerator of invested capital.
   b. pretax income
      Incorrect—Market value of equity as the numerator would be paired with pretax income.
   c. net income
      Incorrect—Market value of equity as the numerator would be paired with net income.
   d. book value of equity
      Incorrect—Market value of equity as the numerator would be paired with book value of equity.

18. Which method combines the income and asset based approaches to arrive at a value of a closely held
business?
   a. Adjusted net assets value method
      Incorrect—This is an asset based approach.
   b. Discounted cash flows method
      Incorrect—This is an income based approach.
   c. Guideline public companies method
      Incorrect—This is a market based approach.
   d. Excess earnings method
      D is Correct—The excess earnings method incorporates elements of both the income and asset
      approaches to arrive at the value of a privately held company.

19. A “pass-through” entity is one which:
   a. Passes the value of the entity to the owners in a taxable transaction
      Incorrect—A pass-through entity is one which pays no entity-level income taxes but passes on
      any income or loss to the owners.
   b. Pays no entity-level income taxes, but passes through any income or losses to the owners of the
      entity
      B is Correct—This is a proper definition of a pass-through entity.
   c. Calculates its entity-level tax liability and passes it through to the owners of the entity
      Incorrect—A pass-through entity does not incur any tax liability itself.
   d. Pays the individual taxes of the owners as a pass through item
      Incorrect—Although many pass-through entities may make distributions of cash to its owners
      to satisfy any individual tax liability they may incur as owners of the entity, the payment of the
      distribution is often discretionary and the entity does not pay the individual taxes of he owners.
20. Which model for valuing a minority interest in a pass-through entity assumes 100% of the company’s earnings is being distributed?
   a. Mercer  
      **Incorrect**—Mercer concludes that the amount of distributions causes no differences in value.
   b. Grabowski  
      **Incorrect**—Although the Grabowski model assumes that 100% of free cash flow is available for distributions, it does not assume that 100% of the free cash flow will actually be distributed and allows for consideration of appropriate discounts for lack of control and lack of marketability to the extent that such amounts will not be distributed.
   c. Van Vleet  
      **C is Correct**—This model assumes that the subject S Corporation is distributing 100% of its earnings and if this is not the case then any appropriate discount for lack of marketability should be adjusted.
   d. Treharne  
      **Incorrect**—Treharne’s model allows for varying levels of distributions from no distributions to 100% distribution.

21. The S election allows a shareholder to avoid which individual level tax?
   a. Capital gain tax  
      **Incorrect**—Both the S and C corporations will pay capital gain tax.
   b. Income tax  
      **Incorrect**—A Corporation will pay income taxes at corporate rates and the owners of an S corporation will pay income taxes at the individual’s effective income tax rate.
   c. Dividend tax  
      **C is Correct**—The S election allows a shareholder to avoid the dividend tax.
   d. Foreign tax  
      **Incorrect**—A US S Corporation which conducts business in a foreign country would be subject to income taxes of that country and neither the shareholder nor the corporation would be able to avoid this tax. However, they may receive a tax credit for income taxes paid in a foreign country.

22. There are four recognized models for valuing a minority interest in a pass-through entity. Which of the following statements is incorrect?
   a. All four models recognize distributions impact value  
      **Incorrect**—All four models recognize distributions impact value.
   b. All four models recognize there is potential value in retained net income  
      **Incorrect**—All four models recognize there is potential value in retained net income.
   c. All four models assume the same holding period  
      **C is Correct**—All four models recognize a different holding period. Treharne’s model assumes the interest is held into perpetuity, Van Vleet assumes the ownership interest can be liquidated at the option of the shareholder, Mercer assumes a selected holding period and Grabowski considers two holding periods.
   d. All four models consider the dividend tax on C corporation dividends  
      **Incorrect**—All four models consider the dividend tax on C Corporation dividends.
Chapter 6 Bonus Question Responses

1. The **Excess Earnings/Treasury Method** presumes that the value of a business is the sum of the values of its adjusted net assets and intangible assets, using what is considered to be a “reasonable” return on the adjusted net assets. List the steps used in the method:
   a. Determine the estimated future earnings of the company. Usually this is the historical economic unweighted or weighted average earnings over the last five years, adjusted for any non-recurring items.
   b. Determine the unweighted or weighted average of the GAAP (or tax basis) net assets. This calculation should exclude goodwill or other intangible assets, whose value is also to be estimated by this method. The analyst uses GAAP assets in this step in order to ensure as much comparability with industry data as possible, from which a reasonable rate of return will be obtained in Step #3.
   c. Select a reasonable rate of return to apply to the GAAP net assets whose value was determined in Step #2. The most appropriate rate of return is the average return on equity (unweighted or weighted) for comparable companies, or as determined from industry averages.
   d. Multiply the value of the GAAP net tangible assets of the business, as determined in Step #2, by the rate of return determined in Step #3. The product is that portion of total earnings of the business attributable to a reasonable return on the weighted average or unweighted average net adjusted assets.
   e. The earnings determined in Step #4 are then subtracted from the total earnings determined in Step #1. The difference is the "excess" earnings that is attributable to the intangible assets being valued by this method.
   f. Select a capitalization rate which corresponds to an appropriate rate for a safe return, adjusting it accordingly to reflect the perceived level of risk associated with the company.
   g. The amount of excess earnings determined in Step #5 is then divided by the capitalization rate determined in Step #6. The amount thus derived is the estimated total value of intangible assets.
   h. Determine the current adjusted net assets at fair market value, utilizing the FMV adjusted net assets method. This determination excludes goodwill and all other intangible assets.
   i. The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step #7) to the adjusted net tangible assets (determined in Step #8).

2. List the steps to be used in **Excess Earnings/Reasonable Rate Method**: 
   a. Determine the estimated future earnings of the company.
   b. Determine the current adjusted net assets at fair market value, utilizing the FMV adjusted net assets method. This determination must exclude goodwill and other intangible assets.
   c. Select a reasonable rate of return to apply to adjusted net assets whose value was determined in Step #2. The rate chosen should correspond to the relative liquidity and risk of the underlying assets which it is being applied to.
   d. Multiply the value of the adjusted net tangible assets of the business determined in Step #2 by the rate of return determined in Step #3. The product is the portion of total earnings attributable to a return on adjusted net assets. Adjusted net assets, once again, exclude intangible assets of any kind.
   e. The earnings determined in Step #4 are then subtracted from the total earnings determined in Step #1. The difference is the "excess" earnings considered to be attributable to the intangible assets being valued by this method.
3. Geri Co has a 10-year history of weighted average profits of $900,000 and a weighted average dividend paid of 3.5% of earnings. Comparable companies indicate a weighted average yield of 6.2%.

1st - Calculate the value under the **dividend payout** method:

Earnings: 900,000
Dividend amount: 900000 X 3.5% = 31500
Weighted average yield of comparables: 6.2%
Dividend payout value: 31500 ÷ 6.2% = 508,065.

2nd - Calculate if the weighted average dividend payout was:

45% = 900000 X 45% = 40500 ÷ 6.2% = 6,532,258
30% = 900000 X 30% = 270,000 ÷ 6.2% = 4,354,839
50% = 900000 X 50% = 450000 ÷ 6.2% = 7,258,065

**QUESTION:** What issues do you see using this method?

a. Family owned businesses often pay out the bulk of their profits to family members in various ways. These are usually termed dividends by many courts.

b. Would a buyer pay that much for this company? Use a justification of purchase method to document your opinion.

b. Differences in capital structure between this company and public comparable companies make it difficult to truly compare dividend payout potential.

4. The steps used when valuing a company using the **discounted earnings** method are:

a. Determine projected annual estimated earnings of the business for an appropriate forecast period (generally three to five years into the future).

b. Estimate a long term (perpetual) growth rate for earnings for the period beginning after the forecast period.

c. Determine an appropriate discount rate.

d. Calculate the present values of the projected annual earnings using the discount rate. Next, calculate a terminal value using the cap rate (discount rate minus the perpetual growth rate), then use the discount rate to determine the present value of the terminal value.

e. Sum the present values determined above.
Review Questions Chapter 7 Valuation Discounts and Premiums

1. Select the reason(s) why a discount for lack of marketability (DLOM) for a controlling interest, even one that is 100%, may be applicable.
   a. Uncertain time horizon to complete the offering or sale
      Incorrect—This is one of the correct options available.
   b. Cost to prepare for and execute the offering or sale
      Incorrect—Although this is a correct option, there are two correct options available.
   c. The eventual sale price is finalized
      Incorrect—The eventual sale price for a controlling (or non-controlling) interest is never certain until the transaction actually takes place.
   d. Market conditions may require a quick sale
      D is Correct—Both option “a” and “b” are valid reasons why a DLOM is appropriate for a controlling interest.

2. What circumstances permit the additive application of the DLOC and DLOM?
   a. There are no circumstances permitting additive application of discounts
      A is Correct—When more than one discount is applicable, they should be taken individually in successive order—generally the DLOC first and then the DLOM.
   b. When the DLOM is applied prior to the DLOC
      Incorrect—The order in which the discounts are applied is not the issue, although it is more theoretically correct to apply the DLOC first as the DLOM relates directly to the non-controlling interest that is the subject of the valuation.
   c. When the DLOC is applied prior to the DLOM
      Incorrect—The order in which the discounts are applied is not the issue. The issue is whether or not one should total the discounts being applied and take one total discount.
   d. All circumstances require the addition of all applicable discounts
      Incorrect—While it is true that Courts often apply only one discount, how the court arrives at the final number is a matter of law judgment and not valuation judgment. Valuation discounts are to be taken successively but not additively.

3. Which of the following best describes the concept of marketability?
   a. How much one will be paid for a bundle of rights
      Incorrect—The amount of payment is not the issue in marketability.
   b. The best listing price to get the greatest number of buyers
      Incorrect—Listing can be done at any time and quite easily. Listing a property for sale is not the issue in marketability.
   c. How quickly an interest can be sold in terms of cash
      C is Correct—The speed of sale is the primary issue in marketability.
   d. Having control of the assets of a business
      Incorrect—Asset control may affect how cash might be paid out, but this is not the issue in marketability.
4. The DLOM and DLOC show a relationship in valuations that:
   a. Indicate it is more difficult to sell a non-controlling (i.e., minority) interest in any privately-held business than to sell a controlling interest in that same business
      **A is Correct**—A number of studies indicate that it is more difficult to sell a non-controlling interest in a privately-held entity than a controlling interest.
   b. The greater the DLOC, the greater the DLOM
      **Incorrect**—There is no empirical data that supports this relationship.
   c. A DLOM is only available for a non-controlling interest, which is also subject to a DLOC
      **Incorrect**—Controlling interests can also be subject to a DLOC.
   d. Indicate it is harder to sell a controlling interest in any business than to sell a non-controlling (i.e., minority) interest in that same business
      **Incorrect**—A number of studies indicate that the opposite is true, it is more difficult to sell a non-controlling interest in a privately-held entity than a controlling interest.

5. It would be appropriate for the valuation analyst to use the restricted stock studies DLOM average of 35% in the valuation of a non-controlling (i.e., minority) interest.
   a. Yes. The studies were done by well-known entities, including the SEC, and, as such, can be trusted by the valuation analyst and report receiver to be accurate.
      **Incorrect**—A one-style discount is not applicable to all companies or all situations. Each situation is unique and must be looked at in and of itself. Trust in the studies is not the issue.
   b. No. Not all the studies are published, and, therefore, those numbers must be deleted from what the valuation analyst uses.
      **Incorrect**—Even though some studies are not published, this does not in and of itself determine what discount a valuation analyst should use.
   c. Yes. The studies are updated periodically, so the average is current and applicable to today’s valuations.
      **Incorrect**—The issue is not whether the studies are new or old.
   d. No, the average rate of 35% may be used as a starting point for the valuation analyst.
      **D is Correct**—The valuator must take additional steps, such as application of current case law, such as Mandelbaum, and other studies to determine a reasonable discount.

6. The formula used to generate an implied minority interest discount from control premium data (such as found in the Mergerstat Review) is:
   a. 1 minus ((1) divided by (1 minus Control Premium))
      **Incorrect**—The control premium is not to be subtracted.
   b. 1 plus ((1) divided by (1 plus the control premium))
      **Incorrect**—The second part of the calculation relating to control premium is not added to 1.0.
   c. 1 minus ((1) multiplied by (1 plus the control premium))
      **Incorrect**—The control premium calculation is not multiplied by 1.
   d. 1 minus ((1) divided by (1 plus the control premium))
      **D is Correct**—Thus if the control premium is 44.70% the implied minority interest discount is calculated to be 30.89%.
9. In a valuation in which the valuation analyst applies both a marketability discount and a discount for lack of control, the application of the discounts is additive not multiplicative.
   a. True
   Incorrect—When both a discount for lack of control and a discount for lack of marketability are applied, the application of the discounts is multiplicative.
   b. False
   B is Correct—When both a discount for lack of control and a discount for lack of marketability are applied, the application of the discounts is multiplicative, not additive.

10. Which level of value would be considered equivalent to owning stock in a publicly traded company?
    a. Control marketable
       Incorrect—Most investors in a publicly traded stock own a minority interest.
    b. Minority marketable
       B is Correct—A marketable minority interest is most representative of owning stock in a publicly traded company.
    c. Synergistic value
       Incorrect—A synergistic value is a level of value to a specific investor
    d. Minority non-marketable
       Incorrect—Owning stock in a publicly traded company would be considered marketable and could be converted into cash fairly quickly.

11. The ability of an individual to set company policy, appoint management, and ability to determine dividend policy and payments are examples of:
    a. A minority interest
       Incorrect—A minority shareholder would not be able to change any management policies.
    b. A control interest
       B is Correct—A controlling interest would have the ability to set company policy, appoint management and determine dividend policy.
    c. An equal shareholder with 50% operating control
       Incorrect—A 50% interest is not considered controlling interest.
    d. A shareholder of a publicly traded company
       Incorrect—Majority of shareholders in a publicly traded company have a minority interest, they would have a vote in management decisions but individually would not be able to set policy, appoint management and determine dividend policy.
12. The following are sources of empirical data on control/minority interests except for:
   a. *Mergerstat Review*
      **Incorrect**—*Mergerstat Review* is published annually by Applied Financial Information, LP to determine control/minority interest information from tender offers and industry transactions.
   b. Morningstar Principia
      **Incorrect**—Morningstar Principia provides a database on closed-end funds which provides discounts for lack of control as used in the price/net asset value method under the market approach.
   c. SEC Studies
      **Incorrect**—SEC Studies were published in the Office of the Chief Economist as a source of empirical data on control/minority interests.
   d. Emory Studies
      **D is Correct**—The Emory studies may be used to determine a discount for lack of marketability.

13. It would not be surprising for a valuation analyst to have the same marketability discount for a controlling interest as they would when valuing a minority interest.
   a. True
      **Incorrect**—It would be very rare for a controlling interest to have a marketability discount equal or higher than for that of a minority interest.
   b. False
      **B is Correct**—Where discounts for lack of marketability are appropriate for controlling interests, they are typically much smaller than those for minority interests.

14. Which of the following factors may increase a marketability discount?
   a. Restrictions on transfer, limited access to financial information, and an imminent public offering
      **Incorrect**—An imminent public offer would decrease the discount because a public offering would instantly make the shares marketable (excluding restricted stock agreements).
   b. Little or no dividends, little prospect of going public, and high dividend payouts
      **Incorrect**—High dividend payouts would decrease the value of the discount.
   c. Low dividend payouts, limited access to financial information, and an imminent public offering
      **Incorrect**—Low dividends payouts and limited access to financial information would increase the marketability discount, but an imminent public offering would decrease the discount.
   d. Restrictions on transfers, little or no dividends, and limited access to financial information
      **D is Correct**—Any time there are restrictions on transfers, little or no dividends, and when an individual has limited information to financial information all of these would be considered risk factors which would increase a marketability discount.
15. What are the two primary cases listed in the Internal Revenue Service Valuation Training for Appeals Officers as the basis for discounts for lack of marketability?
   a. Simplot and Central Trust Co.  
      **Incorrect**—Simplot related with swing vote implications.
   b. Central Trust Co. and Estate of Andrews  
      **B is Correct**—Central Trust Co. and Estate of Andrews are the two primary cases listed in the Internal Revenue Service Valuation Training for appeals Officers as the basis for discounts of lack of marketability.
   c. Estate of Andrews and Estate of Gross  
      **Incorrect**—Estate of Gross related to the tax effect of pass through entities.
   d. Estate of Gross and Estate of Adams  
      **Incorrect**—Both the estate of gross and Adams relate to the tax effect of pass through entities.

16. Which court case specifically isolates the issue of marketability discounts?
   a. Simplot  
      **Incorrect**—Court case relates to swing vote implications.
   b. Estate of Kelly  
      **Incorrect**—Court case discusses control and minority interest discounts.
   c. Mandelbaum  
      **C is Correct**—The Mandelbaum case specifically isolated the issue of marketability discounts and the court listed various factors to calculate this discount.
   d. Gross  
      **Incorrect**—Discusses tax effect on pass through entities.

17. It would be appropriate for a valuator, when adjusting assets to their fair market value, to also make an adjustment for the liability resulting from a built-in capital gains tax.
   a. True  
      **A is Correct**—When writing up fixed assets to fair market value for valuation purposes, it is relevant to consider the application of the deferred tax liability to reflect the economic reality of the company’s balance sheet.
   b. False  
      **Incorrect**—When adjusting assets to their fair market value it would also be appropriate for the valuator to make and adjustment for the liability resulting from build-in capital gains.

18. Transactions offering a substantial amount of a single entity’s stock, which visibly creates a supply that exceeds current demand may result in a:
   a. Blockage discount  
      **A is Correct**—The need for a blockage discount usually arises in consideration of supply and demand influences in the publicly traded securities markets. In other words, a transaction offering a substantial block of a single entity’s issued and outstanding shares may create a supply that exceeds current demand. Such an occurrence will generally impair the subject company’s value because of the reduced liquidity associated with the oversupply.
   b. Key person discount  
      **Incorrect**—A key person discount is an additional discount for a company where thin management and there is a strong dependency on a single individual.
   c. Restrictive agreement discount  
      **Incorrect**—This discount is the result of various documents such as restrictive stock agreements or buy sell agreements that limit the ability of a shareholder to sell or transfer stock.
   d. Investment company discount  
      **Incorrect**—An investment company discount arise from a minority shareholder to force a sale of and illiquid asset such as a building.
Chapter 7 Bonus Questions Responses

1. Your state _________________ what does your state consider a majority interest?
   While we cannot answer for your state here it is written in corporation law of some states that a 33.33% interest has the power to liquidate. This is generally considered a control option. *(Check the laws of the state in which the subject company is domiciled and note the special rules for minority and controlling interest.)*

2. Synergy—what is this and how does it affect value?
   a. An aggregation of two companies where a particular asset makes a section of the other firm more profitable explains synergy.
   b. Value is increased—as the value of the firm with the asset makes the value of the larger organization exceed any value calculated of each on a standalone basis. Therefore, one cannot simply add the value of the two companies valued on standalone basis—the effect of the synergy must be considered. Important in buyouts or sales.

Review Questions Chapter 8 Professional Standards

1. What are the types of Valuation Services recognized by the Professional Standards?
   a. The Professional Standards recognize two types of services, Conclusion of Value and Calculated Value.
      Incorrect—Conclusion of Value and Calculated Value are the results of the Valuation Services provided by the member.
   b. The Professional Standards recognize two types of services, Valuation Engagements and Calculation Engagements.
      B is Correct—These are the two types of services that can be provided by complying with the Development and Reporting Standards of the Professional Standards.
   c. The Professional Standards recognize three types of services, Conclusion of Value Services, Opinion of Value Services, and Estimate of Value Services.
      Incorrect—The Conclusion of Value is the end result of a Valuation Engagement, not a type of Valuation Service, while the Opinion of Value and Estimate of Value Services represent terms that are not defined by the Professional Standards.
   d. The Professional Standards recognize two types of services, Conclusion of Value Services and Opinion of Value Services.
      Incorrect—Conclusion of Value and Opinion of Value are not recognized services provided for in the Professional Standards.

2. The Professional Standards are applicable when valuing the following:
   a. Real estate
      Incorrect—The Professional Standards are not applicable to the valuation of real estate.
   b. Intangible asset
      Incorrect—Although the Professional Standards are applicable to the valuation of an intangible asset, they are also applicable to the value of a business ownership interest, option “c”.
   c. Business ownership interest
      Incorrect—The Professional Standards are applicable to the valuation of more than a business ownership interest; they are applicable to valuing a “business, business ownership interest, security, or intangible asset.” as discussed in Section III.A.
   d. B and C
      D is Correct—The Professional Standards are applicable when valuing a business, business ownership interest, security, or intangible asset (Sec. III.A.)
3. The Professional Standards are:
   a. Rules-based
      **Incorrect**—The Professional Standards are principle-based, taking the form of general principles, relying on the interpretation and professional judgment of the member in order to be implemented. Rules-based standards would limit the flexibility and use of the member’s professional judgment in the performance of their services.
   b. Applicable to economic damages reports
      **Incorrect**—The Professional Standards are for Valuation or Calculation Engagements, not for economic damages engagements.
   c. Not applicable to valuations performed for transactions (M&A engagements)
      **Incorrect**—The Professional Standards should be followed by members performing Valuation or Calculation Engagements for transactional purposes.
   d. Principles-based
      **D is Correct**—The Professional Standards are principle-based, taking the form of general principles, relying on the interpretation and professional judgment of the member in order to be implemented.

4. If I am also a member of ASA must I still also follow the Professional Standards in a Valuation Engagement?
   a. No. As a member, you may select which organization’s standards are most appropriate to the valuation you are performing and write your report in the manner prescribed by that organization.
      **Incorrect**—The member may not choose standards on a report by report basis. The member is bound by the standards of each organization to which the member belongs.
   b. No. This would confuse the requestor of the report.
      **Incorrect**—In fact, the report could well be in danger of being questioned as accurate or even totally denied by the report receiver if any standards by which the analyst is bound are callously ignored.
   c. Yes. If you are a member of more than one certifying organization with standards, you must adhere to all of them as required by that organization.
      **C is Correct**—You are required to follow the standards of each and every organization to which you belong. You should also state these organizations by name in your report.
   d. Yes. When the analyst is expressing a range of values, it is necessary to document the Professional Standards definition of a range of values.
      **Incorrect**—Documenting the Professional Standards definition—or any definition found in the International Glossary of BV Terms—is a good idea. This is not the reason why the member needs to adhere to professional standards of any certifying organization to which that member belongs.
5. Under the Professional Standards, when expressing a Conclusion of Value, the value amount may be communicated:
   a. As a range of values
      **Incorrect**—Although a Conclusion of Value may be communicated as a range of values, it may also be communicated as a single number as noted in Section IV.B.
   b. As a single number
      **Incorrect**—A Conclusion of Value may be communicated as either a single number or a range as noted in Section IV.B. of the Professional Standards.
   c. Orally
      **Incorrect**—The communication of a Conclusion of Value may be either oral or written as noted in Section V.B., the Reporting Standards, Form of Report.
   d. All of the above
      **D is Correct**—A conclusion of Value may be communicated as a single number or a range (Sec. IV.B) and either orally or in a written report (Sec. V.B).

6. When performing Other Services as defined by the Professional Standards, all of the Professional Standards shall apply except for:
   a. General and Ethical Standards
      **Incorrect**—General and Ethical Standards apply to all professional services performed by members (Sec. III.A.).
   b. Development Standards
      **Incorrect**—According to Section IV.A., the Development Standards apply when a member expresses a Conclusion of Value or a Calculated Value and do not necessarily apply to Other Services.
   c. Reporting Standards
      **Incorrect**—Like the Development Standards, the Reporting Standards apply when a member expresses a Conclusion of Value or a Calculated Value as noted in Section V.A. and do not necessarily apply to Other Services.
   d. A and B
      **Incorrect**—Whereas General and Ethical Standards apply to all professional services performed by members according to the Scope of Services (Sec. III.A), the Development Standards apply when a member expresses a Conclusion of Value or a Calculated Value, not when a member is providing Other Services.
   e. None of the above, all standards apply
      **Incorrect**—Development and Reporting Standards do not necessarily apply when performing Other Services.
   f. B and C
      **F is Correct**—When performing Other Services, the Development and Reporting Standards do not apply.

7. A member may perform a Valuation Engagement for a contingent fee when expressing a Conclusion of Value.
   a. True
      **A is Correct**—Under Reporting Standard Sec. V.C.1.(g)(2), a member may perform a valuation engagement for a contingent fee when expressing a conclusion of value, but must disclose such financial arrangements in his or her report.
   b. False
      **Incorrect**—Performing a valuation engagement for a contingent fee is not expressly prohibited under the Professional Standards.
8. According to the Development Standards, a member must identify all of the following except for:
   a. Subject to be valued
      **Incorrect**—Under the Development Standards the subject to be valued must be identified.
   b. Purpose and use of the valuation
      **Incorrect**—Under the Development Standards the purpose of the valuation must be disclosed.
   c. Premise of value
      **Incorrect**—Under the Development Standards the premise of value must be disclosed.
   d. Member’s industry experience
      **D is Correct**—The member may include their industry experience on their CV but it is not required to be identified according to the Development Standards.

9. A member shall not express either a Conclusion of Value or a Calculated Value unless the member and the member’s firm state whether or not the member or the member’s firm has a financial interest in the subject of the engagement.
   a. True
      **A is Correct**—A member shall not express a Conclusion of Value or a Calculated Value unless the member or the member’s firm state either of the following:
      “I (We) have no financial interest or contemplated financial interest in the subject of this report”
      “I (We) have a (specify) financial interest or contemplated financial interest in the subject of this report”
   b. False
      **Incorrect**—Without the independence statement, the valuator would violate the Professional Standards.

10. The Reporting Standards would NOT be exempt for a Valuation Engagement for what purpose?
    a. Gift tax
       **A is Correct**—Gift tax Valuation Engagements require a report for compliance and reporting purposes and are not exempt from the Reporting Standards.
    b. Family law
       **Incorrect**—The term “family law” implies a litigation engagement and as such, is exempt from the Reporting Standards as noted in Section V.D. of the Professional Standards.
    c. Shareholder oppression action
       **Incorrect**—A shareholder oppression action would be “a valuation performed for a matter before a court, an arbitrator, a mediator, or other facilitator” and therefore “is exempt from the reporting provisions of these standards.” (Sec. V.D.).
    d. Breach of contract litigation
       **Incorrect**—A breach of contract litigation is a litigation engagement and is exempt from the Reporting Standards but still must comply with the Development Standards and all other Professional Standards.
11. A report expressing a Conclusion of Value may be presented in a:
   a. Summary Report
      Incorrect—Although a Conclusion of Value may be presented in a written Summary Report, it
      may also be presented in a Detailed Report according to Section V.B., Form of Report.
   b. Detailed Report
      Incorrect—A Detailed Report is not the only form of report available for a Conclusion of
      Value, it may also be presented in a Summary Report which is an “abridged version of the
      information that would be applied in a detailed report...” (Sec. V.C.2.).
   c. Restricted Report
      Incorrect—The Professional Standards do not refer to a “Restricted Report.”
   d. Letter Report
      Incorrect—The Professional Standards do not refer to a “Letter Report.”
   e. A and B
      E is Correct—The Reporting Standards allow a Conclusion of Value to be presented in either a
      Summary Report or a Detailed Report.

12. The primary difference between a Valuation Engagement and a Calculation Engagement is that:
   a. A Calculation Engagement is a shorter form of a Valuation Engagement.
      Incorrect—A Calculation Engagement is where the client and member agree to specific
      valuation approaches, methods, and the extent of selected procedures and a Valuation
      Engagement requires that a member applies valuation approaches and methods deemed in
      their professional judgment to be appropriate.
   b. A Calculation Engagement can result in a range of values whereas a Valuation Engagement can
      only result in a single value.
      Incorrect—Both a Calculation Engagement and a Valuation Engagement can result in a range
      of values.
   c. The results of a Valuation Engagement can only be presented in a Detailed Report while the
      results of a Calculation Engagement can only be presented in a Summary Report.
      Incorrect—Detailed Reports and Summary Reports are used to present the results of a
      Valuation Engagement whereas a Calculation Report is used to present the results of a
      Calculation Engagement.
   d. A Valuation Engagement requires that a member applies valuation approaches and methods
      deemed in their professional judgment to be appropriate, whereas a Calculation Engagement
      occurs when the client and member agree to specific valuation approaches, methods, and the
      extent of selected procedures.
      D is Correct—According to the definitions of Valuation Engagement and Calculation
      Engagement as found in the Professional Standards.

Chapter 8 Bonus Questions Responses

1. Why isn’t Fair Value defined in the glossary?
   Because there are two types of Fair Value used as a Standard of Value, one for statutory purposes and
   two for financial statement reporting, there isn’t a single definition that currently will fit all possible
   engagements. For statutory purposes, Fair Value may be defined differently by each state and
   jurisdiction. And the definition of Fair Value for financial statement reporting purposes is still
   subject to revisions by certain regulatory bodies.
2. Why doesn’t the Professional Standards endorse USPAP? The Uniform Standards of Professional Appraisal Practice (USPAP) is applicable to the appraisal process for many different disciplines including real property, personal property, intangibles, and business valuation. It attempts to provide a set of quality control standards for the appraisal process. The Professional Standards does not endorse USPAP as it already adequately addresses the quality control standards and valuation processes and procedures specifically for the valuation of businesses, business ownership interests, securities, and intangible assets. Although there are some sections of USPAP which apply to valuation of a business, the Professional Standards already include these items in its content.

Review Questions Chapter 9 Valuation Engagement and Obtaining Information

1. External information includes all of the following except:
   a. General Economic Information
      Incorrect—Economic Information is external information.
   b. General Industry Information
      Incorrect—General Industry Information is external
   c. Local and Regional Economic and Industry Information
      Incorrect—These are all external information.
   d. History, nature and organization of the subject company
      D is Correct—The history, nature and organization of the subject is all internal information.

2. What is the main purpose of obtaining external information?
   a. To provide the analyst with the most recent 5 years of financial information
      Incorrect—Financial information would be provided by management and considered internal information.
   b. To gain an understanding of the company’s operations and its products or services
      Incorrect—This is internal information
   c. To give the analyst knowledge of any outside factors that may directly or indirectly affect the future operations of the subject company
      C is Correct—The analyst must consider external factors in all valuation engagements.
   d. To comply with the report writing standards as set forth in the Professional Standards
      Incorrect—Analyzing external factors is part of the development standards.

3. The valuation engagement checklist for Adler-Cottino Wood Furniture, Inc. is found in Chapter 10. What Purpose, Standard, and Premise of Value (in that order) were determined for this case?
   a. FMV, Controlling Interest and Arms-Length Transaction
      Incorrect—FMV is a standard of value, Controlling interest relates to possible discounts or premiums, Arms-length transaction relates to FMV.
   b. Related Party, Estate and Going concern
      Incorrect—Related Party is not the purpose of the valuation, Estate is the purpose of the valuation not the standard of value and going concern is the premise of value.
   c. Buy-Sell, Capitalization of Earnings, Net Asset Value
      Incorrect—Buy-Sell is not the purpose of the valuation, Capitalization of Earnings is a method of valuation and Net Asset Value is a method of valuation.
   d. Estate Tax valuation for Form 706, FMV and Going Concern
      D is Correct—Estate Tax Valuation is the Purpose, FMV is the Standard and Going Concern is the premise of value.
4. What is the valuation analyst’s main objective when gathering internal information?
   a. To examine historical and projected financial data including Financial Statements, Income Tax
      Returns and Budgets
      **Incorrect**—This is one of the steps in gathering internal information but not the main objective.
   b. To keep abreast of changing general economics to ascertain how it may impact the assumptions
      that are made during the valuation process
      **Incorrect**—This is an objective of examining external information.
   c. To gain an adequate understanding of the subject company’s operational management and
      earnings ability
      **C is Correct**—This is the main objective when gathering internal information.
   d. To examine the current location(s) and physical condition of the subject company’s facilities
      and operational assets
      **Incorrect**—This is a small part of the overall objective of obtaining adequate understanding of
      the subject company’s operational management and earnings ability.

5. The Market Approach for valuing businesses utilizes information from Specific Comparable
   Companies. In order for a company to be truly comparable it must share all of the following
   characteristics with the subject company except:
   a. Companies must have similar capital structures
      **Incorrect**—Large, diversified publicly traded companies cannot be comparable to smaller
      closely held businesses without similar capital structures.
   b. Companies must have the same number of stockholders
      **B is Correct**—Although the capital structure must be similar: there are no requirements for a
      specific number of stockholders.
   c. Companies must be of similar size, relative to sales volume and total assets
      **Incorrect**—Although there is debate as to how large the comparable company can be (ex. 10 –
      25x revenue), there are basic financial indicators to ensure comparability.
   d. Companies must have similar competitive positions within the industry.
      **Incorrect**—Having similar competitive positions within the industry is a characteristic of
      comparability.

6. Independence of the valuator will be impaired if:
   a. The member who performs the appraisal or the member’s firm prepares the tax return of the
      subject entity
      **Incorrect**—Preparing a tax return will not result in a valuator’s independence being impaired.
   b. The member or the member’s firm performs an audit of the subject company’s financial
      statement
      **B is Correct**—Independence will be impaired if the members firm performs the auditing of the
      client.
   c. Your neighbor’s best friend owns 100% of the subject company
      **Incorrect**—This may end the friendship but will not impair you as a valuator.
   d. The member or member’s firm performs a compilation of the subject company’s financial
      statement
      **Incorrect**—A compilation of the subject company by your CPA firm will not result in a
      conflict of interest.
7. When defining the engagement the valuation analyst should identify:
   a. Purpose, ownership interest, and profitability of the subject entity
      Incorrect—It is not necessary for the firm to be profitable when defining the engagement. However, it may indicate whether there is money to pay you.
   b. Purpose, valuation date, and valuation approach to be utilized
      Incorrect—The valuation approach will be determined once the analyst gains an understanding of the unique nature of the subject company, not when defining the engagement.
   c. Purpose, ownership interest, and valuation date
      C is Correct—When defining an engagement all three items, purpose, ownership and interest to be valued should be determined.
   d. Ownership interest, report date, and valuation approach
      Incorrect—When defining the engagement most likely the valuation approach will not be determined at this stage.

8. Before starting an engagement, the valuation analyst must obtain an engagement letter.
   a. True
      Incorrect—Although not required, it cannot be emphasized enough how important a properly written engagement letter is.
   b. False
      B is Correct—The Professional Standards state “A member shall establish, with the client, a written or oral understanding of the nature, scope, and limitations of services to be performed and the responsibilities of the parties.”

9. In a litigation engagement, a valuation analyst should be independent and objective; if an attorney wants the valuation analyst to give a specific and tailored answer, this will not impair independence or objectivity.
   a. True
      Incorrect—Although the reporting standards do not apply to litigation engagements, NACVA members are still required to adhere to §1.2(a) – Integrity & Objectivity.
   b. False
      B is Correct—If an attorney wants the valuation analyst to tailor his/her opinion to get the result the attorney wants, an objective and independent valuation analyst should decline this engagement.

10. Of the following sources of information, which source provides data which can be specifically compared to the subject company?
    a. U.S. Bureau of Census
       Incorrect—This is a good source of economic information for such items as construction spending, manufacturing, retail sales, etc.
    b. Federal Reserve Banks
       Incorrect—This is a good source of economic information for such items as consumer credit, industrial production, capacity utilization, etc.
    c. Ibbotson Valuation Yearbook
       Incorrect—This is a good source for cost of capital information.
    d. BIZCOMPS
       D is Correct—BIZCOMPS is a source of specific company information.
Review Questions Chapter 10 Search for Adjustments

1. After the historical financial statements have been adjusted for economic or normalizing items, the analyst should begin a thorough financial analysis of the adjusted financial statement data. Such analysis helps to identify all of the following trends except?
   a. Where has the company been?  
      **Incorrect**—The historical performance of the company will be identified by a thorough financial analysis.
   b. Where is the company today?  
      **Incorrect**—The financial condition of the company today will be identified by an analysis of its balance sheet.
   c. What are the current and future management needs?  
      **C is Correct**—Current and future management needs are not determined by the valuation analyst.
   d. Where might the company be in the future?  
      **Incorrect**—An analysis of the company’s current balance sheet as well as its past performance through its historical income statements will assist in identifying the trends for its future.

2. When adjustments have been made to increase the value of assets to their appraised or market value, a corresponding adjustment recognizing the amount of deferred income taxes should also be made. There have been conflicting arguments for doing so in valuation literature. What is the most often cited argument against recording deferred income taxes on the increased value of assets over book values?
   a. When selling the stock of an entity and not the asset itself, the assets do not have to be adjusted to fair market value, therefore, deferred taxes would not need to be adjusted.  
      **Incorrect**—Assets should be adjusted to fair market value for all valuations.
   b. Deferred taxes are only booked for timing issues related to the recognition of income statement items.  
      **Incorrect**—Deferred taxes are recorded for balance sheet and income statement items.
   c. Deferred taxes should not be recorded unless the company has specific plans to liquidate within a reasonable period following the date of the valuation.  
      **C is Correct**—The IRS, in Letter Ruling 9150001 (c) stated that ….income taxes are not taken into account where the event that would generate these expenses is speculative.
   d. The tax court has ruled in the *Estate of Dunn*, *Estate of Davis*, and the appeal of *Dunn* that no discount was given for taxes.  
      **Incorrect**—In these three cases, a discount was given for income tax related to the trapped in gains.

3. Which of the following are categorized as “Risk” ratios of a company?
   a. Accounts Receivable Turnover Ratios and Current Liabilities as a percent of assets  
      **Incorrect**—These are turnover ratios and balance sheet ratios, respectively.
   b. Total Debt as a percent of Assets and Long term Debt as a percent of Assets  
      **Incorrect**—These are Balance Sheet ratios.
   c. Operating Profit as a percent of Sales and Interest Coverage Ratio  
      **Incorrect**—These are Income statement ratios and Risk ratios, respectively.
   d. Current Ratio and Quick Ratio  
      **D is Correct**—Both are considered risk ratios.
4. When comparing Adler-Cottino to the Industry in Exhibits 10-7 and 10-8, Chapter 10, which of the following statements is/are true:
   a. The Company’s current, quick, and debt/equity ratios are all significantly favorable relative to the industry
      Incorrect—Although this is correct, all of the options listed are correct.
   b. The Company has a different asset mix than the companies that make up the median of the RMA data
      Incorrect—This is but one of the correct options available as an answer.
   c. The Company’s long-term debt as a percentage of assets is lower than the industry median
      Incorrect—All of the statements are correct.
   d. The Company’s operating performance is much better than the industry on average and is superior to the industry relative to financial strength, leverage and liquidity
      Incorrect—This option, although correct, is not the only correct option available.
   e. All of the above
      E is Correct—All of the statements are correct.

5. A Comparative Analysis utilizes information from two sources and can involve either a comparison of the subject company with specific comparable companies or with industry averages for a historical period of one or more years. Which two sources of the subject company are used to perform a Comparative Analysis?
   a. RMA and Integra
      Incorrect—These are databases for various public companies.
   b. Common-Size Analysis and Ratio Analysis
      B is Correct—Both are necessary to prepare a Comparative analysis.
   c. Historical and Normalized Financial Statements
      Incorrect—Not used in a comparative analysis.
   d. Forecasted and Budgeted Financial Statements
      Incorrect—These are examples of projections.

6. Normalized financial statements should allow the valuation analyst to:
   a. Present a financial picture which represents fair market values
      A is Correct—Normalized financial statements should allow a valuator to represent market value and make meaningful comparisons.
   b. Present a financial picture to appease the client
      Incorrect—Valuation analysts are supposed to be objective and independent and normalized financial statements should present a true picture of operations.
   c. Present a financial picture to reflect a predetermined answer
      Incorrect—Normalized financial statements should present a true picture of operations.
   d. To increase a valuation analyst’s fees
      Incorrect—Although it takes time to identify and determine relevant normalization adjustments, they are not applied simply to increase the fee for the valuation engagement.
7. What is the best way to determine if a normalizing adjustment should be made to Accounts Receivable?
   a. Common size the balance sheet
      **Incorrect**—Common sizing would not indicate a collection issue
   b. Use trend analysis
      **Incorrect**—Trend analysis would not indicate a collection problem.
   c. Look at accounts receivable aging
      **C is Correct**—Looking at the accounts receivable aging is the first step in identifying if there is a collection issue.
   d. Discuss with management
      **Incorrect**—Although the valuation analyst should discuss the adjustment with management, if the valuation analyst does not first look at an aging report, the issue may never surface.

8. In Exhibit 10-2, what would be a good reference source to use as a benchmark to determine excess cash?
   a. Ibbotson
      **Incorrect**—Ibbotson is a good reference side when determining a discount and capitalization rate.
   b. BizComps
      **Incorrect**—BizComps is a good reference when looking for market comparables to your subject company.
   c. RMA
      **C is Correct**—RMA is a good benchmark to use as a benchmark when determine average amounts of cash needed to operate the company.
   d. An inquiry with management provides enough support
      **Incorrect**—It is possible management will only tell you what they want you to hear.

9. Ratio Analysis can be an effective tool to compare how well a company is performing to industry benchmarks.
   a. True
      **A is Correct**—Ratio Analysis can be an effective tool to compare how well a company is performing to industry benchmarks.
   b. False
      **Incorrect**—Ratio analysis can be an effective tool, if properly applied, to compare how well a company is performing to industry benchmarks.
Review Questions Chapter 11 Practice Case Workshop

1. In gathering the necessary information to complete Adler-Cottino as an example of a report you can use for later reference,
   a. It is necessary to be able to fully describe the history and nature of the business being valued.
      A is Correct—This is a necessary part of any valuation.
   b. It is not necessary to understand this business or any business, as the company’s management is running the business.
      Incorrect—If you don’t understand the type of business, find out what you need to have/attend to learn about it, and document what you did.
   c. A personal tour of the business can’t be done, so there is not a way to put anything meaningful in the report.
      Incorrect—Although a personal tour of this imaginary business can’t be done, you can piece together what you would find in a site-visit from the data provided in the worksheet.
   d. Note that the type of organizational structure will not be applicable to any other company you would value.
      Incorrect—Adler-Cottino is a C-corporation, with a board of directors, and will be similar to other C-corporations you encounter.

2. In defining the valuation engagement prior to issuing a valuation report:
   a. Ascertain whether the necessary client information and technical resources are available. If not, decline the valuation.
      Incorrect—In divorce valuations, information may not be available in the quality or quantity you would like. A valuation can (and perhaps in this example, should) be performed. Note in your report what data you were denied, and how it affected the outcome.
   b. Define the ownership interest to be valued as this will affect any premiums or discounts to be discussed in the final report.
      B is Correct—The percentage of ownership interest will definitely impact the outcome of your report, especially in the area of discounts.
   c. You must obtain a client representation letter.
      Incorrect—NACVA suggests obtaining such a letter if possible, but it is not mandated.
   d. You must obtain a client engagement letter.
      Incorrect—If a full understanding and communication can be gotten without a letter, a letter isn’t necessary. A letter is helpful if properly written, but not mandated.