BV201: Introduction to Business Valuation: Part 1

Course Hours: 24 Instruction + 3 Exam Hours = Total 27 CPE Credits
(see your instructor for further details)

Course Outline

The American Society of Appraisers wishes to emphasize that these course materials are NOT authoritative. They are intended to be used together with the assigned reading material and the observations of the course instructors as the basis for lectures and discussion in this course.

Concepts and valuation methods portrayed in this course are NOT:

- The only valuation methods used by competent appraisers or the only concepts considered by competent appraisers;
- The only way the individual methods should or could be done;
- Cookbook appraisal methods that may be applied to any appraisal.

Appraisals must be done with knowledge of the facts and circumstances of the subject company and all other relevant factors. A particular valuation method that is relevant and appropriate for the appraisal of one company at one point in time may or may not be appropriate for another time or another company.
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Chapter 1. Introduction

I. Course Introduction

A. BV201 course objectives. Upon completion of the course the student should be able to:

1. Understand the basic theories underlying business valuation.
2. Understand professional business valuation standards.
3. Define an appraisal assignment.
4. Gather useful data on the economy, industry and subject company.
5. Analyze economic, industry and subject company data and understand how the analysis affects value.
6. Arrive at indicated values for a business using the market approach, including the guideline public company and merger and acquisition methods.

B. BV202 - The Introduction to Business Valuation: will cover:

1. The basic theory and application of the income approach and its various methodologies.
2. Basic capitalization models and discounting models in the context of earnings and cash flow measurements, as well as equity and invested capital assignments.

C. BV203 - Business Valuation Case Study is a capstone course which:

1. Applies the theory learned in BV201 and BV202 in an actual valuation case study
2. The subject company is analyzed in a group format
3. Groups are responsible for deriving their own opinion of value

D. BV204 - Special Topics includes instruction in five timely advanced valuation topics.

1. Tax issues in the valuation of pass-through entities.
2. Valuing Early Stage Development Companies and Complex Capital Structures
3. Valuation adjustments, including discounts for lack of marketability and lack of control, as well as control premiums.
5. Valuation of Preferred Stock and Debt.
II. The Business Appraisal Profession

A. Structure of the profession
   1. Entire firms specializing in business appraisal
   2. Departments of firms primarily doing other things, such as CPA firms, banks and multidisciplinary firms
   3. Part-time practitioners

B. Role of the business appraiser
   1. Business appraisers generally provide two types of services:
      a. An objective and independent valuation of business interests.
      b. An advisory, or consulting role in determining a value most beneficial to a client’s position (In such an advisory role, the appraiser may not be expressing an objective opinion of value.).
   2. There is typically a presumption of objectivity in an appraisal of business interests, unless an advisory role has been previously agreed to and clearly identified to those depending upon the appraiser’s work.

C. Services offered
   1. Opinions of value
      a. Equity value
      b. Invested capital value
      c. Intangible asset value
      d. Other—options, debt
   2. Consultation regarding values
   3. Structure terms, sometimes for several classes of investors, such as employee stock ownership plans (ESOPs) or leveraged buyouts
   4. Fairness opinions
   5. Solvency opinions
   6. Assistance in negotiating purchases/sales
   7. Mediation/arbitration of disputed valuations
   8. Litigation support in disputed valuations
   9. Expert testimony
III. Necessary Business Appraisal Skills and Qualifications

A. Appraisal skills

B. Professional obligations for appraisal skills

1. The Uniform Standards of Professional Appraisal Practice (USPAP), discussed in more detail later in the course, obligates the appraiser to exhibit competency in performing appraisals. Competency implies that the appraiser is familiar with the specific type of property, the markets in which it sells, and analytical methods used to value the property.

2. The position of the American Institute of Certified Public Accountants (AICPA) on Professional Competence (education and qualifications) taken from the AICPA Consulting Services Practice Aid 93-3 (no longer in print but authored by the course developer of this course).

   a. “01. In performing business valuation engagements, practitioners are advised to determine whether the competency provisions of rule 201, General standards of the AICPA Code of Professional Conduct, are met. Although accountants have a thorough understanding of financial statements and related matters, they also need to be proficient in the area of appraisals to competently complete an engagement. Usually, being proficient requires an in-depth knowledge of finance, economics, and security analysis for an understanding of appraisal principles and methods.”

   b. “02. In order for the practitioner to obtain the competency required to accept a business valuation engagement, appropriate education is required.”
3. The AICPA position on due professional care taken from the *AICPA Consulting Services Special Report 93-1*.

   a. “01. A practitioner exercises due professional care in the performance of an engagement. Due care requires diligence and critical analysis of all work performed.”

C. Appraiser professional qualifications

1. Academic background in business administration, typically in finance, including bachelors, masters or doctorate degrees.

2. Professional designations

   a. ASA: Accredited Senior Appraiser. Senior member of the American Society of Appraisers accredited in business valuation. Oriented primarily toward closely held companies. For more information call (800) ASA-VALU or visit the Web site at www.bvappraisers.org. Primary requirements for certification include:

      (i) Successful completion of BV201 through BV204

      (ii) Peer review of one appraisal report

      (iii) Five years of full-time equivalent appraisal experience

   b. AM: Accredited Member. Member of the American Society of Appraisers accredited in business valuation. Primary requirements for certification include:

      (i) Successful completion of BV201 through 204

      (ii) Peer review of one appraisal report

      (iii) Two years of full-time equivalent appraisal experience

   c. CFA: Chartered Financial Analyst. Oriented primarily toward publicly traded companies and for securities analysts. For information, visit the CFA Institute Web site at www.aimr.com.

   d. CBA: Certified Business Appraiser. Awarded by the Institute of Business Appraisers. Oriented primarily toward closely held companies. IBA also issues the following designations: BVAL (Business Valuator Accredited for Litigation) and AIBA (Accredited by the IBA). For more information, visit IBA’s Web site at www.go-iba.org.

   e. ABV: Accredited in Business Valuation. Awarded by the American Institute of Certified Public Accountants to CPAs only. For more information visit the AICPA’s Web site at www.aicpa.org.

   f. CBV: Chartered Business Valuator. Awarded by the Canadian Institute of Chartered Business Valuations to Canadian and foreign valuators, including those from the United States. For more information, visit the Canadian Institute of Chartered Business Valuators’ Web site at www.businessvaluators.com.
g. CVA: Certified Valuation Analyst. Awarded by the National Association of Certified Valuation Analysts to CPAs, many of whom are part-time practitioners. NACVA also issues the following designations: AVA (Accredited Valuation Analyst) and the GVA (Government Valuation Analyst). For more information, visit NACVA’s Web site at www.nacva.com.

3. Continuing involvement in professional business appraisal organizations and activities
   a. The American Society of Appraisers holds semi-annual national professional meetings, course offerings, and several regional meetings. ASA’s Business Valuation Committee sponsors an Advanced Valuation Conference in the fall of each year. Various local chapters sponsor conferences and seminars.
   b. The ESOP Association and its Valuation Advisory Committee hold regular semiannual meetings and regional presentations.
   c. The Institute of Business Appraisers holds annual national professional meetings.
   d. The CFA Institute holds annual meetings and periodic seminars and publishes the proceedings from these seminars.
   e. The AICPA and other organizations also offer educational opportunities in business valuation.

IV. Course Prerequisites
   A. Two college-level semesters of accounting
   B. One college-level semester of finance
   C. One college-level semester of economics
   D. Working knowledge of the U.S. public stock market
   E. Understanding of statistics
Chapter 2. Business Valuation Theory

I. Comparison with Real Estate Appraisals - See Exhibit 2-1.

A. Less rigidly structured than real estate appraisal approaches and usually more complex since we are valuing a group of assets rather than a single asset

B. Follows less strictly the three-pronged real estate dictum of cost, market, and income approaches

II. The Three Approaches to Value as Applied to Business Valuation

A. Market Approach

1. Principle of substitution premise that a prudent buyer will pay no more for a property than it would cost to acquire a substitute property with the same utility

2. Comparison between subject property and similar properties that have recently sold

3. Use of guideline company transaction data
   a. Publicly traded companies
   b. Acquired/merged companies

4. Analysis of prior transactions in the subject company’s stock is a market approach

5. The use of rules of thumb is also a market approach. However, this should only be used as a sanity test and not an actual method

6. Strengths and weaknesses of market approach overall
   a. Direct method of valuation if similar companies can be found
   b. Relatively easy to get data
   c. A lot of information and research on the public companies
   d. Very difficult to find truly similar companies

B. Asset-Based Approach

1. Again, based on the principle of substitution

2. In business valuation, the asset-based, adjusted net asset, or adjusted balance sheet method is our version of the cost approach
   a. Balance sheet analysis
   b. Usually involves separate valuation of each item on the balance sheet; adjust all tangible and intangible assets and liabilities to their market values
3. Strengths and weaknesses of asset-based approach overall
   
a. Useful for holding company
b. Useful if company is to be liquidated
c. Does not focus on the income the assets produce as a whole
d. Does not value the unidentifiable intangible value of a business (It is difficult to know if you have captured all the intangible without valuing the company with the use of some other method.)
e. The more intangible value in a business, the more difficult the cost approach and the more relevant the income approach becomes
f. Less applicable in minority interest valuations (because minority shareholders do not control the underlying assets)

4. The following excerpt is from BVS-III:

   *The asset-based approach should be considered in valuations conducted at the enterprise level and involving:
   1. An investment or real estate holding company
   2. A business appraised on a basis other than as a going concern

Valuations of particular ownership interests in an enterprise may or may not require the use of the asset-based approach. The asset-based approach should not be the sole appraisal approach used in assignments relating to operating companies appraised as going concerns unless this approach is customarily used by sellers and buyers. In such cases, the appraiser must support the selection of this approach.

C. Income Approach

1. Closest to pure theory - fair market value is the present value of all future benefits. There is a direct relationship between the amount of income a property will earn and its value

2. Two most common methods:
   
a. Capitalized methodology - the two essential elements are an estimated income base and a capitalization rate (single period). \( \text{Value} = \text{Benefit Stream} / (\text{discount rate} - \text{growth rate}) \)

b. Discounted methodology - you need a projected income stream and a discount rate (multiple period). \( \text{Value} = \sum (\text{Benefit Stream in period } n)/(1 +\text{discount rate}) \)

3. The terms discount rate, cost of capital, required rate of return, and yield rate (used in real property appraisal) all mean the same thing
4. Strengths and weaknesses of income approach overall
   a. Closest to pure value theory
   b. Very difficult to forecast
   c. Estimates of capitalization or discount rate are difficult to make and will be discussed in detail in BV 202.

III. Basic Description of a Business

A. Definitions of a business
   1. Dictionary definitions
      a. A commercial or industrial enterprise and the people who constitute it
      b. An organization operated with the objective of making a profit from the sale of goods or services
      c. An enterprise, commercial entity or firm, in either the private or public sector, concerned with providing products or services to satisfy customer requirements
   2. ASA Glossary definition: A commercial, industrial, service, or investment entity (or a combination thereof) pursuing an economic activity.

B. Real world view
   1. Definition—A group of individuals with a plan (strategy) incorporating systems and procedures to efficiently utilize the tangible and intangible assets they have available to meet the needs and wants of their identified customer base
   2. A business consists of four key components:
      a. Strategy
      b. Systems
      c. People
      d. Tangible and intangible assets
   3. Highly successful businesses have the ability to get the most out of the manageable parts – the business strategy, systems and people.

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1 Source: www.finet.com.hk/accounting/b.htm
2 Source: www.georgetown.edu/uis/ia/dw/GLOSSARY0816.html
IV. Organizational Structure of Business

A. Businesses can have many legal forms which vary depending upon the legal jurisdiction. Legal jurisdictions that control business entities are normally states (or their equivalent) or countries. All countries have business entities which generally have similar names and characteristics.

B. Sole proprietorship
   1. The simplest legal form of business where the business operates under an individual’s legal name (can also have a fictitious name), and
   2. The individual is directly responsible for all the company’s liabilities.
   3. The business’ income is reported on the individual’s personal tax return as part of personal income.

C. Partnership
   1. When individuals join together to carry out a business
   2. Can be registered and operated under its own legal name
   3. Individual partners retain liability for the company’s liabilities.
   4. The business income is reported on a partnership tax return and allocated to the individual members to report on their individual tax return.

D. Limited Liability Company
   1. Is a legal entity with its own legal status including its own name.
   2. Has responsibility for its own legal obligations.
   3. Have limits on the amount of liability or obligations that can be passed through to the owners
   4. Files tax returns, but does not pay income taxes. Instead, the profit or loss is passed through to the members of the firm who pay income taxes on their own income tax returns.

E. Corporation
   1. Is a legal entity with its own legal status including its own name.
   2. Has responsibility for its own legal obligations and files tax returns and pays its own taxes (for C-Corps; S-Corps are pass-through entities).
   3. Individual stockholders are not responsible for the liabilities or tax obligations of the corporation.
   4. Stockholders receive dividends (if declared and paid by the corporation) as their form of annual compensation.
5. Can be a closely held corporation (private company) or a publicly traded company (stocks are regulated and sold on a stock exchange). The common differences between public and private companies are:
   a. Size
   b. Management depth/management succession
   c. Product line diversification
   d. Geographic diversification
   e. Market position/market share
   f. Supplier or customer dependence
   g. Lack of access to capital markets
   h. Private companies managed to minimize taxes, not maximize income
   i. Public companies typically more growth-oriented, particularly through acquisitions
   j. Short-term expectations of public companies versus long-term outlook of private companies
   k. Patent or brand name importance
   l. Private companies generally compare unfavorably with public companies in these areas, but that’s not always the case

6. Variations of the legal entities above
   a. Legal jurisdictions often have established variations of the above three types of entities.
V. Financial Structure of a Business

A. The balance sheet of a typical business appears as follows:

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities &amp; Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>Inventory</td>
<td>Accrued Expenses</td>
</tr>
<tr>
<td>Other Assets</td>
<td>Income Taxes Payable</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>Other Current Liabilities</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>Interest Bearing Debt</td>
</tr>
<tr>
<td>Land</td>
<td>(includes current portion and short term notes payable)</td>
</tr>
<tr>
<td>Other Assets</td>
<td>Stockholders’ Equity</td>
</tr>
<tr>
<td>Investments</td>
<td>Preferred Stock</td>
</tr>
<tr>
<td>Life Insurance</td>
<td>Common Stock</td>
</tr>
<tr>
<td>Intangible Assets</td>
<td></td>
</tr>
<tr>
<td>Identifiable</td>
<td></td>
</tr>
<tr>
<td>Non-identifiable</td>
<td></td>
</tr>
</tbody>
</table>

B. The assets of a business typically consist of:

1. The tangible and intangible assets owned by the company, which include:
   a. Operating assets—assets used in the company’s operations
   b. Excess assets—assets that could be used in the operations but are owned in excess of the assets the company actually needs to operate the business (For example, unused areas of the factory or idle equipment.)
   c. Non-operating assets—assets that are not and will not be used in the ordinary course of conducting business (Examples often include personal airplanes, vacation cabins, artwork and investment properties.)

2. Non-booked or unrecorded assets—the intangible or other assets that are not recorded on the company’s financial statements
   a. Per GAAP, the internally generated assets of the company are expensed and not recorded on the company’s balance sheet.
   b. Discarded assets that may still have value—e.g., molds, old equipment, scrap, etc.

3. Types of assets used in the business include:
   a. Liquid assets—cash, accounts receivable, securities, short term notes, etc.
b. Inventory—raw materials, work in process and finished goods

c. Other current assets—additional assets that are expected to be used in the normal operating year of the company (within the next 12 months)

d. Fixed assets—generally considered to be the office and manufacturing facilities used in the business

(i) These assets are recorded at their original costs and are then depreciated over their estimated economic or tax lives.

(ii) These assets remain at their originally recorded cost basis even if their value increases, as normally expected for real properties such as office and manufacturing facilities.

e. Other assets—these assets generally include:

(i) Additional assets that are not expected to be used in the normal operating year of the company

(ii) Tangible assets not used in the operations of the business

(iii) Purchased intangible assets, intellectual property and goodwill

(iv) Long-term notes receivable

C. The liabilities of the business typically consist of:

1. Current liabilities—the short-term obligations (generally payable in 12 months or less) of the company (These obligations generally consist of accounts payable, current portion of long-term obligations, payroll payable and short-term notes payable.)

2. Long-term liabilities—the long-term obligations (generally not payable in the current operating year/the next 12 months) of the company (These obligations consist of bank debt, notes payable, mortgages payable and loans from stockholders.)

3. Liabilities of the company can be interest-bearing and non-interest-bearing obligations.

   a. Interest-bearing liabilities include bank debt, mortgages payable, notes payable and may or may not include loans from stockholders.

   b. Non-interest bearing liabilities include accounts payable, payroll payable, accrued expenses and often loans from stockholders

4. General characteristics of bank loans, mortgage notes and notes payable to third parties:

   a. They are secured interests—specific assets are generally pledged as collateral.

   b. They carry terms related to repayment schedules, interest rates and covenants.
D. The ownership equity section of the company’s balance sheet generally consists of:

1. In a sole proprietorship the owner’s investment is generally referred to as the owner’s net worth or equity. The business does not have any retained earnings in the business as the business’ profits are co-mingled with the owner’s personal assets.

2. In a partnership the partner’s direct investment is referred to as partner’s equity. Any profits retained in the business are combined with previous invested amounts into the one partner’s equity account.

3. In a corporation the ownership investment is referred to as stockholder’s equity. The stockholders’ equity:

   a. Is not directly allocated to individual owners in the accounting records

   b. Shareholder’s equity consists of:

      (i) Paid-in capital in the form of preferred or common stock (This represents the direct investments the stockholders have made in the company.)

      (ii) Preferred stocks generally have preferences on dividends and distributions from the company. Therefore common shareholders receive their dividends and distributions after the preferred shareholders.

      (iii) Preferred stocks most often have a specified return on investment.

      (iv) Retained earnings—the current year’s net income (less any dividends paid) plus all prior years’ retained earnings

   c. The equity of the business is the owners’ interest in the property after deductions are made for all liabilities.

4. Non-financial reporting perspective on the components of the balance sheet

   a. Assets listed on the balance sheet from top to bottom in order of liquidity—cash, accounts receivable, inventory, fixed assets and other assets.

   b. Working capital—The difference between the total amount of current assets and current liabilities is referred to as the company’s working capital.

   c. Invested capital—The sum of the stockholder’s equity or partner’s capital and the interest-bearing debt is the total invested capital in the company. Invested capital represents the financing (through the use of both equity and debt) of the non-working capital assets of the company.

      (i) Interest-bearing debt is referred to as the debt capital of the business. The economic return to debt holders is interest.

      (ii) The stockholder’s equity section of the balance sheet is referred to as the equity capital of the business. The economic return to equity holders is profit.
(iii) Equity capital and debt capital enjoy different rights and risks and therefore generally have very different rates of expected returns.

d. Liabilities on the balance sheet are presented differently for financial reporting and invested capital analysis purposes.

(i) For financial reporting purposes liabilities are separated into current liabilities (payable in next 12 months) and long-term liabilities. The short-term portions of long-term debts (e.g., real property mortgages) are recorded in the current assets sections along with non-interest-bearing debts like accounts payable and payroll payables.

(ii) For analyzing a company’s invested capital, the liabilities are separated into two categories: current liabilities and interest-bearing debt. Long-term debt without interest obligations normally should be adjusted to fair market value which would in effect convert some of the debt repayment to interest expense.

e. Measuring returns on invested capital

(i) The returns to equity holders and invested capital holders

(ii) Income differences relate to the return on the difference between equity and debt—interest expense.

(iii) Cash flow differences relate to the differences in income plus the differences in cash flow related to debt acquisition and repayment.

<table>
<thead>
<tr>
<th>Equity Cash Flow</th>
<th>Invested Capital Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>less Cost of sales</td>
<td>less Cost of sales</td>
</tr>
<tr>
<td>less Operating expense</td>
<td>less Operating expense</td>
</tr>
<tr>
<td>= Operating income (EBIT)</td>
<td>= Operating income (EBIT)</td>
</tr>
<tr>
<td>less Interest expense</td>
<td>less Taxes on EBIT</td>
</tr>
<tr>
<td>= Pretax income</td>
<td>= Net Operating profit after tax (NOPAT)</td>
</tr>
<tr>
<td>less Income taxes</td>
<td>plus Depreciation &amp; amortization</td>
</tr>
<tr>
<td>= Net income</td>
<td>= Gross cash flow</td>
</tr>
<tr>
<td>plus Depreciation &amp; amortization</td>
<td>less Increase in working capital</td>
</tr>
<tr>
<td>= Gross cash flow</td>
<td>less Capital expenditures</td>
</tr>
<tr>
<td>less Increase in working capital</td>
<td>+/- Change in debt principal</td>
</tr>
<tr>
<td>less Capital expenditures</td>
<td>= Equity Net Cash Flow</td>
</tr>
<tr>
<td>+/- Change in debt principal</td>
<td>= Invested Capital Net cash flow</td>
</tr>
</tbody>
</table>
(iv) **Example**: Assume the following:

- Net Income $10,000,000
- Depreciation $1,400,000
- Amortization $200,000
- Interest Expense $3,000,000
- Income Taxes $3,900,000
- Capital Expenditures $1,500,000
- Increase in Working Capital $1,800,000
- Net Increase in Long-Term Debt $400,000

**Classroom Assignment 1**: Calculate the net cash flow to the equity

**Classroom Assignment 2**: Calculate the net cash flow to the invested capital

*(10 minutes to do both)*
Handout 2-1

Answers to Classroom Assignments 1 & 2
Classroom Assignment 3: Review Exhibit 2-2 at the end of this chapter.
(10 minutes)

VI. Basic Concept of Value

A. Definition: The concept of value is analogous to that of beauty—it is a perception. Perception of what? Perception of the future usefulness or utility (the benefits) of the subject being appraised.

B. Perception, by definition, must be associated with a person or group of persons. As such, relevant parameters that must be defined in every appraisal assignment, include the following:

1. Value to “whom”? (Answering this question defines the scope of the appraisal definition.)

2. Value for what purpose, or “why”? (Answering this question defines the function of the appraisal assignment.)

3. Value as of “when”? (Answering this question defines the effective date of the appraisal.)

VII. Value vs. Cost vs. Price

A. Value

1. Value will vary depending on the perceived value to a specific type of investor. There are strategic buyers, financial buyers, vulture buyers, ego buyers, etc. The intangible asset being purchased probably has a different value to each of them.

2. The value of any financial asset is equal to the net present value of the expected future cash flows (CF) derived from the asset,

   a. Discounted at the required rate of return (k), which is also referred to as the discount rate.

   b. The required rate of return will vary depending on the type of buyer.

B. Cost

1. One viable perspective on the concept of cost is the fact that it simply represents a historical fact.

2. The fact that you paid X dollars for an asset one day, one year or one decade ago has little, if any, relationship to its current value. Examples: home appreciation; new car depreciation one minute after driving it off the sales lot.
3. In a business context, the balance sheet simply represents a historical tracking of costs incurred to acquire certain assets. The book value of the stockholders’ equity account is, in fact, a misnomer. It is more properly entitled book cost.

C. Price

1. Price is a term that is used in many ways. Offering price, market price, dealer’s price, FMV price, are common variations of the term.

2. Offering price simply represents a number that a seller is asking for an asset.
   a. Examples: sticker price on a new auto, store price tag on a garment.
   b. The unsophisticated layperson believes that if there is a wide enough gap between the (asking) price and the cost he/she will actually pay (in effect a discount), he is receiving value. This is naïve thinking.

3. In the business valuation world, price is most commonly thought of as the value received as adjusted for the terms of the transaction. For example,
   a. Owner A sells his company for $1,000,000 for cash and Owner B sells his business for $1,000,000 on a non-interest-bearing note for 10 equal annual payments of $100,000.
   b. Both owners paid the same price, but the underlying value is different.

D. Appraiser’s job

1. To estimate economic value

2. Achieve the above goal by rigorously exercising the three approaches available to him/her
   a. In reality, the asset-based (cost) approach references a distinct historical market—the market responsible for the creation of the historical balance sheet.
   b. The market approach references actual transactions in either distinct entire company acquisitions or thousands of fractional market transactions in the public stock market.
   c. Even the income approach, in one very real sense, is market-based due to the fact that the risk-free rate, the equity market premium (market again) and even the appraiser’s estimate of the company-specific risk premium, are all market derived.

E. Value determination

1. The litmus test to verify that one is reasonably determining value is to invoke the three valuation approaches.

2. By correlating the results of one approach against the other two approaches, one can reasonably (and comfortably) validate that one has received (or determined) value.
a. Example: you are buying a new car at a dealership. You are being told that you are getting a great deal because of the huge cash back rebate amounting to a sizable discount from the original sticker price. Once you drive the new vehicle off the lot, it becomes a used car. Check the blue book (in essence, one piece of evidence derived from the market approach) to verify if the recommended prices for your newly acquired used car with one-mile on it closely approximates your hugely discounted cost. If the blue book price exceeds your purchase cost, you indeed received value—as of that moment.

VIII. Standards of Value

A. Fair market value—addresses the broadest end of the spectrum of potential buyers. It is the most common standard of value used in business appraisals today, particularly for U.S. tax-related events. Two definitions are classically given for this standard:

1. The price at which the property would change hands between a willing buyer and a willing seller, when the former is not under any compulsion to buy and the latter is not under any compulsion to sell; both parties having reasonable knowledge of relevant facts (Revenue Ruling 59-60)

2. The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller acting at arm’s length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts (ASA BVS definition). (Note: In Canada, the term price should be replaced with the term highest price.)

3. Key concepts:
   a. Presumed ownership change at a specific date
   b. Hypothetical willing buyer, willing seller
      (i) Fair market value does not contemplate specific individuals as the buyer or seller.
      (ii) In most cases, the presumed hypothetical buyer is interested only in a financial return from the business (the hypothetical buyer is a financial buyer) and has no special interest, such as combining the business with similar operations already owned.
         (a) However, in the limited case where the pool of willing buyers for a business consists primarily of special buyers (or strategic buyers), as can be the case in periods of intense industry consolidation, the willing buyer may be defined as a special buyer, and some level of synergistic value may be incorporated into fair market value.
   c. No compulsion to transact on either party’s part
   d. Reasonable knowledge by both parties
e. Cash or cash equivalent price

f. Transaction costs not included

g. Generally assumed to include a covenant not to compete. However, this can be somewhat controversial in some jurisdictions.

B. **Investment value**—is defined as the value to a particular buyer (or small handful of buyers).

1. By definition, this extremely small and limited market is typically characterized by a premium because of the unique synergy(ies) the perceived particular buyer would realize as a result of acquiring the asset.

2. The value that a particular investor considers, on the basis of individual investment requirements such as:
   a. Differences in estimates of future earning power
   b. Differences in perception of the degree of risk and the required rate of return
   c. Differences in financing costs and tax status
   d. Synergies with other operations owned or controlled

3. Investment value is sometimes referred to as strategic value due to the synergy aspect of the transaction. An exchange transaction is contemplated in this standard of value.

C. **Fair value** has two different contexts:

1. Fair value for legal purposes
   a. Primarily used in dissenting stockholder actions and shareholder oppression cases
   b. The definition varies from jurisdiction to jurisdiction as specified in state statutes and developed in the state’s case law precedents.
   c. This standard of value is legal community-based, not economically or market-based.

2. Fair value for financial reporting purposes
   a. Fair value is defined as: the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. (FASB ASC 820, formerly SFAS 157)
   b. Fair value is now an exit price (sell-side), which means the price a company would receive if they were to sell an asset in the marketplace or paid if they were to transfer the liability. Transaction costs are excluded from fair value.
   c. Market participants are buyers and sellers in the principal or most advantageous market for an asset or liability. Market participants are:
(i) Unrelated (i.e., independent) to the reporting entity

(ii) Knowledgeable about factors relevant to the asset or liability and the transaction

(iii) Have the financial and legal ability to transact

(iv) Are willing to transact without compulsion

d. The “fair value hierarchy” prioritizes the inputs used in valuation and impacts the level of disclosure, but not the valuation techniques themselves (i.e., choose the best approach first, then the highest priority inputs).

(i) Level I

(a) Quoted prices in active markets for identical assets/liabilities

(ii) Level II

(a) Observable prices for similar assets/liabilities

(b) Prices for identical assets/liabilities in an inactive market

(c) Directly observable inputs for a substantially full term of an asset/liability

(d) Market inputs derived from or corroborated by observable market data

(iii) Level III

(a) Unobservable inputs based on the reporting entity’s own assumptions about the assumptions a market participant will use

e. Fair value for financial reporting purposes and fair market value are similar concepts, although differences can exist. For example, FASB Accounting Standards Codification (“ASC”) Topic 820 specifically does not allow for blockage discounts.

f. Fair value assumes the highest and best use for an asset. Reporting entities need to determine if highest and best use for an asset is in-use or in-exchange (valuation basis), regardless of management’s intended use for the asset. (Market participant perspective)

(i) Highest and Best Use is In-Use if:

(a) Asset has maximum value in combination with other assets as a group (installed or configured)

(b) Typically non-financial assets

(ii) Highest and Best Use is In-Exchange if:
(a) Asset has maximum value on a stand-alone basis

(b) Typically financial assets

g. There are many other issues that need to be considered in determining fair value for financial reporting purposes, which are beyond the scope of this course.

D. **Intrinsic value**

1. The value that a prudent investor considers, on the basis of an evaluation or available facts, to be the “true” or “real” value that will become the market value when other investors reach the same conclusion

2. What the value should be based on analysis of all the fundamental factors inherent in the business or the investment

3. Does not consider extreme aspects of market conditions and behavior. (e.g., the value of any particular stock on October 20, 1987—the Monday after the computer-driven event of Black Friday)

IX. **Premise of Value**

A. **Going concern value premise**—All the foregoing definitions of value assume an ongoing business, though FMV could also be a liquidation value.

B. **Liquidation value premise**—The appraiser / prudent investor (buyer) assumes the business will NOT continue in its present form and will be dismantled. This dismantling is driven by the belief that the business is better off dead than alive. There are two forms of liquidation:

1. Orderly liquidation

   a. The expected gross proceeds from the sale of the asset:

   (i) Held under orderly sales conditions

   (ii) Given a reasonable period of time in which to find purchasers

   (iii) Considering a complete sale of all assets as is, where is, with the buyer assuming all costs of removal

   (iv) With all sales free and clear of all liens and encumbrances

   (v) With the seller acting under compulsion

   (vi) Under current economic conditions, as of a specific date
2. Forced liquidation
   a. The expected gross proceeds from the sale of the asset:
      (i) That could be realized at a properly advertised and conducted public auction held under forced sale conditions
      (ii) With a sense of immediacy
         (a) Lack of adequate time to find purchasers
         (b) Fire sale values apply
      (iii) Under current economic conditions, as of a specific date

3. Premise of value—value in exchange vs. value in use
   a. The premise of value in exchange presupposes a proposed transaction of the property, wherein the property actually changes ownership hands. This value premise references market conditions external to the company being appraised. As such, the value standards of investment value, fair market value and liquidation value are properly classified under this premise.
   b. The premise value in use does not presuppose a proposed transaction of the property, whereby the property actually changes ownership hands. It does not reference market or economic conditions external to the company being appraised. It assumes that the current economic return (profitability) of the company being appraised is of sufficient magnitude to provide a reasonable basis to a prudent investor that the company has adequate financial strength to continue operating into the future.
   c. This value in use premise is sometimes (confusingly) referred to as fair market value in continued use (because no exchange market vehicle is contemplated). By definition, this premise is softer in nature than the value in exchange premise—which has hard market contours defining its shape.

X. The Purpose and Intended Use of the Valuation

A. Appraisers should understand and disclose the purpose of the valuation.
   1. The purpose may determine the standard of value.
   2. The purpose may affect the choice or presentation of valuation methods.
      a. No single valuation method is universally applicable to all appraisal purposes.
      b. The sophistication of the intended user is an important consideration in choosing methods and reporting your conclusions.
3. Stating the purpose of the valuation indirectly communicates your independence and objectivity. (You have nothing to hide about why you are doing the appraisal!)

B. The purpose of the valuation affects the standard of value.

1. Buying/selling/merging—any of the above standards of value could be used.

2. Tax-related valuation—typically based on fair market value
   a. Estate, gift and inheritance taxes
   b. S-corporation elections
   c. Charitable contributions
   d. Ad valorem taxes (property taxes)
   e. Transfer pricing
   f. Change of ownership

3. Financial reporting—Most engagements relate to purchase price allocation and impairment of goodwill calculations using the financial reporting standard of fair value.

4. ESOPs
   a. Typically based on fair market value
   b. Minority values for ESOP shares could be different than for non-ESOP shares because of marketability differences.

5. Going public—fair market value

6. Dissenting stockholder/shareholder oppression actions—almost all state statutes specify fair value. Interpretation varies from state to state.

7. Divorces/corporate or partnership dissolutions—clear-cut statutory standards of value are often lacking

8. Fairness opinions

9. Damage cases—must carefully research case law in each case.
   a. Antitrust
   b. Breach of contract
   c. Condemnation (eminent domain)
   d. Insurance casualty claims (business interruption or termination)
   e. Lost profits
f. Lost business opportunity
g. Commercial reasonableness
h. Intellectual property infringement

10. Buy/sell agreements—value standard is often arbitrary

XI. Professional Obligation of the Appraiser

A. The following definition of a profession suggests specific obligations for any professional:

A calling requiring specialized knowledge and often long and intensive preparation, including instruction in skills and methods as well as in the scientific, historical or scholarly principles underlying such skills and methods, maintaining by force of organization or concerted opinion high standards of achievement and conduct, and committing its members to continued study and to a kind of work which has for its prime purpose the rendering of a public service.3

B. Business valuation is a profession with the following four characteristics:

1. Recognized and coherent body of specialized knowledge

The members of the Society are engaged in a professional activity. A profession is based on an organized body of specific knowledge—knowledge not possessed by laymen. It requires a high degree of intelligence and considerable expenditure of time and effort to acquire it and to become adept in its application.4

a. Business valuation derives its theoretical validity from established principles of economics, finance and business management. Its skills and methods are those of economic, financial and organizational analysis, as recognized by academic and professionally practicing scholars in these respective fields.

b. For purposes of testimony in most federal, state and local courts in the United States, appropriate academic background and accreditation by ASA or another professional society are usually considered prima facie evidence of expert status.

2. High standards of achievements and conduct

The purpose of the Uniform Standards of Professional Appraisal Practice (USPAP) is to promote and maintain a high level of public trust in appraisal practice by establishing requirements for appraisers. It is essential that appraisers

develop and communicate their analyses, opinions, and conclusions to intended users of their services in a manner that is meaningful and not misleading.5

The American Society of Appraisers, in its Principles of Appraisal Practice and Code of Ethics, and the Appraisal Foundation, in its Uniform Standards of Professional Appraisal Practice (USPAP), have established authoritative principles and a code of professional ethics. The American Society of Appraisers Business Valuation Standards incorporates the Principles of Appraisal Practice and Code of Ethics and the relevant portions of USPAP, either explicitly or by reference, and are designed to clarify them and provide additional requirements specifically applicable to the valuation of businesses, business ownership interests, and securities.6

3. Maintained by force of organization

A member of the Society, having knowledge of an act by another member, which, in his opinion, is in violation of the ethical principles incorporated in the Principles of Appraisal Practice and Code of Ethics of the Society, has the obligation to report the matter in accordance with the procedure specified in the Constitution and Bylaws.7

In accordance with a resolution passed by the ASA Board of Governors on July 20, 2001, any member disciplined by the Board of Governors in the form of censure, suspension, or expulsion shall be identified by name, city, state, chapter affiliation, discipline and specialty(s) in ASA’s Newsline and on the ASA Web site.8

4. Continued study and contribution to the profession

a. The American Society of Appraisers accredits its members for a specified period of time only, usually in five-year intervals.

b. Maintaining one’s accreditation requires documentation of participation in continued professional education and/or contributions to the profession in the form of written articles, public presentations on appraisal-related topics, or teaching appropriate academic or professional courses at advanced educational levels.

7American Society of Appraisers, AAppraiser=s Obligation to Other Appraisers and to the Society,A Principles of Appraisal Practice and Code of Ethics, Section 5.2.
XII. Professional Standards

A. Professional standards codify the knowledge and techniques necessary for the competent practice of business valuation. (We will discuss two sources here—The Appraisal Foundation and ASA. The Institute of Business Appraisers, the National Association of Certified Valuation Analysts, the International Valuation Standards Committee and the American Institute of CPAs also have standards, but they will not be discussed here.)

B. Uniform Standards of Professional Appraisal Practice (USPAP)

1. Background


   b. Eight of the nine founding organizations are composed entirely of real estate appraisers; the American Society of Appraisers is the only multidiscipline society.

   c. The Appraisal Foundation; (202) 347-7722; http://www.appraisalfoundation.org

2. Structure of The Appraisal Foundation

   a. The Appraisal Foundation serves as the parent organization for three independent boards. The Foundation’s board of trustees finances the boards and appoints their members.

   b. The Appraisal Standards Board (ASB) is responsible for maintaining and updating USPAP.

   c. The Appraisal Qualifications Board (AQB) establishes qualification criteria for state licensing, certification and recertification of appraisers.

      (i) The Federal Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA) mandates that all state-certified real estate appraisers must meet the minimum education, experience and examination requirements promulgated by the AQB.

      (ii) The AQB has continued to work on voluntary criteria for disciplines other than real property including personal property appraisers.

   d. The Appraisal Practices Board (APB) has the responsibility of identifying and issuing opinions on recognized valuation methods and techniques, which may apply to all disciplines within the Appraisal Foundation

   e. Contents of USPAP

      (i) Prefatory material contains, among other things, an ethics rule and a competency rule.

      (ii) Standards 1-6 deal with real estate and fixed asset appraisal.
(iii) Standard 3 deals with reviewing an appraisal, originally for real estate. As of 2004, Standard 3 is also applicable to reviewing business appraisals.

(iv) Standards 7 and 8 deal with personal property appraisals.

(v) Standards 9 and 10 deal with business appraisals.

(vi) The Appraisal Foundation has also issued statements on standards and advisory opinions, which clarify issues in implementing and adhering to the standards.

f. Compliance with USPAP

(i) FIRREA requires that real estate appraisals used in conjunction with federally related transactions be performed in accordance with USPAP. More than 85,000 state-certified and licensed real property appraisers are currently required to adhere to USPAP.

(ii) Many other appraisers are also bound to comply with USPAP through affiliations with professional appraisal organizations.

(iii) Since ASA is a sponsoring organization of the Appraisal Foundation, all ASAs, AMs, FASAs, Candidates and Associates of ASA must take a course on USPAP and follow USPAP when performing a comprehensive appraisal and presenting a formal opinion of value as the primary objective of an appraisal engagement.

g. ASA’s Business Valuation Standards – See Appendix A

(i) The following business valuation standards have been adopted by the Business Valuation Committee of the American Society of Appraisers and approved by ASA’s board of governors. The Business Valuation Committee is the policy-making arm of ASA in the business valuation discipline (for more information, visit www.bvappraisers.org).

(a) Preamble

(b) Standards

(1) BVS-I. General Requirements for Developing a Business Valuation

(2) BVS-II. Financial Statement Adjustments

(3) BVS-III. Asset-Based Approach to Business Valuation

(4) BVS-IV. Income Approach to Business Valuation

(5) BVS-V. Market Approach to Business Valuation

(6) BVS-VI. Reaching a Conclusion of Value
XIII. Basic Variables Affecting Value (These are the things we analyze when we do our appraisals.)

A. Risk/return analysis - Generally, the higher the risk associated with an investment, the higher the return an investor will require to make the investment. Therefore, much of our analysis focuses on relative risk assessment (There are several different types of risk - business, financial, and liquidity.)

B. Business Risk is any threat to achieving an organization’s business objectives. It is the likelihood that an event or action may negatively affect the entity.

1. Specific types of business risks
   a. Operational risk—uncertainty or volatility of operating flows: revenue, earnings and cash flows
   b. Turnover risk—the decline in return on assets (ROA) due to the underutilization of assets
   c. Financial risk—the fluctuation of earnings available to common shareholders, measured by calculating the degree of financial leverage and various leverage, coverage and liquidity ratios.
d. Liquidity risk—the ease with which the asset can be converted to cash (In business valuation, this is typically quantified in the discount for lack of marketability.)

e. Going concern business risks

   (i) Going concern—the ability of the company to continue in operations for the foreseeable future

   (ii) Going concern business risks are created by internal and external factors.

       (a) External risk factors include:

           (1) Economic conditions and outlook (interest rates, inflation, etc.).

           (2) Industry conditions and outlook, including competitive analysis (expected growth).

           (3) Market rates of return (risk free rate, equity risk premium, industry and company-specified risk).

       (b) Internal risk factors

           (1) Business background and current operations

           (2) Earnings history of the firm (stability vs. volatility)

           (3) Future earnings expectations (high growth vs. low growth).

           (4) Balance sheet - financial strength (how leveraged).

           (5) Qualitative factors, such as management depth, customer concentration, security of supply

       (c) Examples of going concern risks:

           (1) A decline in the demand for industry products, which may affect the ability of the company to continue operations

           (2) A company’s inability to attract new debt or equity capital, which may affect the company’s ability to continue operations.

           (3) When a company can no longer continue operations, the assets of the company are liquidated and the financial obligations are first satisfied, with the common shareholders receiving any proceeds remaining, after all other claims have been paid.
XIV. The Role of IRS Rulings

A. IRS revenue rulings provide important guidelines for specific valuation issues.

B. The following IRS Revenue Rulings (RR) should be copied and filed as part of your valuation library.

1. **Revenue Ruling 59-60** highlights key items to be considered in valuing a business. **Exhibit 2-3.**
   
   a. Nature of the business and history of the enterprise since its inception
   
   b. The economic outlook in general and the condition and outlook of the specific industry in particular
   
   c. The book value of the stock and the financial condition of the business
   
   d. The earning capacity of the company
   
   e. The dividend paying capacity
   
   f. Whether or not the enterprise has goodwill or other intangible value
   
   g. Sales of the stock and size of the block of stock to be valued
   
   h. The market price of the stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a free and open market, either on an exchange or over-the-counter

2. **Revenue Ruling 65-192** states that the theory used in RR 59-60 applies to income and other taxes as well as estate and gift taxes.

3. **Revenue Ruling 65-193** approves only those valuation methods that can be used to separately determine tangible and intangible asset values.

4. **Revenue Procedure 66-49** deals with the methods the IRS uses to arrive at valuations.

5. **Revenue Ruling 68-609** deals with the calculation of return on tangible assets and capitalization rates for intangibles when a formula approach is selected.

6. **Revenue Ruling 77-12** describes the acceptable methods used for allocating a lump-sum purchase price to inventory values.

7. **Revenue Ruling 77-287** provides information on valuation, for tax purposes, of securities that cannot be resold because federal security laws restrict their marketability (marketability discounts).

8. **Revenue Ruling 81-253** deals with the IRS’s position on the allowance of minority discounts in valuing stock of a closely held family corporation transferred to the donor’s children for federal gift tax purposes. *(Superseded by RR 93-12.)*
9. **Revenue Ruling 83-120** clarifies RR 59-60 with additional factors to be considered in valuing the common and preferred stock of a closely held company for gift taxes and re-capitalization purposes.

10. **Revenue Ruling 85-75** states that the IRS is not bound to accept values that it accepted for estate tax returns as the basis for determining income taxes on capital gains from a later sale of the assets or depreciation expenses allowed.

11. **Revenue Ruling 93-12** allows minority discounts to be applied when valuing minority interests of family members in a closely held corporation. Prior to this, the IRS used family attribution rules to disallow these minority discounts. (Supersedes RR 81-253.)

C. There are many other revenue rulings that an appraiser will have to be familiar with. For those appraisers who are not CPAs with a tax background, it is advisable that you work in conjunction with a tax specialist if your assignment involves a tax-related purpose.

**XV. The Role of Key Court Cases**

A. Appraisers should be aware of court cases, either federal or individual state decisions, which pertain to the type of valuation they are performing.

B. Helpful aspects of court decisions
   1. Interpret standard of value.
   2. Indicate important factors to consider.
   3. Suggest approaches to value that are persuasive.

C. However, caution must be used in applying these decisions. Case decisions are very fact-specific and may not apply to your subject company. Judges are not valuation experts.

D. While court cases are important to study, they should not establish valuation theory. We, not court judges, are the experts. However, they often establish binding legal precedent.

**XVI. The Role of Financial Accounting Standards Board (“FASB”) Guidance**

A. FASB Codification Project

   1. On June 30, 2009, the FASB issued FASB Statement No. 168, The FASB Accounting Standards Codification™ and the Hierarchy of Generally Accepted Accounting Principles—a replacement of FASB Statement No. 162. On the effective date of this standard, FASB Accounting Standards Codification™ (ASC) will become the source of authoritative U.S. accounting and reporting standards for nongovernmental entities, in addition to guidance issued by the Securities and Exchange Commission (SEC). FASB ASC significantly changes the way financial statement preparers, auditors, and academics perform accounting research. Each ASC is referred to as a “Topic.”
This statement is effective for financial statements issued for interim and annual periods ending after September 15, 2009.

B. Key FASB ASC Topics.

1. **FASB ASC Topic 820**, Fair Value Measurements and Disclosures (formerly SFAS 157)
   a. Establishes a framework for “how” to apply fair value concepts. Does not provide guidance on “what” to value or “when”.
   b. Discussed further in the Standards of Value section.

2. **FASB ASC Topic 805** (formerly SFAS 141R) applies to business combination and performing purchase price allocation analyses.

3. **FASB ASC Topic 350-20** (formerly SFAS 142) applies to impairment testing of goodwill.

4. **FASB ASC Topic 718** (formerly SFAS 123R) covers stock based compensation.

5. **FASB ASC Topic 360** (formerly SFAS 144) deals with impairment testing for long-lived assets such as amortizable intangible assets and property, plant and equipment. It is also referenced in FASB ASC Topic 350-30.

C. The Role of SEC Speeches

1. Appraisers should be aware of relevant speeches made by the staff of the SEC. While they may not represent authoritative guidance, they can provide useful insight as to how the SEC views important issues. Speeches are available on the SEC web site (link as of November 2009: http://www.sec.gov/news/speech.shtml).

2. However, caution must be used when reviewing these speeches, as they do not represent authoritative guidance and facts and circumstances vary in each situation. Not only do facts and circumstances vary, but market conditions and best practices change over time. Information in these speeches should not supersede the judgment and expertise of the appraiser.

**XVII. Steps of a Business Appraisal**

A. Define the appraisal assignment

B. Gather the data

C. Analyze the data

D. Arrive at a value conclusion

E. Write the report
Exhibit 2-1

Business Appraiser or Real Property
Which to Use?
American Society of Appraisers

RELEASE

December 18, 1991

Business Appraiser or Real Property Appraiser?
Determining Which to Use

Introduction

As in so many other professions, the requirement for specialists in the appraisal field is an absolute necessity. Real property appraisers have the necessary real estate background and training to do real property appraisals. Similarly, business appraisers have the requisite business credentials and financial training to do business appraisals. While they share some common appraisal standards, the professional disciplines and the required knowledge differ. The purpose of this American Society of Appraisers Release is to assist the appraiser user in determining when a business appraisal and/or a real property appraisal is required. The release is divided into the following five sections:

I. The Basic Difference Between Business Appraisals and Real Property Appraisals
II. Knowledge and Qualifications of Business Appraisers and Real Property Appraisers
III. Similarities and Differences: Business Appraisal and Real Property Appraisal Approaches
IV. Business Appraisal or Real Property Appraisal Check List
V. Examples of Business Appraisal and/or Real Property Appraisal Situations

I. The Basic Difference Between Business Appraisals and Real Property Appraisals

There are significant differences between business appraisals and real property appraisals. The American Society of Appraisers has a major and separate appraisal discipline for each type of appraisal. The need for this distinction flows from the fact that in most cases what is being appraised is quite different.

The Standards Board of the Appraisal Foundation clearly recognizes the distinction between real property, personal property and business appraisals. In Uniform Standards of Professional Appraisal Practices, there are separate standards covering real property (Standards 1 through 6), personal property (Standards 7 and 8) and business appraisal/valuation (Standards 9 and 10).

Real property appraisal involves the valuation of land, improvements and associated rights. Business appraisal has to do with the value inherent in ownership of a commercial, industrial or
service organization pursuing an economic activity. The following will assist the appraiser user in determining the applicability of a business appraisal, real property appraisal or both:

Clear Examples of Where BUSINESS APPRAISAL is Appropriate

- Common Stock
- Preferred Stock
- Debt Instruments
- Warrants
- Options
- Sole Proprietorship Businesses
- Business Partnership Interests
- Employee Stock Ownership Trusts
- Intangibles:
  - Patents
  - Trademarks
  - Copyrights
  - Goodwill
  - Customer Lists
  - Employment Contracts
  - Covenant Not to Compete
  - Exploration Rights
  - Intangible Drilling Rights
  - Franchises
  - Licenses

Clear Examples of Where Real Property Appraisal is Appropriate

- Residential Properties
  - Single Family Detached Homes
  - Condominiums/Town Homes
  - One to Four Unit Apartments
- Dormitories
- Vacant Land
- Subdivision Properties

- Commercial Properties
  - Shopping Centers
  - Retail Malls
  - Office Buildings
  - Apartments

- Industrial Properties
  - Factories
  - Warehouses
  - Truck Terminals

- Agricultural Properties

- Special Purpose Buildings
  - Public Buildings (non-income producing properties)
  - Churches

**Examples of Where Both BUSINESS APPRAISAL and Real Property Appraisal Disciplines may be Jointly Required**

- Agricultural Properties (various types)
- Amusement Parks
- Bowling Alleys
- Car Washes
- Casinos
- Cemeteries, Mortuaries
- Franchise Operations If Property Owned
- Golf Courses
- Grain Mills and Elevators
- Hospitals
- Hotels, Motels
• Marinas
• Mobile Home Parks
• Nursing Homes
• Private Airports
• Recycling Centers
• Restaurants (Going Concern)
• Service Stations
• Ski Resorts with Residential Land
• Theatres
• Time Share Ownership Interest

These businesses are distinguished by the fact that the real estate is a special purpose property and is a major asset of the business.

Many certified commercial real property appraisers have developed the necessary credentials, experience and expertise to analyze both the business values and the real estate values in the special-purpose properties listed above. Nevertheless, the purchaser of valuation services should be aware that, in the above types of assets, both the services of a business appraiser and a real property appraiser may be needed.

II. Knowledge and Qualifications of Business Appraisers and Real Property Appraisers

The business appraiser draws heavily on the theory and practice of corporate finance and securities analysis in addition to the requisite understanding of economics, business management and accounting. Typically, but not always, a business appraiser may have a business oriented degree supplemented by an advanced degree. Some of these individuals will also have certification as Certified Public Accountants (CPA) or Chartered Financial Analysts (CFA), as well as business appraisal credentials. The umbrella labeled “corporate finance” really covers the financing of all kinds of business entities, regardless of whether they happen to be in the form of a corporation, partnership or sole proprietorship. The basic thrust of business appraisal is the appraisal of an interest in an operating entity.

A real property appraiser should have detailed knowledge of real property appraisal techniques; “real property appraisers must be more or less conversant with the fields of building, civil engineering, architecture, surveying, forestry, soil science, agriculture, accounting, real estate brokerage, lending, urban land economics, government real estate regulations and real estate law” (from a 1989 paper prepared for the Wisconsin Legislature by the Wisconsin Appraisers Coalition entitled, “What Appraisers Do”). A real property appraiser also needs an understanding of the variables and characteristics of the income aspects of real estate. This includes an understanding of financing and of required rates of return and differential risks attached to various types of investments.
III. Similarities and Differences: Business Appraisal and Real Property Appraisal Approaches

Both business and real property appraisers use the three basic approaches of “cost,” “market,” and “income” in varying degrees when valuing businesses or real estate. In business appraisal, the “cost” (or “asset-based”) approach is used when an estimate of the fair market value of each of the separate individual underlying assets is required, such as in a liquidation valuation, a purchase price allocation, or where real estate is a material non-operating asset. In such cases, a real property appraisal will be required for the real estate portion of the value. Typically, however, the business is valued as a whole and/or a minority interest is valued, wherein the “market” or “income” approaches are given a great deal more weight, if not all the weight, in determining the final value amount, and a separate real property appraisal is not required.

In other words, the business appraiser can value a business using the “market” approach or “income” approaches, such as capitalization of earnings or discounted cash flow, without a separate real property appraisal. Also, in those instances where there is a fair market value lease, a real property appraisal is not necessary, since the business appraisal approaches incorporate the leasehold value. In cases where the lease is not at fair market value, it may be necessary to secure the assistance of a real property appraiser to develop a fair market rent for the operating real estate.

The business appraiser will make use of a market approach, comparing guideline companies to the subject business. He/she will also rely heavily on various income approaches to convert an earnings stream of the business into an indicated value for the business.

The real property appraiser will use the market or sales comparison approach to compare similar real estate assets. He/she will use the income approach and develop a fair rental value for the real estate assets only.

The business appraiser may need the services of a real property appraiser when a liquidation valuation is indicated and where real estate assets are either owned or leased. An appraisal for purchase price allocation will require a real estate valuation of owned real estate or for favorable leases. If there are non-operating real estate assets, there will be need for a separate real property appraisal. In many cases, where owned real estate is an operating asset, it may be most appropriate to remove this asset and value it separately, then appraise the business by setting a fair rent rate on the real estate. A real property appraiser is best equipped to do this.

IV. Business Appraisal or Real Property Appraisal Checklist

The following checklist helps determine which discipline—business appraisal or real property appraisal—is the pertinent appraisal discipline when valuing an entity. In some cases, as indicated by the checklist, both disciplines may be required.
A Business Appraisal

Is the entity to be appraised:

[ ] A commercial, industrial or service organization pursuing an economic activity other than the sole operation of real estate?

[ ] An equity interest (such as a security in a corporation or partnership interest)?

[ ] A fractional or minority interest (i.e., less than 100 percent of the entity)?

[ ] Difficult to split up (perhaps because the owners do not have a direct claim on the assets)?

A Real Property Appraisal

[ ] A residential or commercial property (such as a single family residence, apartment house or office building)?

[ ] An interest in real estate (such as tenant in common or joint tenancy)?

[ ] A whole or partial interest in real estate?

[ ] Owners have a direct claim on their real estate interest?

Does the entity to be appraised:

[ ] Derive its revenues from providing goods or services?

[ ] Derive its revenues from the use or leasing of real estate?

[ ] Primarily use assets such as machinery, equipment, employee skill and talent in providing goods or services, and depend on assets other than or in addition to real estate to generate earnings?

[ ] Use real estate as its primary asset?

[ ] Conduct an economic activity which is more important than the location of the real estate where the economic activity is being conducted?

[ ] Conduct an activity wherein the location of the real estate is a primary valuation factor?

[ ] Likely have a value that fluctuates with conditions in its industry (as opposed to fluctuations in the real estate market)?

[ ] Have a value which fluctuates primarily with the real estate market?

Does the entity have:

[ ] Intangible assets such as patents, trademarks, copyrights, franchises, licenses, customer lists, employment contracts, non-compete covenants and goodwill which the entity uses to generate earnings?

[ ] Assets that are primarily tangible real estate. Insignificant or no tangible assets?

[ ] Substantial assets that can be moved?

[ ] Real estate and real estate related assets that cannot be moved?

[ ] A variety of tangible and intangible assets which interact to produce economic activity?

[ ] Primarily tangible real estate assets that produce the economic activity in the form of lease revenue or real estate use?

[ ] Significant operating expenses such as management, labor, marketing, advertising, research and transportation?

[ ] Operating expenses that are limited to real estate oriented expenses such as property management and maintenance?
V. Examples of Business Appraisal and/or Real Property Appraisal Situations

1. A REAL PROPERTY APPRAISAL
   a) Mr. A owns fee simple title to a small shopping center that he personally manages. Mr. A is getting divorced and the value of his ownership interest in the shopping center is an issue in the dissolution of marriage action.

2. A BUSINESS APPRAISAL
   a) Mr. X owns, as a sole proprietor, a retail store that bakes and sells cookies. The cookie business leases a store in Mr. A’s shopping center. Mr. X is preparing a personal financial statement for the bank and thus wishes to know the value of his business.

3. A BUSINESS APPRAISAL
   a) Mr. X is interested in selling one half of his cookie store to his brother-in-law. Mr. X and his brother-in-law have agreed to hire a competent appraiser to set the price for the sale of a 50 percent interest in the cookie store.

4. A REAL PROPERTY APPRAISAL
   a) Ms. L has just received her current tax assessment for her primary residence from the local assessor’s office. The estimated market value of her home and the resulting property taxes increased 100% from the prior year. She is alarmed and seeks a market value appraisal to check the reasonableness of the assessor’s value estimate.

5. A BUSINESS APPRAISAL AND A MACHINERY & EQUIPMENT APPRAISAL
   a) Mr. B owns 75 percent of the outstanding stock of B Ski Resort, Inc., which owns and operates three ski resorts. All three ski resorts are more than five years old and have operated profitably in at least three of the last five years. B Ski Resort, Inc. wishes to borrow operating funds from a national bank and will pledge accounts receivable, inventory and ski lift equipment on the loan. The real property is already pledged on an existing long-term loan. Mr. B will also personally guarantee the debt.

6. A BUSINESS APPRAISAL AND A REAL PROPERTY APPRAISAL
   a) Mr. C is a limited partner owning 10 percent of the limited partnership interests in capital, income and distributions in Apartments Limited, a Limited Partnership, which has as its sole asset a 1,000 unit apartment complex. Mr. C is negotiating with the general partner of Large Apartment Limited whereby the general partner would purchase Mr. C’s limited partnership interest.

7. A BUSINESS APPRAISAL AND A REAL PROPERTY APPRAISAL
   a) The valuation of 100 percent of the issued and outstanding stock of Corporation D, which was owned by Mr. D, who died. The purpose of the valuation is for Federal Estate Tax purpose. Corporation D owns 1,200 acres of farmland, all of which is leased on a sharecrop arrangement to individual farm tenants. Reference, Revenue
Ruling #59-60.

8. A BUSINESS APPRAISAL

a) Mr. D’s estate distributes the stock of Corporation D to Mr. D’s four sons in equal 25 percent interests. Shortly after receiving his distribution of 25 percent of Corporation D stock, son #1 dies, and it is now necessary to value his 25 percent interest in Corporation D for Estate Tax purposes.

9. A BUSINESS APPRAISAL

a) Mr. Z, one of the tenants sharecropping the farms, also operates a custom farming business in which he performs various farming tasks for the operators of farms for a fee. Mr. Z is interested in bringing his son into an ownership position in this company which was incorporated two years ago. The corporation owns no land but stores machinery on the rented farm. It has elected to be taxed under Chapter “S” of the Internal Revenue Code.

10. A BUSINESS APPRAISAL

a) The F & F Limited Partnership owns four video rental stores, all located in the same city. Mr. F3 is a limited partner in the F & F Limited Partnership. He owns 10 percent of the capital and has a right to receive 10 percent of the distributions and 10 percent of the net income and expense. Mr. F3 intends to gift his limited partnership interest in F & F Limited Partnership to his daughter.

11. A REAL PROPERTY APPRAISAL

a) Mr. C is a speculative office developer. He has purchased five acres of vacant land and desires to construct a 25,000 square foot suburban office building. He has approached Main Street Savings and Loan regarding an interim construction loan, as well as a permanent mortgage loan. The S8cL has indicated that any loan approval would be subject to a market value appraisal.

12. A BUSINESS APPRAISAL

a) Mr. G owns 1 million shares out of the 100 million shares outstanding of the G Corporation, whose stock is publicly traded on the New York Stock Exchange. Mr. G serves as Chairman of the Board of the company. The closing price for Mr. G’s stock on December 31, 1990 was $10 per share. Mr. G gifted 10,000 shares to each of three children on December 31, 1990. One of the children is a minor, one is an officer and the third is an employee but not an officer or director of G Corporation.

13. A REAL PROPERTY APPRAISAL

a) Attorney A represents ABC Limited Partnership, whose general partner has just placed the partnership into Chapter 11 bankruptcy. The sole asset of the partnership is a 1,200 acre parcel of unimproved land. The first lien holder is claiming that there is no equity in the partnership, and thus he should be allowed to complete foreclosure and take ownership possession of the real property asset. Attorney A needs a market value appraisal to ascertain the merits of the first lienholder’s claim.
14. A BUSINESS APPRAISAL
   a) Lawyer H is a senior partner in the H, X, Y & Z law firm, which has four partners and six associates. The law firm leases its office facilities from an independent third party. The firm is actively involved in various facets of the practice of law, and its attorneys consider themselves to be general practitioners. Mr. H is getting divorced, and the value of his interest in the partnership is an issue in the dissolution of marriage action.

15. A REAL PROPERTY APPRAISAL
   a) Mr. P owns a 15 unit apartment complex 200 feet from a mayor highway. Plans call for the state to widen the highway, which will then come within 15 feet of Mr. P’s apartment complex. Mr. P needs an appraisal to determine the fair market value of the property which the state is taking, as well as a determination of the loss in value of his remaining property.

16. A BUSINESS APPRAISAL
   a) An employee stock ownership plan owns 13 percent of the issued and outstanding common stock of Corporation A. Corporation A is actively involved in the manufacture of snow shovels. Adjacent to the company’s manufacturing facility is a 12 acre parcel of undeveloped land which the company intends to use for future plant expansion.

   b) Reference Foltz vs. U.S. News. where the court held that it was proper to value the minority interest owned by the profit sharing plan using an earnings approach without separately valuing the excess land, as the minority shareholders had no right to either force the company to sell such land or order the distribution of proceeds even if the land was sold. Further reference Revenue Ruling #59-60 (2) (a) and Department of Labor adequate consideration guidelines.

17. A REAL PROPERTY APPRAISAL
   a) Mr. T, Mr. C and Mr. D each own a 33-1/3 percent undivided interest in a 200 acre parcel of farmland. Due to a disagreement, Mr. T and Mr. C wish to buy out Mr. D’s undivided 33-1/3 percent interest and need to obtain a fair market value appraisal of Mr. D’s interest. The applicable state law dictates that Mr. D will receive a pro-rata share of the total value.

18. A BUSINESS APPRAISAL AND A REAL PROPERTY APPRAISAL
   a) A restaurant owner operates a successful restaurant on a parcel of real estate that she owns. She wants to sell both the restaurant as a going concern and the real estate. The real property appraiser will typically separately value the real estate and establish a fair market rent. The business appraiser will use the fair rent figure provided by the real property appraiser to value the business. When he substitutes fair rent, the business appraiser will remove all real estate assets and expenses connected with the ownership of the real estate.
19. A BUSINESS APPRAISAL AND A REAL PROPERTY APPRAISAL

a) A casino owner and his spouse are pursuing marital dissolution in a community property state. They own several casinos, hotels and restaurants. The business appraiser will work in concert with the real property appraiser to issue one report following the standards set forth in the Uniform Standards of Professional Appraisal Practice (USPAP). The business appraisal expert will focus on the statistical testing of the casinos’ cash flow streams using regression analysis, and the development of the discount and capitalization rates using public market comparables and the Capital Asset Pricing Model (CAPM). The real property appraiser will focus on the hotels and their locations while also reviewing the results of the casinos’ operating forecasts, and relating them to the hotel forecasts. The real property appraiser will establish the fair market value rent for the facilities, including the restaurants, and the business appraiser will use this rent in determining the business value of the business facilities. The real property appraiser and business appraiser will jointly summarize their valuation study and value conclusions in a thorough report. Both the real property appraiser and business appraiser will sign the report as individuals.

For more information, contact:
American Society of Appraisers
555 Herndon Pkwy, Ste 125
Herndon, VA 20170
(703) 478-2228 • FAX (703) 742-8471
Exhibit 2-2

GDT, Inc. Financial Statements
Most Recent Audit Report and Notes to Financial Statements

GDT, Inc. is a fictional company that will be used in various parts of this course for different types of exercises.
Report of Independent Public Accountants

To the Board of Directors
General Deliveries Trucking, Inc.

We have audited the accompanying combined balance sheets of General Deliveries Trucking, Inc. as of December 31, 2008 and 2007 and the related combined statements of income, changes in stockholders’/members’ equity and cash flows for the years then ended. These combined financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these combined financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the combined financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the financial position of General Deliveries Trucking, Inc. as of December 31, 2008 and 2007, and their results of operations and cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Some City, Florida
June 12, 2009
GENERAL DELIVERIES TRUCKING, INC.

NOTES TO COMBINED FINANCIAL STATEMENTS

(In Thousands)

Note 1 - Business and summary of significant accounting policies:

Business:

The Company provides transportation logistics management and distribution services for national multi-unit retail stores throughout the United States, expediting the flow of merchandise from the manufacturer to the point of sale. Such services include local pick-up, consolidation of inventory, computerized inventory control, fleet management under contract, less-than-truckload and line-haul delivery, local distribution, storage and brokerage.

Basis of presentation:

The accompanying combined financial statements include the accounts of all of the transportation operations of General Deliveries Trucking, Inc. (the “Company”). This affiliation is through common family ownership and all of the owners are either officers or employees of the companies. All significant intercompany balances and transactions have been eliminated in combination. The active companies included are Company 1, Inc. and its subsidiary, Company 2, Inc., as well as its affiliated companies, Company 3, Inc., Company 4, Inc., Company 5, Inc. and Company 6, LLC. Company 7, Inc., which is included in General Deliveries Trucking, Inc., is an inactive company.

The accounts of two partnerships, eight limited liability companies and three corporations (the uncombined affiliates), which are in the real estate and equipment leasing businesses, and are owned by the owners of the Company, have not been included in the combined financial statements since it has been determined that the Company is not the primary beneficiary of these uncombined affiliates.

Revenue recognition:

Operating revenue and related expenses are primarily recognized when the shipment is completed or allocated between reporting periods based on relative transit time in each reporting period and collectability is reasonably assured.

Cash and cash equivalents:

It is the Company’s policy to consider as cash equivalents all short-term, highly liquid investments, which are convertible to a known cash amount in a period of less than three months from the date of purchase.

Cash of approximately $9,730 and $10,222 at December 31, 2006 and 2007, respectively, is subject to withdrawal restrictions to collateralize short-term letters of credit with Insurance companies.
Accounts receivable and allowance for uncollectible accounts:

The Company carries its receivables at amounts billed to customers less allowances for uncollectible accounts. On a periodic basis, the Company evaluates its accounts receivable and establishes an allowance for doubtful accounts based on a history of past write-offs and collections and current credit conditions. Accounts are written off when deemed uncollectible. The policy for determining the past due status of receivables is 30 days.

Property and equipment:

Property and equipment are stated at cost. Depreciation is provided using the straight-line method over estimated useful lives of three to eight years. Leasehold improvements are amortized over the shorter of the useful life of the related asset or the period of the lease. Major additions, replacements and betterments, including major engine overhauls, are capitalized, while maintenance, repairs and the cost of replacement tires, which do not extend the useful lives of these assets, are expensed as incurred.

Insurance:

The Company accrues estimated liabilities for the self-retention and deductible portions of cargo loss and damage, fleet, workers’ compensation, general liability and certain medical claims.

Income taxes:

All active entities included in the combined group are taxed as either “S” Corporations under the Internal Revenue Code (the “Code”) or limited liability companies. Accordingly, no Federal income taxes are provided by the Company; however, the Company is subject to certain state and local income taxes on its income.

Provision has been made for deferred state and local Income taxes based on temporary differences between financial statement and the tax bases of assets and liabilities using currently enacted tax rates and regulations.

Use of estimates:

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Marketable equity securities:

Marketable equity securities are classified as available-for-sale, with net unrealized gains and losses reported as a component of stockholders’ equity. The Company values its marketable equity securities in accordance with Statement of Financial Accounting Standards No. 157 (“SFAS 157”). At December 31, 2008, marketable securities valued at $102, based on quoted market prices considered to be “LevelI” inputs under SFAS 157, were included in other current assets.
Note 2 - Transactions and related parties:

The Company has borrowed funds from and loaned funds to certain uncombined affiliates, officers and stockholders. The loans are noninterest bearing unsecured demand loans. Certain owners and officers have guaranteed a major portion of the borrowings obtained by the Company.

The Company also rents equipment and real estate from the uncombined affiliates under month-to-month operating leases. Payments to and on behalf of these uncombined affiliates amounted to $7,447 and $5,046 in 2008 and 2007, respectively.

Note 3 - Property and equipment:

Property and equipment, at cost, consists of the following:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation equipment</td>
<td>$152,179</td>
<td>$149,302</td>
</tr>
<tr>
<td>Leasehold improvements and other fixed assets</td>
<td>$30,447</td>
<td>$27,935</td>
</tr>
<tr>
<td>Totals</td>
<td>$182,626</td>
<td>$177,237</td>
</tr>
<tr>
<td>Less accumulated depreciation and amortization</td>
<td>$137,425</td>
<td>$124,226</td>
</tr>
<tr>
<td>Totals</td>
<td>$45,201</td>
<td>$53,011</td>
</tr>
</tbody>
</table>

Depreciation and amortization expense for 2008 and 2007 was $17,879 and $19,158, respectively. Fully depreciated and amortized assets having an original cost of approximately $85,720 and $85,873 are still in use at December 31, 2008 and 2007, respectively.

Note 4 - Leases:

Capital leases:

Included in property and equipment are the following assets financed by capital leases:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation equipment</td>
<td>$19,093</td>
<td>$14,536</td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>$7,629</td>
<td>$4,658</td>
</tr>
<tr>
<td>Totals</td>
<td>$11,464</td>
<td>$9,878</td>
</tr>
</tbody>
</table>
Future minimum lease payments under capital leases for transportation equipment, and the present value of the minimum lease payments, are as follows:

<table>
<thead>
<tr>
<th>Year Ending December 31,</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>$ 3,949</td>
</tr>
<tr>
<td>2010</td>
<td>3,363</td>
</tr>
<tr>
<td>2011</td>
<td>2,746</td>
</tr>
<tr>
<td>2012</td>
<td>2,130</td>
</tr>
<tr>
<td>2013</td>
<td>863</td>
</tr>
<tr>
<td>Thereafter</td>
<td>488</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13,539</strong></td>
</tr>
</tbody>
</table>

Less amount representing interest 1,538

Present value of net minimum lease payments $ 12,001

Amortization of the capital lease assets is included in depreciation and amortization.

Operating leases:

Certain of the companies lease office space, terminals and warehousing facilities under operating leases which expire at various dates through September 2031. Transportation and other equipment are leased on a month-to-month basis. Rental expense, including the operating leases with uncombined affiliates (see Note 2), amounted to $16,490 and $13,366 in 2008 and 2007, respectively.

Minimum rental commitments under the noncancelable operating leases, with remaining terms of up to 23 years, including an aggregate of $46,958 with uncombined affiliates, in years subsequent to December 31, 2008 and thereafter are payable as follows:

<table>
<thead>
<tr>
<th>Year Ending December 31,</th>
<th>Uncombined Affiliates</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ 5,400</td>
<td>$ 9,193</td>
<td>$ 14,593</td>
</tr>
<tr>
<td>2009</td>
<td>5,400</td>
<td>7,095</td>
<td>12,495</td>
</tr>
<tr>
<td>2010</td>
<td>5,400</td>
<td>6,205</td>
<td>11,605</td>
</tr>
<tr>
<td>2011</td>
<td>5,400</td>
<td>6,195</td>
<td>11,595</td>
</tr>
<tr>
<td>2012</td>
<td>5,400</td>
<td>6,056</td>
<td>11,456</td>
</tr>
<tr>
<td>2013</td>
<td>5,400</td>
<td>6,056</td>
<td>11,456</td>
</tr>
<tr>
<td>Thereafter</td>
<td>46,874</td>
<td>27,576</td>
<td>74,450</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$ 73,874</strong></td>
<td><strong>$ 62,320</strong></td>
<td><strong>$136,194</strong></td>
</tr>
</tbody>
</table>
Note 5 - Long-term obligations:

Long-term obligations consist of notes payable to financial institutions and obligations under capital leases due in installments through June 2015 at various interest rates ranging from 3.84% to 8.47% per annum.

Maturities of long-term obligations, including capital leases, in each of the five years subsequent to December 31, 2008 and thereafter are as follows:

<table>
<thead>
<tr>
<th>Year Ending December 31,</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>$15,278</td>
</tr>
<tr>
<td>2010</td>
<td>11,558</td>
</tr>
<tr>
<td>2011</td>
<td>8,048</td>
</tr>
<tr>
<td>2012</td>
<td>4,338</td>
</tr>
<tr>
<td>2013</td>
<td>1,625</td>
</tr>
<tr>
<td>Thereafter</td>
<td>603</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$41,450</td>
</tr>
</tbody>
</table>

Long-term obligations are collateralized by substantially all of the Company’s equipment with a net book value of approximately $36,505 at December 31, 2008, including $14,382 of transportation equipment related to transportation agreements under which the customers, at the option of the Company, must purchase the transportation equipment and satisfy all related debt if a customer terminates their agreement. The terms of the agreements parallel the terms of the debt associated with the equipment.

Historically, the Company maintained a $7,500 revolving line of credit with Capital One Bank. In 2008, the revolving line of credit was not renewed and in 2009, Capital One approved a $4,000 revolving line of credit, expiring June 2010. The Company has never borrowed against its revolving lines of credit.

Note 6 - Income taxes:

The provision (credit) for state income taxes consists of the following:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>$198</td>
<td>$245</td>
</tr>
<tr>
<td>Deferred</td>
<td>269</td>
<td>(117)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$467</td>
<td>$128</td>
</tr>
</tbody>
</table>
Deferred tax liabilities at December 31, 2008 and 2007 are $470 and $201, respectively, and are principally due to depreciation.

Note 7 - Employee benefit plans:

A majority of the employees of the Company are covered by multi-employer defined benefit pension plans and post-retirement health and welfare plans. Contributions to these plans amounted to $4,992 and $5,179 in 2008 and 2007, respectively. These contributions are determined in accordance with provisions of negotiated labor contracts. The Company presently has no intention to withdraw from participation in these plans, nor is there any intention to terminate such plans.

The Company maintains a defined contribution savings plan covering all nonunion employees under Section 401 (k) of the Code. Eligible employees can elect to contribute up to 15% of their salaries, subject to Code limitations, to an investment trust. The Company voluntarily contributed $688 and $673 to the plan in 2008 and 2007, respectively, pursuant to Safe Harbour Matching Contribution elections then in effect. For 2009, the Safe Harbour Matching Contribution was elected only through April 9.

Note 8 - Litigation - stockholder:

In 1996, a former stockholder commenced an action against the other two shareholders under Florida’s Oppressed Minority Shareholder Act. In 2001, the Court found that the former stockholder was guilty of oppression and ordered him to sell his Interest In the “Company” (defined by the Court as both the combined and uncombined companies). In 2002, the Court ruled on the payments to be made to the former stockholder and directed that either the Company or the remaining shareholders be the purchaser (the “First Valuation Ruling”). The purchaser was one of the remaining shareholders. The former stockholder appealed the First Valuation Ruling and a Second Valuation Hearing was ordered. Pending the appeal, the former stockholder was paid all monies required by the First Valuation Hearing. The Second Valuation Hearing concluded in 2007 and in 2008 the Court ruled that additional amounts were due to the former stockholder. The Company and the remaining shareholders believe that the same shareholder will remain the purchaser. The Company and the remaining shareholders believe it is unlikely that the assets of the combined companies or its stock are at risk to the former stockholder and therefore no liability has been recorded. The remaining shareholders intend to appeal the second Phase 2 Ruling.

Note 9 - GDT - Vinotrans Joint Venture:

In August 2007, General Deliveries Trucking, Inc. and Vinotrans Limited, a Chinese corporation, formed a joint venture named “GDT VinoGDT Cargo Management Limited.” The business of the joint venture is to provide warehousing and value added services within China to business entities engaged in the sale of consumer products via department stores, chain stores and specialty stores in the United States. Each joint venturer has the right to appoint and has appointed 3 members to the Board of Directors of the joint venture. The initial capital contribution by each joint venturer was 2,500 RMB, which General Deliveries Trucking, Inc. contributed in March 2008. The contribution approximated $355 when paid. The Company accounts for its investment in
the joint venture using the equity method. The joint venture met its sales goals for 2008. The Company recorded a loss of $82 in 2008, which is the Company’s 50% share of the joint venture’s $164 loss.

Note 10- Stockholders’ equity:

Common stock consists of the following:

<table>
<thead>
<tr>
<th>General Deliveries Trucking, Inc.:</th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized 16,000,000 shares (15,000,000 common and 1,000,000 preferred); par value $.01; issued and outstanding 3,588,000 shares of common stock</td>
<td>$ 36</td>
<td>$ 36</td>
</tr>
<tr>
<td>Additional paid-in-capital</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Company 1 – capital contribution</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>Totals</td>
<td>$ 737</td>
<td>$ 737</td>
</tr>
</tbody>
</table>

Distributions and other:

Distributions to stockholders amounted to $13,959 in 2008 and $14,246 in 2007.

Note 11- Fair value of financial instruments:

The fair value of financial instruments at December 31, 2008 and 2007 including cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate their carrying amounts due to their relative short-term nature. The fair value of long-term obligations approximates carrying value due to having terms similar to those it can currently obtain.

Note 12- Supplemental disclosure of cash flow Information:

<table>
<thead>
<tr>
<th>Cash paid during the year for:</th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash paid during the year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income taxes</td>
<td>$ 312</td>
<td>$ 236</td>
</tr>
<tr>
<td>Interest</td>
<td>2,846</td>
<td>3,428</td>
</tr>
</tbody>
</table>

Supplemental schedule of noncash investing and financing activities:

| Transportation equipment financed with lender | 5,625 | 6,641 |
| Insurance premiums financed with lenders | 1,580 | 1,785 |

Note 13- Other information:

In 2008, three customers, each exceeding 10% of operating revenue, accounted for approximately 42% of the combined operating revenue of the Company and 41% of the Company’s combined accounts receivable. In 2007, two customers, each exceeding 10%
of the combined operating revenue of the Company accounted for approximately 27% of the combined operating revenue of the Company and 20% of the Company’s combined accounts receivable.

The Company has a concentration of employees working under collective bargaining agreements ("CBA") representing approximately 47% of the entire workforce. The CBAs expire in the years 2009 through 2013, of which 26% of the employees are working under CBAs that expire in 2009.

The Company maintains accounts with financial institutions whereby principally all of its cash and cash equivalent balances usually exceed the maximum coverage provided by the Federal Deposit Insurance Corporation on Insured depositor accounts.
Exhibit 2-3

Revenue Ruling 59-60
IRS Revenue Ruling 59-60

Rev. Rul. 59-60, 1959-1 CB 237 -- IRC Sec. 2031 (Also Section 2512.) (Also Part II, Sections 811(k), 1005, Regulations 105, Section 81.10.)

Reference(s): Code Sec. 2031 Reg § 20.2031-2

In valuing the stock of closely held corporations, or the stock of corporations where market quotations are not available, all other available financial data, as well as all relevant factors affecting the fair market value must be considered for estate tax and gift tax purposes. No general formula may be given that is applicable to the many different valuation situations arising in the valuation of such stock. However, the general approach, methods, and factors which must be considered in valuing such securities are outlined.


Full Text:

Section 1. Purpose.

The purpose of this Revenue Ruling is to outline and review in general the approach, methods and factors to be considered in valuing shares of the capital stock of closely held corporations for estate tax and gift tax purposes. The methods discussed herein will apply likewise to the valuation of corporate stocks on which market quotations are either unavailable or are of such scarcity that they do not reflect the fair market value.

Sec. 2. Background and Definitions.

.01 All valuations must be made in accordance with the applicable provisions of the Internal Revenue Code of 1954 and the Federal Estate Tax and Gift Tax Regulations. Sections 2031(a), 2032 and 2512(a) of the 1954 Code (sections 811 and 1005 of the 1939 Code) require that the property to be included in the gross estate, or made the subject of a gift, shall be taxed on the basis of the value of the property at the time of death of the decedent, the alternate date if so elected, or the date of gift.

.02 Section 20.2031-1(b) of the Estate Tax Regulations (section 81.10 of the Estate Tax Regulations 105) and section 25.2512-1 of the Gift Tax Regulations (section 86.19 of Gift Tax Regulations 108) define fair market value, in effect, as the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts. Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and to be well informed about the property and concerning the market for such property.

.03 Closely held corporations are those corporations the shares of which are owned by a relatively limited number of stockholders. Often the entire stock issue is held by one family. The result of this situation is that little, if any, trading in the shares takes place. There is, therefore, no established market for the stock and such sales as occur at irregular intervals seldom reflect all of the elements of a representative transaction as defined by the term “fair market value.”
Sec. 3. Approach to Valuation.

.01 A determination of fair market value, being a question of fact, will depend upon the circumstances in each case. No formula can be devised that will be generally applicable to the multitude of different valuation issues arising in estate and gift tax cases. Often, an appraiser will find wide differences of opinion as to the fair market value of a particular stock. In resolving such differences, he should maintain a reasonable attitude in recognition of the fact that valuation is not an exact science. A sound valuation will be based upon all the relevant facts, but the elements of common sense, informed judgment and reasonableness must enter into the process of weighing those facts and determining their aggregate significance.

.02 The fair market value of specific shares of stock will vary as general economic conditions change from “normal” to “boom” or “depression,” that is, according to the degree of optimism or pessimism with which the investing public regards the future at the required date of appraisal. Uncertainty as to the stability or continuity of the future income from a property decreases its value by increasing the risk of loss of earnings and value in the future. The value of shares of stock of a company with very uncertain future prospects is highly speculative. The appraiser must exercise his judgment as to the degree of risk attaching to the business of the corporation which issued the stock, but that judgment must be related to all of the other factors affecting value.

.03 Valuation of securities is, in essence, a prophesy as to the future and must be based on facts available at the required date of appraisal. As a generalization, the prices of stocks which are traded in volume in a free and active market by informed persons best reflect the consensus of the investing public as to what the future holds for the corporations and industries represented. When a stock is closely held, is traded infrequently, or is traded in an erratic market, some other measure of value must be used. In many instances, the next best measure may be found in the prices at which the stocks of companies engaged in the same or a similar line of business are selling in a free and open market.

Sec. 4. Factors To Consider.

.01 It is advisable to emphasize that in the valuation of the stock of closely held corporations or the stock of corporations where market quotations are either lacking or too scarce to be recognized, all available financial data, as well as all relevant factors affecting the fair market value, should be considered. The following factors, although not all-inclusive are fundamental and require careful analysis in each case:

(a) The nature of the business and the history of the enterprise from its inception.

(b) The economic outlook in general and the condition and outlook of the specific industry in particular.

(c) The book value of the stock and the financial condition of the business.

(d) The earning capacity of the company.

(e) The dividend-paying capacity.

(f) Whether or not the enterprise has goodwill or other intangible value.
(g) Sales of the stock and the size of the block of stock to be valued.

(h) The market price of stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a free and open market, either on an exchange or over-the-counter.

.02 The following is a brief discussion of each of the foregoing factors:

(a) The history of a corporate enterprise will show its past stability or instability, its growth or lack of growth, the diversity or lack of diversity of its operations, and other facts needed to form an opinion of the degree of risk involved in the business. For an enterprise which changed its form of organization but carried on the same or closely similar operations of its predecessor, the history of the former enterprise should be considered. The detail to be considered should increase with approach to the required date of appraisal, since recent events are of greatest help in predicting the future; but a study of gross and net income, and of dividends covering a long prior period, is highly desirable. The history to be studied should include, but need not be limited to, the nature of the business, its products or services, its operating and investment assets, capital structure, plant facilities, sales records and management, all of which should be considered as of the date of the appraisal, with due regard for recent significant changes. Events of the past that are unlikely to recur in the future should be discounted, since value has a close relation to future expectancy.

(b) A sound appraisal of a closely held stock must consider current and prospective economic conditions as of the date of appraisal, both in the national economy and in the industry or industries with which the corporation is allied. It is important to know that the company is more or less successful than its competitors in the same industry, or that it is maintaining a stable position with respect to competitors. Equal or even greater significance may attach to the ability of the industry with which the company is allied to compete with other industries. Prospective competition which has not been a factor in prior years should be given careful attention. For example, high profits due to the novelty of its product and the lack of competition often lead to increasing competition. The public’s appraisal of the future prospects of competitive industries or of competitors within an industry may be indicated by price trends in the markets for commodities and for securities. The loss of the manager of a so-called “one-man” business may have a depressing effect upon the value of the stock of such business, particularly if there is a lack of trained personnel capable of succeeding to the management of the enterprise. In valuing the stock of this type of business, therefore, the effect of the loss of the manager on the future expectancy of the business, and the absence of management-succession potentialities are pertinent factors to be taken into consideration. On the other hand, there may be factors which offset, in whole or in part, the loss of the manager’s services. For instance, the nature of the business and of its assets may be such that they will not be impaired by the loss of the manager. Furthermore, the loss may be adequately covered by life insurance, or competent management might be employed on the basis of the consideration paid for the former manager’s services. These, or other offsetting factors, if found to exist, should be carefully weighed against the loss of the manager’s services in valuing the stock of the enterprise.

(c) Balance sheets should be obtained, preferably in the form of comparative annual statements for two or more years immediately preceding the date of appraisal, together with a balance sheet at the end of the month preceding that date, if corporate accounting will permit. Any balance
sheet descriptions that are not self-explanatory, and balance sheet items comprehending diverse
assets or liabilities, should be clarified in essential detail by supporting supplemental schedules.
These statements usually will disclose to the appraiser (1) liquid position (ratio of current assets
to current liabilities); (2) gross and net book value of principal classes of fixed assets; (3)
working capital; (4) long-term indebtedness; (5) capital structure; and (6) net worth.
Consideration also should be given to any assets not essential to the operation of the business,
such as investments in securities, real estate, etc. In general, such nonoperating assets will
command a lower rate of return than do the operating assets, although in exceptional cases the
reverse may be true. In computing the book value per share of stock, assets of the investment
type should be revalued on the basis of their market price and the book value adjusted
accordingly. Comparison of the company’s balance sheets over several years may reveal, among
other facts, such developments as the acquisition of additional production facilities or subsidiary
companies, improvement in financial position, and details as to recapitalizations and other
changes in the capital structure of the corporation. If the corporation has more than one class of
stock outstanding, the charter or certificate of incorporation should be examined to ascertain the
explicit rights and privileges of the various stock issues including: (1) voting powers, (2)
preference as to dividends, and (3) preference as to assets in the event of liquidation.

(d) Detailed profit-and-loss statements should be obtained and considered for a representative
period immediately prior to the required date of appraisal, preferably five or more years. Such
statements should show (1) gross income by principal items; (2) principal deductions from gross
income including major prior items of operating expenses, interest and other expense on each
item of long-term debt, depreciation and depletion if such deductions are made, officers’ salaries,
in total if they appear to be reasonable or in detail if they seem to be excessive, contributions
(whether or not deductible for tax purposes) that the nature of its business and its community
position require the corporation to make, and taxes by principal items, including income and
excess profits taxes; (3) net income available for dividends; (4) rates and amounts of dividends
paid on each class of stock; (5) remaining amount carried to surplus; and (6) adjustments to, and
reconciliation with, surplus as stated on the balance sheet. With profit and loss statements of this
character available, the appraiser should be able to separate recurrent from nonrecurrent items of
income and expense, to distinguish between operating income and investment income, and to
ascertain whether or not any line of business in which the company is engaged is operated
consistently at a loss and might be abandoned with benefit to the company. The percentage of
earnings retained for business expansion should be noted when dividend-paying capacity is
considered. Potential future income is a major factor in many valuations of closely-held stocks,
and all information concerning past income which will be helpful in predicting the future should
be secured. Prior earnings records usually are the most reliable guide as to the future expectancy,
but resort to arbitrary five-or-ten-year averages without regard to current trends or future
prospects will not produce a realistic valuation. If, for instance, a record of progressively
increasing or decreasing net income is found, then greater weight may be accorded the most
recent years’ profits in estimating earning power. It will be helpful, in judging risk and the extent
to which a business is a marginal operator, to consider deductions from income and net income
in terms of percentage of sales. Major categories of cost and expense to be so analyzed include
the consumption of raw materials and supplies in the case of manufacturers, processors and
fabricators; the cost of purchased merchandise in the case of merchants; utility services;
insurance; taxes; depletion or depreciation; and interest.
(e) Primary consideration should be given to the dividend-paying capacity of the company rather than to dividends actually paid in the past. Recognition must be given to the necessity of retaining a reasonable portion of profits in a company to meet competition. Dividend-paying capacity is a factor that must be considered in an appraisal, but dividends actually paid in the past may not have any relation to dividend-paying capacity. Specifically, the dividends paid by a closely held family company may be measured by the income needs of the stockholders or by their desire to avoid taxes on dividend receipts, instead of by the ability of the company to pay dividends. Where an actual or effective controlling interest in a corporation is to be valued, the dividend factor is not a material element, since the payment of such dividends is discretionary with the controlling stockholders. The individual or group in control can substitute salaries and bonuses for dividends, thus reducing net income and understating the dividend-paying capacity of the company. It follows, therefore, that dividends are less reliable criteria of fair market value than other applicable factors.

(f) In the final analysis, goodwill is based upon earning capacity. The presence of goodwill and its value, therefore, rests upon the excess of net earnings over and above a fair return on the net tangible assets. While the element of goodwill may be based primarily on earnings, such factors as the prestige and renown of the business, the ownership of a trade or brand name, and a record of successful operation over a prolonged period in a particular locality, also may furnish support for the inclusion of intangible value. In some instances it may not be possible to make a separate appraisal of the tangible and intangible assets of the business. The enterprise has a value as an entity. Whatever intangible value there is, which is supportable by the facts, may be measured by the amount by which the appraised value of the tangible assets exceeds the net book value of such assets.

(g) Sales of stock of a closely held corporation should be carefully investigated to determine whether they represent transactions at arm's length. Forced or distress sales do not ordinarily reflect fair market value nor do isolated sales in small amounts necessarily control as the measure of value. This is especially true in the valuation of a controlling interest in a corporation. Since, in the case of closely held stocks, no prevailing market prices are available, there is no basis for making an adjustment for blockage. It follows, therefore, that such stocks should be valued upon a consideration of all the evidence affecting the fair market value. The size of the block of stock itself is a relevant factor to be considered. Although it is true that a minority interest in an unlisted corporation's stock is more difficult to sell than a similar block of listed stock, it is equally true that control of a corporation, either actual or in effect, representing as it does an added element of value, may justify a higher value for a specific block of stock.

(h) Section 2031(b) of the Code states, in effect, that in valuing unlisted securities the value of stock or securities of corporations engaged in the same or a similar line of business which are listed on an exchange should be taken into consideration along with all other factors. An important consideration is that the corporations to be used for comparisons have capital stocks which are actively traded by the public. In accordance with section 2031(b) of the Code, stocks listed on an exchange are to be considered first. However, if sufficient comparable companies whose stocks are listed on an exchange cannot be found, other comparable companies which have stocks actively traded in on the over-the-counter market also may be used. The essential factor is that whether the stocks are sold on an exchange or over-the-counter there is evidence of an active, free public market for the stock as of the valuation date. In selecting corporations for comparative purposes, care should be taken to use only comparable companies. Although the
only restrictive requirement as to comparable corporations specified in the statute is that their lines of business be the same or similar, yet it is obvious that consideration must be given to other relevant factors in order that the most valid comparison possible will be obtained. For illustration, a corporation having one or more issues of preferred stock, bonds or debentures in addition to its common stock should not be considered to be directly comparable to one having only common stock outstanding. In like manner, a company with a declining business and decreasing markets is not comparable to one with a record of current progress and market expansion.

Sec. 5. Weight to Be Accorded Various Factors.

The valuation of closely held corporate stock entails the consideration of all relevant factors as stated in section 4. Depending upon the circumstances in each case, certain factors may carry more weight than others because of the nature of the company’s business. To illustrate:

(a) Earnings may be the most important criterion of value in some cases whereas asset value will receive primary consideration in others. In general, the appraiser will accord primary consideration to earnings when valuing stocks of companies which sell products or services to the public; conversely, in the investment or holding type of company, the appraiser may accord the greatest weight to the assets underlying the security to be valued.

(b) The value of the stock of a closely held investment or real estate holding company, whether or not family owned, is closely related to the value of the assets underlying the stock. For companies of this type the appraiser should determine the fair market values of the assets of the company. Operating expenses of such a company and the cost of liquidating it, if any, merit consideration when appraising the relative values of the stock and the underlying assets. The market values of the underlying assets give due weight to potential earnings and dividends of the particular items of property underlying the stock, capitalized at rates deemed proper by the investing public at the date of appraisal. A current appraisal by the investing public should be superior to the retrospective opinion of an individual. For these reasons, adjusted net worth should be accorded greater weight in valuing the stock of a closely held investment or real estate holding company, whether or not family owned, than any of the other customary yardsticks of appraisal, such as earnings and dividend paying capacity.

Sec. 6. Capitalization Rates.

In the application of certain fundamental valuation factors, such as earnings and dividends, it is necessary to capitalize the average or current results at some appropriate rate. A determination of the proper capitalization rate presents one of the most difficult problems in valuation. That there is no ready or simple solution will become apparent by a cursory check of the rates of return and dividend yields in terms of the selling prices of corporate shares listed on the major exchanges of the country. Wide variations will be found even for companies in the same industry. Moreover, the ratio will fluctuate from year to year depending upon economic conditions. Thus, no standard tables of capitalization rates applicable to closely held corporations can be formulated. Among the more important factors to be taken into consideration in deciding upon a capitalization rate in a particular case are: (1) the nature of the business; (2) the risk involved; and (3) the stability or irregularity of earnings.
Sec. 7. Average of Factors.

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

Sec. 8. Restrictive Agreements.

Frequently, in the valuation of closely held stock for estate and gift tax purposes, it will be found that the stock is subject to an agreement restricting its sale or transfer. Where shares of stock were acquired by a decedent subject to an option reserved by the issuing corporation to repurchase at a certain price, the option price is usually accepted as the fair market value for estate tax purposes. See Rev. Rul. 54-76, C.B. 1954-1, 194. However, in such case the option price is not determinative of fair market value for gift tax purposes. Where the option, or buy and sell agreement, is the result of voluntary action by the stockholders and is binding during the life as well as at the death of the stockholders, such agreement may or may not, depending upon the circumstances of each case, fix the value for estate tax purposes. However, such agreement is a factor to be considered, with other relevant factors, in determining fair market value. Where the stockholder is free to dispose of his shares during life and the option is to become effective only upon his death, the fair market value is not limited to the option price. It is always necessary to consider the relationship of the parties, the relative number of shares held by the decedent, and other material facts, to determine whether the agreement represents a bonafide business arrangement or is a device to pass the decedent’s shares to the natural objects of his bounty for less than an adequate and full consideration in money or money’s worth. In this connection see Rev. Rul. 157 C.B. 1953-2, 255, and Rev. Rul. 189, C.B. 1953-2, 294.

Sec. 9. Effect on Other Documents.

Revenue Ruling 54-77, C.B. 1954-1, 187, is hereby superseded.
Chapter 3. Defining the Appraisal Assignment

I. BVS-I States the Following:

In developing a business valuation, an appraiser must identify and define:

1. The business, business ownership interest or security to be valued
2. The effective date of the appraisal
3. The standard of value
4. The purpose and the intended use of the valuation
5. The nature and scope of the assignment must be defined. Acceptable scopes of work will generally be one of three types. Other scopes of work should be explained and described.

II. Pre-Engagement Assessment

A. The appraiser must specifically define the assignment in order to determine whether or not to accept the project and to quote a fee.

1. Assess the complexity of the project.
   a. Size of the business, more than one line of business, interrelated entities
   b. Type and availability of financial information
   c. Capital structure—degree of leverage, financially distressed, etc.
   d. Non-operating assets and liabilities
   e. Minority versus control interest
   f. Start-up company
   g. Preliminary assessment of possible appropriate valuation methodologies and obvious difficulties in applying those methods

2. Assess the appraiser’s ability to perform the assignment.
   a. Does the appraiser meet the necessary competency requirements?

B. The appraiser must identify issues related to independence and conflict of interest that could reflect on his/her objectivity and credibility.

1. All appraisers should be viewed as independent of their clients.
2. Independence is not the same as a conflict of interest.
a. Independence—freedom from control or influence of another or others

b. Conflict of interest—any interest, financial or otherwise, any business or professional activity, or any obligation that is incompatible with the proper discharge of an appraiser’s duties in the public interest

3. Before accepting the assignment, you must determine if you have a potential conflict and disclose such to the client.

a. BVS VIII; Paragraph IIIA

b. USPAP Ethics Rule: Conduct

c. USPAP Standard 10-3

4. Appraisers working for accounting firms are subject to specific independence rules.

a. SEC registrant—Sarbanes-Oxley Act of 2002 describes services that an audit firm may provide to an audit client.

   (i) Sarbanes-Oxley generally prohibits the performance of appraisal and valuation services related to the audit client’s financial reports.

   (ii) However, the regulations expressly state that accounting firms are not prohibited from performing non-financial statement valuation work, specifically including tax-only valuations.

b. Non-SEC Registrant

   (AICPA Code of Conduct, Interpretation 101-3, performance of other services) The general requirements are:

   (i) All significant matters of judgment are determined or approved by the client.

   (ii) The client is in a position to have an informed judgment on the results of the valuation.

   (iii) The client accepts responsibility for the valuation.

III. What is Being Appraised

A. The type of business

1. Corporation

   a. C-Corp or S-Corp

   b. State of incorporation

2. Limited Liability Company

   a. State of formation

3. Partnership—general partnership or limited partnership
a. State of formation
4. Sole proprietorship

B. The nature of the business interest
1. Stock—common or preferred
2. Assets that make up the business
3. Invested capital
4. Specific intangible assets
5. Options or warrants

C. The level of the ownership interest
1. Controlling interest—there can be various levels of control
2. Minority interest—generally cannot influence operations

IV. The Effective Date of the Appraisal

A. Every valuation is as of a specific point in time. The value at an earlier or later date may be different.

B. Only information that is known or knowable as of the specific valuation date should be incorporated into a business valuation.

C. The valuation date should be specifically defined at the time of engagement. The valuation date is different from:
   1. The date of engagement
   2. The date of field work
   3. The date the report is produced

D. It is generally easiest if the valuation date coincides with the date of the company’s reported financial statements.
   1. Interim valuation dates may require the use of internal financials, which may not be in the same format as reported financials.
   2. Interim financial statements may reflect very different financial conditions for a seasonal company than end-of-year financial statements.

V. The Scope of the Appraisal

A. In BVS-1, the ASA Business Valuation Standards identify three possible scopes for appraisal work.
   1. Appraisal
a. The objective of an appraisal is to express an **unambiguous opinion** as to the value of the business, business ownership interest, or security, which opinion is supported by all procedures that the appraiser deems to be relevant to the valuation.

b. An appraisal has the following qualities:

   (i) Its conclusion of value is expressed as either a single dollar amount or a range.

   (ii) It considers all relevant information as of the appraisal date available to the appraiser at the time of performance of the valuation.

   (iii) The appraiser conducts appropriate procedures to collect and analyze all information expected to be relevant to the valuation.

   (iv) The valuation considers all conceptual approaches deemed to be relevant by the appraiser.

2. **Limited appraisal**

   a. The objective of a limited appraisal is to express an **estimate** as to the value of a business, business ownership interest, or security. The development of this estimate excludes some additional procedures that are required in an appraisal.

   b. A limited appraisal has the following qualities:

      (i) Its conclusion of value is expressed as either a single dollar amount or a range.

      (ii) It is based upon consideration of limited relevant information.

      (iii) The appraiser conducts only limited procedures to collect and analyze the information that such appraiser considers necessary to support the conclusion presented.

      (iv) The valuation is based upon the conceptual approach or approaches deemed by the appraiser to be most appropriate.

3. **Calculation**

   a. The objective of a calculation is to provide an **approximate indication** of value based upon the performance of limited procedures agreed upon by the appraiser and the client.

   b. A calculation has the following qualities:

      (i) Results may be expressed either as a single dollar amount or a range.

      (ii) May be based upon consideration of only limited relevant information.

      (iii) The appraiser performs limited information and analysis procedures.
(iv) The calculation may be based upon conceptual approaches agreed upon with the client.

B. USPAP and the scope of appraisal work

1. USPAP also has certain minimum requirements to determine if what you are doing is an appraisal as opposed to a calculation or consulting. (AO-21)

2. Hypothetical appraisals are permissible and must state that they are hypothetical and what the hypothetical assumptions are. The important point is not to mislead the client about what you are doing. They cannot be so outside of reality that the condition(s) really could not exist.

C. The scope of the valuation report

1. Distinguish between the scope of the appraisal work and the scope of the appraisal report.

2. In certain circumstances, it may be acceptable to perform a full appraisal, but issue some form of limited report.

VI. Engagement Letters

A. The engagement letter should contain an explanation of the assignment in sufficient detail to ensure that there can be no misunderstanding between the appraiser and the client.

1. The obligations of each party should be spelled out.

   a. The client must provide financial and operating information as well as access to facilities and people.

   b. The analyst must perform certain predetermined functions.

2. The procedures to be followed if there is a breakdown on either side of the project should be indicated.

3. An important reason for documenting the initial assignment is because the assignment may change at a later date.

   a. Many valuation assignments are subject to change, sometimes several times, particularly in the context of litigation.

   b. A follow-up letter to the client should document any subsequent changes made to the engagement, including additional requirements and limiting conditions not contemplated in the original arrangement.

B. Suggested content

1. Name of client retaining the appraiser

2. Identification of the company and ownership interest to be valued

3. Appraisal date
4. Standard of value and definition of the standard of value
5. Purpose and intended use of the appraisal
6. Scope of the appraisal work
7. Scope of the appraisal report and documentation
   a. Many situations can be satisfied with relatively simple reports and little or no supportive, documentary evidence.
   b. However, the end result must effectively meet the client’s requirements.
   c. The end result must also meet the standards established for reports developed by ASA and in USPAP.
   d. In any case, there should be a clear understanding at the outset of what will be provided at the conclusion of the project.
8. Which professional standards are to be followed (USPAP, BVS)
9. If applicable, due date
   a. Including oral conclusions provided in advance of the written report
   b. It is wise to tie due dates to timely delivery of required information by the client.
   c. In the minds of most clients, a late report is a poor quality report.
10. Fee arrangements
    a. Not all engagements call for a set fee.
    b. However, it should be made absolutely clear:
       (i) Who will be responsible for payment of the fee?
       (ii) Under what terms the fee will be paid?
    c. Retainer requirements
    d. Appraiser’s right to disengage if not paid or for other reasons
11. Countersignature—It is a good idea to ask the client to initial or sign a copy of the letter and return it for incorporation in the appraiser’s files.
12. For potential litigation support engagements:
    a. Often, valuation assignments are tied to litigation support or may later be subject to dispute.
    b. It is advisable to address issues such as required notifications, appraiser availability for court appearances and the fact that additional fees will apply.
13. Liability—the extent to which it is accepted should be defined in the engagement letter or in attached materials.
   a. In an increasingly litigious world, appraisers should take steps to protect themselves against legal actions flowing from valuation opinions.

14. It is probably best to attach to the engagement letter:
   a. A statement of anticipated general assumptions and limiting conditions (USPAP says that specific limiting conditions should be attached to the engagement letter. Things such as limited scope, research and data.)
   b. Language dealing with indemnification and the requirement to hold harmless
   c. Any unique terms and conditions governing the assignment

15. Business appraisers who are also CPAs should additionally disclose that they are not auditing, reviewing or compiling financial data, or expressing an opinion on such.

16. Consider additional language relating to assumptions regarding the reliability of company and third-party data.

17. Have your engagement letter reviewed by an attorney since it is a binding contract.

Classroom Assignment 4 —Defining the Appraisal Assignment (10 minutes)

An attorney, Mr. Smith, calls you and says one of the shareholders of Food Wholesale Company Inc. died on September 30 of this year and an appraisal of the 250,000 shares of Food Wholesale Company Inc. owned by the shareholder is required for determination of the applicable federal estate taxes to be paid.

What other information do you need to properly define the assignment, including the fee?
Chapter 4. Data Gathering

I. Data Gathering via the Internet

A. The Internet is a specialized type of vendor because it places no limitations on who can contribute to it or on the content of the offerings.

1. Consequently, there is an erroneous tendency for users to consider all sources of data from the Internet equivalent in quality, which is not the case.

2. Internet-based data are also very dynamic. Information available today may not be available next week and may not have been available last month. Therefore, one should use a significant amount of discretion in accepting, using and documenting Internet-based data in the data-gathering process.

B. Tips specific to business appraisers

1. Remember that the Internet is very fluid. Information found and used today may not be available, or may have changed, when needed in the future (in defending a valuation in court or before the IRS, for example). Preserve your Internet-based research electronically or in hard copy format.

2. As in any source of information, be sure to give credit where credit is due.

3. Consider bookmarking or otherwise documenting Internet sources for future reference and use in subsequent research projects.

II. General Information

A. Basic Bibliography – See Exhibit 4-1.

III. Economic and Industry Data

A. Economic data

1. All information gathered should be “known or knowable” as of the valuation date.

2. Focus should be on current and expected conditions relevant to the industry and subject company.

3. Type of business dictates the type of economic research

   a. Example: Retail—personal income

   b. Example: Animal feed manufacturers—commodity prices, government programs

4. National economy

5. Regional or local economy

6. International markets
B. Industry Data
   1. All information gathered should be “known or knowable” as of the valuation date.
   2. Industry trends in growth, structure, technology, regulation, etc.
   3. Industry financial performance
   4. Competition
   5. Public companies

C. Subject Company Data
   1. All information gathered should be “known or knowable” as of the valuation date.
   2. Financial data
      a. Financials for five fiscal years, or relevant period
      b. Income tax returns—same five fiscal years, or relevant period. Is there something “magical” about five years? NO! The key is to capture the business cycle so as to not slant the historical analysis or warp the view of the future.
      c. Interim financials
      d. Detailed depreciation schedule
      e. Budgets or forecasts—may want historical budgets to see how company’s actual performance compared with budget (measure quality of management)
      f. Other financial data
   3. Product and market data
      a. Marketing literature—Web site, brochures, price lists, etc.
      b. Location(s) of company operations
   4. Customer list and supplier list
   5. List of patents, copyrights, trademarks and expiration dates
   6. Sales forecasts by product line and sales division
   7. List of major competitors, their locations, and their relative strengths and weaknesses
   8. List of trade associations
   9. Survey of geographic market
  10. Personnel
      a. Organization chart
      b. Brief résumé on key personnel
c. Employment agreements

d. Covenants not to compete

e. Union contracts

f. Compensation schedule for owners, officers and directors—include all perks in the schedule.

g. Schedule of life insurance policies on key personnel

h. Pension and profit-sharing plans and employee handbook

B. Other business records

1. Organizational documents
   a. If corporation—articles of incorporation, bylaws, amendments and minutes
   b. If partnership—partnership agreement and amendments
   c. If LLC—articles of organization and LLC member’s agreement

2. List of stockholders, members or partners and what each owns

3. Any details on prior stock sales

4. Buy/sell agreements, options, etc.

5. Loan documents

6. Shareholder and board minutes

7. Major contracts
   a. Supply contracts
   b. Distributor agreements
   c. Lease agreements
   d. Guaranteed sales contracts

8. Copies of previous appraisals and/or appraisals of specific assets

9. Information on contingent liabilities

C. The management interview

1. The main purpose is to assess risk and qualitative factors.

2. Prepare a list of questions in advance.

3. Persons to interview might include:
   a. Client and client’s attorney
b. Company managers; president; chief financial officer; managers of sales, production and personnel
c. Company advisers: accountant, attorney, banker
d. Members of company board of directors
e. Customers or suppliers with management permission

4. Topics to discuss with management
   a. History of the company
   b. Operations
      (i) Products and services
      (ii) Seasonal or cyclical sales patterns
      (iii) Supplier base
      (iv) Customer base
      (v) Facilities
      (vi) Marketing and distribution strategies
      (vii) Manufacturing or distribution capacity
      (viii) Management, employees, key personnel, succession plans
      (ix) Plans for the future, new product development
   c. Environment
      (i) Economic and industry factors affecting company
      (ii) Competition
      (iii) Regulatory issues
      (iv) Legal proceedings
   d. Financial condition and performance
      (i) Reasons for identified trends
      (ii) Capital expenditures
      (iii) Company’s present and future use of debt
(iv) Details of past transactions in company stock

(v) Contingent liabilities

e. Other information of which the appraiser may not be aware

5. Sample management questionnaires can be found in various valuation books

6. Information gathered during the management interview is frequently a major portion of the description or history of the company section of a report.

IV. Specific Data Sources

A. Specific economic, industry, and guideline company information sources, both print and electronic.

B. Economic data

1. General economy


2. Sources for regional economic data


   b. Bureau of Labor Statistics has historical economic and demographic data by region, state, and MSAs (or “Metropolitan Statistical Area”); http://www.bls.gov/home.htm

   c. State, county, or local government economic development departments. For example, New York State’s development agency, Empire State Development provides statewide and localized economic and demographic data on their Web site, http://www.nylovesbiz.com/nysdc/default.asp

   d. Local or regional chambers of commerce

C. Industry data

1. General business periodicals/publications

   a. Available in both electronic and print formats. Check the Guide to Business Periodicals (for print sources), which is available at most libraries.
b. *Business Week* and *Forbes* produce special issues each January that cover many industries.


3. Government publications—The U.S. Department of Commerce tracks industry statistics and makes most of them available on the Internet and through government depository libraries.

4. Trade associations
   a. Industry data availability varies considerably in both quality and price from trade association to trade association, but can be a very good source. Thomson offers an *Encyclopedia of Associations* [fee based]. Also the American Society of Association Executives’ website provides an industry-based trade association search engine (www.asaenet.org)—[free site].
   
   b. Some trade associations provide data for free, others are fee-based. On occasion, the subject business entity may already have trade association reports, or can obtain them as a member of a trade organization for free or at reduced fee.

5. Trade magazines
   a. Many are available electronically through databases such as the Trade and Industry Index on Dialog, or on electronic versions on the Internet.
   
   b. Management of the subject company may be able to point the appraiser to useful periodicals.

6. SEC Form 10–Ks for publicly traded companies

7. Brokerage reports
   a. These are available from individual brokerage firms, but distribution policies vary.
   
   b. They are also available through Dialog on the Investext database. Some business-oriented libraries also offer access to Investext.

8. Industry financial ratios
   a. Risk Management Associates’ (RMA) *Annual Statement Studies*, Troy’s *Almanac of Business and Industrial Financial Ratios*, and *Financial Statement Studies of the Small Business* are available in print form, as are most industry ratios produced by trade associations.
   
   b. Internet-based sources include
      
      (i) Risk Management Associates’ (RMA) *Annual Statement Studies*  
      (http://www.rma.com)
(ii) Integra Information (http://www.integrainfo.com)

(iii) BizMiner (http://www.bizminer.com)

c. The use of some third party statistics in valuation analysis requires the permission of the information provider, as is the case with RMA.

d. Care should be taken when using third party anonymous industry data. Without access to source documents, the reliability and relevance of peer group data can be suspect. Be sure to understand the basis of reporting, source of information, and definitions used in the analysis and reporting of information.

9. Third party providers of industry research

a. Valuation Resources (http://www.valuationresources.com) — The Web site lists online resources on more than 70 specific industries. The site is free—some links are not.

b. Industry Research (http://www.industryresearch.com) — The Web site provides industry summary reports and offers custom research and report writing. [Fee based]

c. First Research (http://wwwfirstresearch.com) — The Web site offers summary information on various industries, as well as industry-specific bibliographies for further research. [Fee based]

D. Data on publicly traded guideline companies

1. To identify standard industrial classification (SIC) code or North American Industry Classification System (NAICS) code


b. NAICS Manual (also available on the Internet at http://www.census.gov/epcd/www/naics.html) Free. Site also includes SIC to NAICS conversion table.


2. Places to find lists of potential guideline companies

a. Electronic sources

(1) Disclosure—CD-ROM or online through Dialog (http://library.dialog.com/). [Fee based]


(3) S&P’s Corporate Descriptions online through Dialog, S&P’s Corporations or Corporate Records on CD-ROM, or S&P’s online. [Fee based]
(iv) Mergent’s—CD-ROM or online through Dialog. [Fee based]

(v) Hoovers—(http://www.hoovers.com). Basic information and search capabilities are free; detailed data available by subscription.

(vi) Edgar—(http://www.sec.gov/edgar) now offers the ability to search by SIC Code. [Free]

b. Print sources

(i) Standard & Poor’s Corporation Records: Index of Companies by SIC code—lists public companies by SIC code

(ii) Directory of Companies Required to File Annual Reports with the SEC

(iii) Mergent’s manuals

(iv) Value Line Investment Survey (http://www.valueline.com)

(v) Standard & Poor’s Register Indexes—list public and private companies by SIC code

3. Where to get financial information and further description

a. Primary data—Form 10K and annual reports—these original source documents provide the best descriptions and most reliable financial data.

(i) Directly from the company—often available at the company’s Web site.

(ii) Security and Exchange Commission—EDGAR (Electronic Data Gathering Analysis and Retrieval). An online searchable database of public filings searchable by company, industry or key word (http://www.sec.gov/edgar.shtml)

(a) SEC filings are available at several Internet sites, some at no charge and some for a fee.

(b) While data are generally reliable, realize that non-SEC sites used to access SEC data should be considered secondary data.

(c) One such site, http://www.pwcglobal.com/edgarscan, is free and offers SEC filings on public companies. It will also list the companies by SIC code, through which you can access other potential guideline entities.

(iii) Document retrieval companies such as Disclosure Info Center or Mergent’s Docutronics
b. Secondary data

(i) Disclosure—online through Dialog or CompuServe

(ii) S&P’s CompuStat—CD-ROM

(iii) Standard & Poor’s Corporation Records—print or CD-ROM—selected data are available online through S&P’s Corporate Descriptions through Dialog or S&P Online through CompuServe

(iv) Mergent’s manuals—print only—selected data are available on CD-ROM or online through Dialog

(v) Media General Financial Services (http://www.mgfs.com). [Fee based]

(vi) Value Line Investment Survey—print—selected data are available on diskette and online through CompuServe

(vii) Other online public company data providers, such as Hoovers (http://www.hoovers.com). [Fee based]

c. Forecasted data

d. Institutional Brokers Estimate System (I/B/E/S)—earnings estimates; now owned by Thomson and found online at www.firstcall.com.

e. Zacks Investment Research—earnings estimates (http://www.zacks.com)

f. Value Line—some financial statement projections

g. Analyst’s research reports—earnings estimates. Some have additional financial projections.

h. Standard & Poor’s Earnings Guide—earnings estimates

E. Data on acquired companies

1. Places to find lists of suspect companies (also contains some secondary financial data)

a. Electronic sources

(i) Thomson Securities Data Corporation (SDC) Merger and Acquisition Corporate Transactions database is available via direct dial-up to SDC or through Dialog. SDC will run the search for you at your request. [Fee based].

(ii) DoneDeals database—available online at http://donedeals.nvst.com. [Fee based]
(iii) Mergerstat database (www.mergerstat.com) [Fee based]

b. Print sources

(i) Merger & Acquisition Sourcebook (at http://www.nvst.com)

(ii) Mergerstat Review (http://www.mergerstat.com)

(iii) Mergers & Acquisitions magazine

(iv) The Merger Yearbook

c. Small companies

(i) BIZCOMPS; available through BV Resources (http://www.bvresources.com). [Fee based]

(ii) Institute of Business Appraisers; (http://www.go-iba.org). Free to members with certain limitations.

(iii) Pratt’s Stats; available through BV Resources (http://www.BVResources.com). [Fee based]

2. Where to get original source financial data

a. Publicly traded companies

(i) SEC Forms

(a) 10-K: Annual Statement

(b) 10-Q: Quarterly Statement

(c) 8-K: Material Occurrence Statement—Once you know of a transaction, the 8-K will contain the specific terms of the deal, assuming the transaction was large enough to warrant filing an 8-K.

b. Private companies

(i) Call acquired or acquiring company directly

(ii) Form 8-K, 10-K, or 10-Q of acquirer, if public or if the company has publicly traded debt.

(iii) Business brokers

F. Lack of marketability discounts (covered in BV 204)

1. Restricted or letter stock evidence

2. Studies of private transactions prior to public offerings (IPO Studies)
G. Lack of control discounts (covered in BV 204)
   1. Look at premiums paid in acquisitions and convert to a lack of control discount
      a. Control Premium Studies

H. Executive compensation data
   1. Industry financial ratios
      b. Risk Management Associates, *Annual Statement Studies*
      c. Leo Troy, Troy’s *Almanac of Business and Industrial Ratios*
   2. Trade associations
   3. Employment agencies
   4. Economic Research Institute, *Salary Assessor*
   5. Public company proxy statements

I. Tax court cases
   1. Research Institute of America
   2. Commerce Clearing House
   3. West Law (West Publishing)
   4. Lexis
   5. Klienrock’s Tax Library
   6. Business Valuation Update and Web site: http://www.bvlibrary.com. This Web site also provides a searchable database of relevant state court cases. [Fee based]
   7. Financial Valuation Group: http://www.fvginternational.com. This Web site has many of the recent significant tax court cases online in a searchable format. Newsletter available by e-mail.

**Homework: Review Exhibit 4-2 for a sample history section for the GDT, Inc. Case Study.**
Exhibit 4-1

Basic Bibliography
Business Valuation Resources

BOOKS, PERIODICALS, AND MORE


*Business Appraisal Practice*, The Institute of Business Appraisers, several times a year.


*Encyclopedia of Associations.* Detroit: Gale Research, annual.


Exhibit 4-2

GDT, Inc.
History of the Company
HISTORY OF THE COMPANY

General Deliveries Trucking, Inc. was founded by John Smith, Sr. in 1952. It was this company that eventually grew to be National Truckers, Inc. and all of the General Deliveries Trucking, Inc. companies. The Company was started and continued for several years with only one truck. John Smith, Jr., Mr. Smith’s oldest son, joined The Company in 1966\(^1\), at which time The Company still had only one truck. The Company expanded to a total of 20 trucks over the next eight years. John Smith, Jr. served as Chief Operating Officer of The Company from 1970 until 1978, when he became Chief Executive Officer and Chairman of the Board.\(^2\)

George Smith, Mr. Smith Sr.’s younger son, began working for The Company in 1971.\(^3\) In 1978, he was elected C.O.O. and became President of The Company in 1983.\(^4\) General Deliveries Trucking, Inc. was a small local trucking operation specializing in servicing the New York City garment district. General Deliveries Trucking, Inc. entered the field of garment-on-the-hanger consolidation and ticketing in the New York City metro area in 1974. In about 1977 to 1978, General Deliveries Trucking, Inc. purchased City Delivery Co., Inc., primarily purchasing City Delivery Co. for the ICC rights that would allow General Deliveries Trucking, Inc. to expand outside the New York City area.

Mr. Smith, Sr. died in 1978. James Brown, his son-in-law, joined The Company in that same year. By that time, The Company had become involved in long and short hauling of general commodities, mostly garments, as well as in warehousing and consolidating. In about 1977, the Smith group of companies signed its first fleet management contract. The group formed General Deliveries Systems, Inc. in 1984 as a management company for General Deliveries Transportation and General Deliveries Trucking, Inc., operating entities that were “C” Corporations, in contemplation of a public offering. Because of a crash in the initial public offering market, and a change in management philosophy, The Company decided to suspend its plans for the public offering, and has remained a closely held company.

The trucking industry was deregulated in the early 1980s. General Deliveries Transportation expanded its business operations into new areas including the “Pennsylvania Corridor.” At this time, The Company covered the entire Northeast and Mid-Atlantic corridor from Baltimore north. A competitor of GDT in this market, A.P.T., Inc., had a large share of the less-than-truckload (LTL) market in this corridor. In order to slow down The GDT Entities’ growth in this market, A.P.T. claimed that several GDT companies (General Deliveries Trucking, Inc. Co., Inc., General Deliveries Transportation, Inc., City Delivery Co., Inc. and Interior Freight Lines, Inc.) and John Smith, Jr. had violated Federal antitrust regulations by attempting to monopolize the

\(^{1}\)Securities and Exchange Commission, General Deliveries Systems, Inc. Form S-1, p. 20.
\(^{2}\)Ibid.
\(^{3}\)Ibid.
\(^{4}\)Ibid.
industry in the Pennsylvania corridor. They brought action against John Smith, Jr. and The GDT Entities.

In 1986, The U.S. District Court, Southern District of New Jersey awarded a judgment to A.P.T. against all of the GDT defendants in the amount of $39 million, a treble damage award. However, in 1987, the Second Circuit U.S. Court of Appeals reversed the judgment and dismissed A.P.T.’s complaint. During this time frame, certain of The GDT Entities were sustaining substantial losses. Between the time of the trial court judgment and the Second Circuit Court’s reversal, the defendants each filed a Chapter XI petition in the Bankruptcy Court for the District of New Jersey. As a result of this filing, some of the major customers became concerned that problems might arise out of their dealings with the bankrupt GDT companies. It was decided to transfer all of the intangibles of the GDT debtor companies to other GDT Entities outside of the bankruptcy.

On November 19, 1985, in order to give The Company the opportunity to continue operations, Always Freight Corp. was purchased as a shell corporation that had ICC rights. Always obtained the necessary financing to effectively restructure The GDT Entities outside of the Chapter XI. The intangibles included the accounts receivables, customer lists, and every contract with The GDT Entities’ customers. During the late 1980s and early 1990s, personal legal issues kept John Smith, Jr. distracted from his duties and subsequently absent from The Company. He returned to The Company in 1994.

Today, The GDT Entities, known collectively as General Deliveries Systems, Inc., transport, consolidate, provide support services, and mark and ticket merchandise. The group’s primary customers are multi-unit retail stores. The services of The GDT Entities are designed to improve productivity of customer distribution systems by expediting the flow of merchandise from local vendor pick-ups to the final point-of-sale, thereby increasing inventory turnover.

The principal active companies of The GDT Entities as of December 31, 2008 include the following:

- General Deliveries Systems, Inc.
- Always Freight Corp.
- Caribbean Island Transport, Inc.
- Logistics, Inc.

The inactive companies include:

- General Deliveries Trucking, Inc.
- Equity Transport, Inc.
- General Deliveries Resources, Inc.
- Dale Transport, Inc.
- SPD, Inc.
- Eastern Retail Delivery, Inc.
• City Retail Ticketing, Inc.
• Candoor Freightways, Inc.
• General Deliveries Ticketing, Inc.
• Distribution, Inc.
• HHH, Inc.

Other businesses that are part of The GDT’s entities, through common ownership, include:

• Roach Realty Company
• Roach Realty II
• Air Transportation, Inc.
• 1234 15th Street Associates, LLC
• Smithfam Property Associates, LLC
• Smithfam Realty Corporation
• Joined Plan, Inc.
• TXX Leasing Inc.
• Advanced Lease Funding
• Contract Transport, Inc.

General Deliveries Systems, Inc. (“GDT”) was incorporated in Delaware in 1983. The Company operated as a C Corporation until January 1, 1998, at which time its tax status was changed to an S Corporation. It eventually changed back to a C corporation in 2002. GDT owns a wholly owned subsidiary, General Deliveries Transportation, Inc. General Deliveries Transportation is a Pennsylvania corporation, incorporated in 1979, and operates three divisions: the Less-Than-Truckload (LTL) division, the Truck Werks division, and the General Deliveries Consolidation division. General Deliveries Trucking, Inc. Corp., another subsidiary of GDT has been inactive for many years.

Originally, General Deliveries Trucking, Inc.’s business consisted of local trucking pickups and deliveries in the New York Metropolitan Free Zone. After deregulation by the ICC, the LTL business began. The LTL division services markets on both the east and west coasts of the U.S. and handles shipments in several coordinated stages. Shipments are picked up from customers by local drivers operating from The Company’s network of 12 terminals. Each terminal serves a specific territory. The freight is then transported to the terminal, loaded into intercity trailers, hauled by line haul drivers to the terminal servicing the delivery area, transferred to trucks and trailers, and delivered to its final destination by local drivers. Established time schedules are strictly enforced for line haul service between terminals to insure prompt service.

Truck Werks is the in-house maintenance arm of The Company, and is involved in the repair and maintenance of power units (tractors) and trailers.
The processing of inventory received from various locations into a single truckload unit is performed by the General Deliveries Consolidation division. This division serves only to consolidate freight; it is neither a shipper nor a carrier. The efficiency which results from streamlining deliveries, increasing timeliness of delivery, and servicing a customer whose facilities cannot accommodate numerous carriers is the goal of this service.

Always Freight Corporation was incorporated in Pennsylvania in 1982. The Company is a truckload line haul common and contract carrier of general commodities, except liquid bulk. Line haul shipping is offered to customers throughout the continental United States. The line haul trucking can be between two GDT facilities, a GDT facility and a final destination, a point of pick-up and a GDT facility, or a variety of other pick-up and delivery points. Where the line haul delivery is not going to the final destination, another GDT company may provide local delivery. Always and other GDT companies provide line haul and local trucking, and operate intrastate and interstate. Until the total deregulation of the trucking market these companies were regulated by the ICC and state authorities.

Always, in addition to its other operations, provides fleet management to its customers. A fleet management arrangement is a long-term contract between The Company and a customer, allowing Always to operate dedicated equipment for that customer. The Company provides drivers, dispatching, insurance, fueling, oil and tires, maintenance and related administrative and accounting services. The customer can benefit from certain economies of scale, reduced overhead and volume purchases because the customer’s fleet is integrated into Always’s or The GDT Entities’ transportation system. By utilizing the excess capacity (generally through back hauls), revenue is generated by Always or the GDT companies, and the customer’s accounts are credited for use against future charges.

Typical fleet management agreements require Always to provide, operate, maintain, and insure a dedicated fleet of vehicles. The customer sets forth operating guidelines, and defines routes in accordance with its transportation needs, but gives operating control of the fleet to Always or The GDT Entities. Always is considered an independent contractor and is usually compensated on a cost-plus basis. Approximately 50 percent of Always’s carrier business is contract shipping with multi-location retailers. The principal retailer that Always contracts with is Marshall’s Department Stores. Federated’s principal retail stores include Macy’s and Bloomingdales. Always also handles private fleets for K-Mart, Best Buy, and Filene’s Basement.

Caribbean Island Transport, Inc. is a C Corporation which was incorporated in New Jersey in 1985. It is a contract carrier that provides private fleet management for Marshall’s. The GDT Entities began with Marshall’s in 1980 and serviced six to eight stores. Now, Caribbean Island handles up to 1,000 stores for Marshall’s and provides store delivery throughout the country.

Always Freight provides all of The GDT Entities’ truckload revenue, while the other half of Always’s business is fleet management. Fleet management is the sole function of both Caribbean Island Transport and General Deliveries Trucking Corp. (which no longer operates). Fleet management has the potential to substantially grow with its customers. At the valuation date, The Company was optimistic about growing with customers such as K-Mart and Best Buy, as these customers had promising future prospects.

General Deliveries Systems, Inc. serves a variety of multi-unit retail customers. The five largest are listed in Table 1 for selected years:
### TABLE 1
**TOP SALES BY CUSTOMER**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-Mart</td>
<td>$32,743,896</td>
<td>$34,980,705</td>
<td>$29,507,267</td>
<td>$68,437,880</td>
</tr>
<tr>
<td>TJX Group</td>
<td>28,704,342</td>
<td>24,208,100</td>
<td>31,668,160</td>
<td>15.43%</td>
</tr>
<tr>
<td>Dayton Group</td>
<td>14,619,337</td>
<td>18,640,237</td>
<td>22,674,708</td>
<td>5.88%</td>
</tr>
<tr>
<td>Federated</td>
<td>12,567,500</td>
<td>16,364,676</td>
<td>18,343,584</td>
<td>4.99%</td>
</tr>
<tr>
<td>Calvin Klein</td>
<td>7,459,282</td>
<td>7,964,465</td>
<td>9,197,269</td>
<td>2.89%</td>
</tr>
<tr>
<td>Others</td>
<td>117,638,643</td>
<td>139,922,817</td>
<td>143,381,012</td>
<td>53.04%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$213,733,000</td>
<td>$242,081,000</td>
<td>$254,772,000</td>
<td>$265,675,000</td>
</tr>
</tbody>
</table>
Although it would appear that a majority of revenues come from just a few companies, it is important to note that some customers have multiple chains. This fact reduces the risk of customer concentration. It should also be noted that our review of various publicly traded companies’ annual reports reflects that this is not uncommon in this industry. The GDT Entities have enjoyed a long-term relationship with many of its larger accounts.

Various agreements with major customers are in place and continuously are renewed to allow The GDT Entities to provide services to such companies as K-Mart, Federated Stores, Best Buy and others. In fact, when questioned about the importance of a good relationship with clients, John Smith stated, “I believe the average client is with me 40 years.”

Based on the facts that these large companies have been expanding their relationship with General Deliveries Trucking, Inc., and the renewal contracts, over the past several years have been extended for longer periods of time, John Smith appears to be correct. The relationship with these customers is solid and therefore, the future prospects for General Deliveries Trucking, Inc. are excellent.

The GDT Entities employ between 1,000 and 2,000 employees. The vast majority of these employees are covered under collective bargaining agreements of various union locals. The companies also use independent contractors who provide personnel in different areas of the companies’ operations. Each GDT company deals with different bargaining units. General Deliveries Transportation deals with several unions, including I.L.G.W.U. Local 102, Teamster Local 653, ILA-AFL-CIO Local 1964, and UAW Local 509. Always also deals with ILA-AFL-CIO Local 1964. Caribbean deals with Teamster Local 25. The GDT Entities have never had any labor problems.

All of the drivers have commercial licenses. Drivers for The GDT Entities receive uniforms, and new tractors to drive. Most drivers do not have to touch their freight, and are able to be home almost every night. Most of the employees are covered by multi-employer defined benefit pension plans, and post-retirement health and welfare plans. Also, The Company entered into a 401(k) plan in 1995 for salaried employees.

The Company’s solid reputation for on-time deliveries and a history of servicing the retail industry are competitive advantages for The GDT Entities. As The GDT Entities expand its facilities, more and continued good services are expected to be provided for the customers.

The senior management of The Company as of December 31, 2008 appears in Table 2.
TABLE 2  
MANAGEMENT TEAM

<table>
<thead>
<tr>
<th>Officer</th>
<th>Title</th>
<th>Longevity</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Smith Jr.</td>
<td>Chief Executive Officer</td>
<td>All adult life at General Deliveries Trucking, Inc.</td>
</tr>
<tr>
<td>James Brown</td>
<td>President/Chief Operating Officer</td>
<td>At General Deliveries Trucking, Inc. since 1978</td>
</tr>
<tr>
<td>Hal Roberts</td>
<td>Chief Financial Officer</td>
<td>At General Deliveries Trucking, Inc. since 2000</td>
</tr>
</tbody>
</table>

George Smith had been President of The Company until May 16, 2000. On that date, the Board of Directors replaced him with James Brown, the former Vice President of The Company. According to Mr. Brown, he is in control of all of the operations. All operating companies answer to him and he also negotiates rates with customers.5

Historically, The GDT Entities made substantial cash distributions to its owners. In fact, when considering only monies received as owners (and not salaries, commissions or loans), these amounts were as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$9,814,000</td>
</tr>
<tr>
<td>2004</td>
<td>9,177,000</td>
</tr>
<tr>
<td>2005</td>
<td>12,848,000</td>
</tr>
<tr>
<td>2006</td>
<td>16,524,000</td>
</tr>
<tr>
<td>2007</td>
<td>18,148,000</td>
</tr>
<tr>
<td>2008</td>
<td>14,246,000</td>
</tr>
</tbody>
</table>

Distributions in the most recent year (2008 were reduced because of the economy and The Company’s expansion plans. According to Mr. Brown, sometime in 2008, discussions were held regarding the cash needed by The Company to grow. He said:

We were expanding the company. We were talking about buying or going into different terminals, getting new terminals, refurbishing terminals that needed to be refurbished, expanding to Building G.6

Expansion of The Company was a major priority. The GDT Entities had been experiencing rapid growth in revenues as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$193,422,000</td>
</tr>
<tr>
<td>2004</td>
<td>189,704,000</td>
</tr>
<tr>
<td>2005</td>
<td>213,733,000</td>
</tr>
<tr>
<td>2006</td>
<td>242,081,000</td>
</tr>
<tr>
<td>2007</td>
<td>254,772,000</td>
</tr>
<tr>
<td>2008</td>
<td>265,675,000</td>
</tr>
</tbody>
</table>

Looking at customer growth, increased revenues, cash distributions to the owners, and the strong financial position (soon to be discussed) of The GDT Entities, we believe that The GDT Entities are strong and positioned for solid growth.

Ownership of The GDT Entities, for purposes of this appraisal has been assumed to be consistent with the order of The Court. Each owner, John Smith, Jr., George Smith and Patricia Brown, is considered to own one-third of the entire entity.
Chapter 5. General Economic and Political Analysis

I. Introduction

A. Business is an integral part of an economy, particularly a free market economy.

B. On the most conceptual level, businesses purchase resources in the marketplace and generate goods and services, which are sold in the marketplace.

C. Analyzing and understanding the economic environment in which a business operates is fundamental to the appraiser’s ability to assess value, as a business cannot be viewed, for valuation purposes, in isolation.

D. The economic environment is just one of several frameworks of issues that drive value, either by affecting the level of economic benefits to owners or by affecting the risk in those economic benefits occurring.

E. The economic and related political environments in which a business operates can be viewed from three perspectives:

1. The global environment
2. The national environment
3. The regional and local environment
II. The Globalization of Economic Factors

A. Globalization has been defined as the growing interconnectedness of the world through cross-border flows of information, capital and people.¹

B. Economic globalization creates both new opportunities and challenges for firms.

1. The opportunities include:
   a. Access to new markets that were previously closed due to cost, regulation or indirect barriers
   b. The ability to tap resources such as labor, capital and knowledge on a worldwide basis
   c. The opportunity to participate in global production networks that are becoming prevalent in many industries such as automotive, electronics, toys and textiles

2. Challenges come from:
   a. Foreign competitors entering a firm’s domestic markets
   b. Domestic competitors reducing their costs through global sourcing, moving production offshore or gaining economies of scale by expanding into new markets
   c. Forcing firms to become more streamlined and efficient while simultaneously extending the geographic reach of their operations

C. Global-specific risks

1. Country risk, which refers to the risk that a country won’t be able to honor its financial commitments. When a country defaults it can harm the performance of all other financial instruments in that country as well as other countries it has relations with. Country risk applies to stocks, bonds, mutual funds, options and futures that are issued within a particular country. This type of risk is most often seen in emerging markets or countries that have a severe deficit.

2. Exchange rate risk, which refers to relative changes in currency exchange rates between the subject company’s “home” currency and the currency for which the company buys from or sells into

3. Political risk, which represents the financial risk that a country’s government will suddenly change its policies (This is a major reason that second and third world countries lack foreign investment.)

D. Implications of globalization on valuation
   1. Globalization increases the complexity of risk analysis.
   2. Valuation opportunities exist beyond U.S. borders.
   3. Need for appraisers to understand non-U.S. conventions in financial reporting, taxation, regulation and culture on the valuation subject

III. Country-Specific (National) Economic Factors
A. Global effects aside, macroeconomic factors that affect business value are generally driven at the national level. These macroeconomic factors include:
   1. General economic conditions
      a. GDP
      b. Consumer spending
      c. Government spending
      d. Business investments and inventories
      e. Trade deficit
   2. Inflation
   3. Interest rates
   4. Unemployment
   5. Consumer spending and confidence
   6. Equity and debt markets
   7. Construction activity
   8. Manufacturing activity
   9. Economic growth

B. Regulatory environment
   1. Taxation
   2. Industry regulation
   3. Employment laws
   4. Trade barriers/protection
IV. Regional and Local Economic Factors

A. It is difficult to imagine a valuation engagement where the regional and local economy had no impact on the valuation of a business interest. The old saying, “All politics are local” is applicable to economics as well.

B. Typical regional and local economic factors’ impact:
   1. Labor pool or lack thereof
   2. Facility availability and cost
   3. Distribution infrastructure
   4. Local regulatory environment
      a. Land use
      b. Business regulations
      c. Labor laws
      d. Taxes and fees

C. Sample Economic Analysis – see Appendix B.
Chapter 6. Industry Analysis

I. Introduction to Industry Analysis

A. Every company operates within the context of an industry. Some industries are very clearly delineated, as in the case of fast food restaurants, while others are harder to define, such as testing laboratories. The key to the understanding the testing lab industry would really involve identification of the specific segments served by that industry. For example, major sub-areas would be medical diagnostic labs, concrete core sampling labs, metallurgical structural testing labs, software testing labs, etc. Each of the sub-industry segments is characterized by very different value drivers and influences.

1. Medical labs are driven by the physicians and hospitals.

2. Concrete testing labs are driven by the amount of construction activity.

3. Metallurgical structural testing would be driven by areas like nuclear power plant construction, aerospace activity and manufactured products that must endure high stress levels.

4. Software testing would really depend on the amount of new software being written and the quality of the software used for writing the software.

B. Understanding the industry and the macroeconomic and microeconomic factors that affect the industry, and therefore the company being analyzed, is extremely important to making value-based decisions or placing a value on a particular company within the context of that industry.

C. To effectively analyze an industry, it is recommended that the analyst use a structured analytical process to ensure no material factors affecting the subject company are overlooked or not understood in their proper context.

D. One structure for analyzing an industry was outlined by Michael Porter.

1. Porter’s five forces and strategy models are the classic models utilized to understand an industry and the forces that influence a company and its strategies.

2. Only by understanding these forces, including the company’s competitors, can the analyst properly determine the company’s risk from its competitors and within the industry.
II. Porter’s Five Forces and Generic Strategies

A. Introduction

B. Five forces analysis

1. Threat of new entrants

   a. Market conditions affecting impact of the threat of new entrants:
      
      (i) Economies of scale
      
      (ii) Product differentiation
      
      (iii) Capital requirements
      
      (iv) Switching costs to buyers
      
      (v) Access to distribution channels
      
      (vi) Other cost advantages
      
      (vii) Government policies

   b. Barriers to entry are unique industry characteristics that define the industry. Barriers reduce the rate of entry of new firms, thus maintaining a level of profits for those already in the industry. From a strategic perspective, barriers can be created or exploited to enhance a firm’s competitive advantage. Barriers to entry arise from several sources:
(i) Government creates barriers. Although the principal role of the government in a market is to preserve competition through antitrust actions, government also restricts competition through the granting of monopolies and through regulation. Industries such as utilities are considered natural monopolies because it has been more efficient to have one electric company provide power to a locality than to permit many electric companies to compete in a local market. To restrain utilities from exploiting this advantage, government permits a monopoly, but regulates the industry. Illustrative of this kind of barrier to entry is the local cable company. The franchise to a cable provider may be granted by competitive bidding, but once the franchise is awarded by a community, a monopoly is created. Local governments were not effective in monitoring price gouging by cable operators, so the federal government has enacted legislation to review and restrict prices.

(ii) Patents and proprietary knowledge serve to restrict entry into an industry. Ideas and knowledge that provide competitive advantages are treated as private property when patented, preventing others from using the knowledge and thus creating a barrier to entry.

(iii) Asset specificity inhibits entry into an industry. Asset specificity is the extent to which the firm’s assets can be utilized to produce a different product. When an industry requires highly specialized technology or plant and equipment, potential entrants are reluctant to commit to acquiring specialized assets that cannot be sold or converted into other uses if the venture fails. Asset specificity provides a barrier to entry for two reasons: First, when firms already hold specialized assets they fiercely resist efforts by others to take their market share. Second, new entrants can anticipate aggressive rivalry.

(iv) Organizational economies of scale. The most cost-efficient level of production is the point at which unit costs for production are at minimum. If the level of efficiency for firms in an industry is known, then one can determine the amount of market share necessary for low-cost entry or cost parity with rivals. For example, in long-distance communications roughly 10% of the market is necessary to reach the most cost-efficient level of production. If sales for a long-distance operator fail to reach 10% of the market, the firm is not competitive.

c. Barriers to exit are functionally similar to barriers to entry. Exit barriers limit the ability of a firm to leave the market and can exacerbate rivalry; unable to leave the industry, a firm must compete. Some of an industry’s entry and exit barriers can be summarized as follows:
2. Threat of substitute products or services
   
a. In Porter’s model, substitute products refer to products in other industries. To the economist, a threat of substitutes exists when a product’s demand is affected by the price change of a substitute product. A product’s price elasticity is affected by substitute products. As more substitutes become available, the demand becomes more elastic since customers have more alternatives. A close substitute product constrains the ability of firms in an industry to raise prices.

   b. Market conditions affecting impact of substitutes:
      
      (i) Relative price of substitutes
      
      (ii) Relative quality of substitutes

      (iii) Switching costs to customers

3. Bargaining power of buyers (customers)
   
a. Market conditions affecting impact of buyer bargaining power:

   (i) Number of buyers relative to suppliers

   (ii) Product differentiation

   (iii) Switching costs to use other product

   (iv) Customer’s profit margins

   (v) Customer’s use of multiple sources

   (vi) Customer’s threat of backward integration
(vii) Customer’s threat of forward integration

(viii) Importance of product to customer

(ix) Customer’s volume

b. Customers are powerful if:

(i) Customers are concentrated—there are a few customers with significant market share. (Example: DOD purchases from defense contractors)

(ii) Customers purchase a significant proportion of output—distribution of purchases or if the product is standardized. (Example: Circuit City and Sears’ large retail market provides power over appliance manufacturers.)

(iii) Customers possess a credible backward integration threat—can threaten to buy producing firm or rival. (Example: Large auto manufacturers’ purchases of tires.)

c. Customers are weak if:

(i) Suppliers threaten forward integration—a supplier can take over/own distribution or retailing channels. (Example: Movie-producing companies have integrated forward to acquire theaters.)

(ii) Significant customer switching costs—products not standardized and customer cannot easily switch to another product. (Example: IBM’s 360 system strategy in the 1960s.)

(iii) Customers are fragmented (many, different)—no customer has any particular influence on product or price. (Example: Most consumer products.)

(iv) Suppliers supply critical portions of customers’ input—distribution of purchases. (Example: Intel’s relationship with PC manufacturers.)

4. Bargaining power of suppliers

a. Market conditions affecting impact of supplier bargaining power:

(i) Supplier integration

(ii) Availability of substitute products

(iii) Importance of supplier’s input to buyer

(iv) Supplier’s product differentiation

(v) Importance of industry to suppliers

(vi) Customer’s switching costs to other input
(vii) Supplier’s threat of forward integration

(viii) Customer’s threat of backward integration

b. Suppliers are powerful if:

(i) Credible forward integration threat by suppliers (Example: Baxter International, manufacturer of hospital supplies, acquired American Hospital Supply, a distributor.)

(ii) Suppliers concentrated (Example: Drug industry’s relationship to hospitals.)

(iii) Significant cost to switch suppliers (Example: Microsoft’s relationship with PC manufacturers.)

(iv) Customers weak (Example: Only have a few suppliers- Coca Cola.)

c. Suppliers are weak if:

(i) Many competitive suppliers—product is standardized. (Example: Tire industry relationship to automobile manufacturers.)

(ii) Purchase commodity products (Example: Grocery store brand label products.)

(iii) Credible backward integration threat by customers (Example: Timber producer’s relationship to paper companies.)

(iv) Concentrated customers (Example: Garment industry relationship to major department stores.)

(v) Customers powerful (Example: Boycott of grocery stores selling non-union-picked grapes.)

5. Competitive rivalry among existing firms

a. Factors that affect rivalry:

(i) Number of competitors (concentration)

(ii) Relative size of competitors (balance)

(iii) Industry growth rate

(iv) Fixed costs versus variable costs

(v) Product differentiation

(vi) Capacity augmented in large increments

(vii) Customer’s switching costs
(viii) Diversity of competitors

(ix) Exit barriers

(x) Strategic stakes

b. Competitive responses to rivalry:

(i) Changing prices—raising or lowering prices to gain a temporary advantage

(ii) Improving product differentiation—improving features, implementing innovations in the manufacturing process and in the product itself

(iii) Creatively using channels of distribution—using vertical integration or using a distribution channel that is novel to the industry (For example, with high-end jewelry stores reluctant to carry its watches, Timex moved into drugstores and other nontraditional outlets and cornered the low- to mid-price watch market.)

(iv) Exploiting relationships with suppliers (For example, from the 1950s to the 1970s, Sears, Roebuck and Co. dominated the retail household appliance market. Sears set high quality standards and required suppliers to meet its demands for product specifications and price.)

c. The intensity of rivalry is influenced by the following industry characteristics:

(i) A large number of firms increase rivalry because more firms must compete for the same customers and resources. The rivalry intensifies if the firms have similar market share, leading to a struggle for market leadership.

(ii) Slow market growth causes firms to fight for market share. In a growing market, firms are able to improve revenues simply because of the expanding market. In the latter case, a smaller piece of a larger pie has more calories, if the pie grows faster than the proportion of the piece.

(iii) High fixed costs result in an economy of scale effect that increases rivalry. When total costs are mostly fixed costs, the firm must produce near capacity to attain the lowest unit costs. Since the firm must sell this large quantity of product, high levels of production lead to a fight for market share, resulting in increased rivalry.

(iv) High storage costs or highly perishable products cause a producer to sell goods as soon as possible. If other producers are attempting to unload at the same time, competition for customers intensifies.

(v) Low switching costs increase rivalry. When a customer can freely switch from one product to another, there is a greater struggle to capture customers.

(vi) Low levels of product differentiation are associated with higher levels of rivalry. Brand identification, on the other hand, tends to constrain rivalry.
(vii) Strategic stakes are high when a firm is losing market position or has potential for great gains. This intensifies rivalry.

(viii) High exit barriers place a high cost on abandoning the product. The firm must compete. High exit barriers cause a firm to remain in an industry, even when the venture is not profitable. A common exit barrier is asset specificity. When the plant and equipment required for manufacturing a product are highly specialized, these assets cannot easily be sold to other buyers in another industry.

(ix) A diversity of rivals with different cultures, histories and philosophies makes an industry unstable. There is greater possibility for mavericks and for misjudging rivals’ moves. Rivalry is volatile and can be intense. The hospital industry, for example, is populated by hospitals that historically are community or charitable institutions, by hospitals that are associated with religious organizations or universities, and by hospitals that are for-profit enterprises. This mix of philosophies about mission has lead occasionally to fierce local struggles by hospitals over who will get expensive diagnostic and therapeutic services. At other times, local hospitals are highly cooperative with one another on issues such as community disaster planning.

(x) Industry shakeout. A growing market and the potential for high profits induce new firms to enter a market and incumbent firms to increase production. A point is reached where the industry becomes crowded with competitors, and demand cannot support the new entrants and the resulting increased supply. The industry may become crowded if its growth rate slows and the market becomes saturated, creating a situation of excess capacity with too many goods chasing too few buyers. A shakeout ensues, with intense competition, price wars, and company failures. Additionally, market stability and changes in supply and demand affect rivalry. Cyclical demand tends to create cutthroat competition.

C. Generic Strategies for effectively competing in light of the five forces

1. Overall cost leadership

   a. Overall cost leadership as a strategy requires that management pursue a course of action that:

      (i) Aggressively constructs facilities that are of a scale to have maximum efficiency

      (ii) Focuses on cost reductions gained through experience

      (iii) Includes tight control on costs and overhead

      (iv) Eliminates marginal customer accounts
(v) Minimizes costs in areas like service, sales teams, advertising, and research and development

b. The overall cost leadership strategy’s commonly required skills and resources include:

(i) Continual capital investments and access to capital to fund the investment.

(ii) An engineering team with skills in process engineering

(iii) High level of labor supervision

(iv) Designing products for manufacturing simplicity and ease

(v) Use of a low-cost distribution system or network

c. In addition, the strategy requires the development of many organizational characteristics including:

(i) The ability to maintain tight cost controls

(ii) An information infrastructure capable of providing frequent, detailed cost control reports.

(iii) A highly-structured organization and defined responsibilities

(iv) Compensation incentives based on meeting quantitative goals

d. Risks related to a cost efficiencies strategy include:

(i) Technological advances making the prior capital investments obsolete

(ii) Lower-cost learning curve by newcomers to the industry and their ability to invest in state-of-the-art facilities without concern for write-offs of existing facilities and equipment

(iii) The extreme focus on cost, blinding management from spotting the need for product or marketing changes

(iv) Cost increases resulting from inflation eating away at strategy’s cost advantages and not being able to offset the competitor’s premium pricing due to their differentiation strategy.

2. Differentiation from competitors—as a strategy requires management to create something that is perceived industry-wide as being unique.

a. Uniqueness related to product innovation can be created via many approaches such as:

(i) Developing a design or brand image
(ii) Technology leadership

(iii) Product features provided

(iv) Level of or type of customer service provided

(v) A strong dealer network

b. Highly successful product innovators generally differentiate themselves by using more than one approach. The differentiation strategy’s commonly required skills and resources include:

(i) Possessing high-quality marketing skills

(ii) Strong product-engineering capabilities

(iii) A creative flair

(iv) A highly competent basic research team

(v) A reputation for technological or quality leadership

(vi) Known tradition in the industry or a unique combination of skills drawn from related industries

(vii) A high level of cooperation from the channel of distribution

c. In addition, the differentiation strategy requires the development of many organizational characteristics including:

(i) Incentives based on subjective measures instead of definitive quantitative goals

(ii) A high level of cooperation and coordination among the research and development, product development and marketing departments

(iii) Facilities and amenities capable of attracting scientists, engineers, creative individuals, or a highly skilled labor force

d. The risks associated with the strategy of differentiation include:

(i) The cost differential between the low-cost providers and the differentiated innovators becomes greater than the firm’s ability to maintain its brand loyalty. Customers, at some point, are willing to sacrifice image, features or service to benefit from large cost savings.

(ii) Customers’ needs change, and they are no longer attracted to the company because of its differentiating characteristics.
(iii) Imitation by competitors narrows or eliminates the perceived differentiation. This is especially true as industries mature and can be seen today in several industries, such as the software industry, furniture industry, automobile industry, and so forth.

3. Focus on a particular customer group, segment of the product line or geographic area as a strategy, is based on being able to serve its highly focused target group more effectively or efficiently than its competitors. The competitors are assumed to be marketing to a more diverse market, geographic market, or with a broader product line.

   a. A focus strategy will require a combination of the same skills, resources and organizational characteristics that are required for the product innovation strategy. Each of these strategies often needs very different styles of leadership and usually evolves into its own unique corporate culture. In addition, each of these strategies requires the use of different performance measures. Being a cost-efficient provider would necessitate a focus on performance measures related to manufacturing, while a strategy based on product innovation would focus on performance measures related to customer satisfaction and perceptions.

   b. The strategy, based on a focus on a particular customer group, segment of the product line, or geographic area, has the following risks:

      (i) The cost advantages of serving an extremely focused target market become less than the cost savings of the low-cost provider serving a broad market.

      (ii) The differences in the products or services desired by the target market and those desired by the marketplace as a whole narrow or are eliminated.

      (iii) Competitors identify a submarket within the company’s target market and effectively out-focus the company.

D. Correlation of the five forces and the generic strategies: The generic strategies each have attributes that can serve to defend against competitive forces. The following table compares some characteristics of the generic strategies in the context of Porter’s five forces.
### Industry Analysis

**Chapter 6. Industry Analysis**

#### Entry Barriers

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to cut price in retaliation deters potential entrants.</td>
<td>Customer loyalty can discourage potential entrants.</td>
<td>Focusing develops core competencies that can act as an entry barrier.</td>
<td></td>
</tr>
</tbody>
</table>

#### Customer Power

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to offer lower price to powerful buyers.</td>
<td>Large customers have less power to negotiate because of few close alternatives.</td>
<td>Large customers have less power to negotiate because of few alternatives.</td>
<td></td>
</tr>
</tbody>
</table>

#### Supplier Power

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better insulated from powerful suppliers.</td>
<td>Better able to pass on supplier price increases to customers.</td>
<td>Suppliers have power because of low volumes, but a differentiation-focused firm is better able to pass on supplier price increases.</td>
<td></td>
</tr>
</tbody>
</table>

#### Threat of Substitutes

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can use low price to defend against substitutes.</td>
<td>Customers become attached to differentiating attributes, reducing threat of substitutes.</td>
<td>Specialized products and core competency protect against substitutes.</td>
<td></td>
</tr>
</tbody>
</table>

#### Rivalry

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better able to compete on price.</td>
<td>Brand loyalty to keep customers from rivals.</td>
<td>Rivals cannot meet differentiation-focused customer needs.</td>
<td></td>
</tr>
</tbody>
</table>

---

E. Porter’s models are a basis to start your analysis, not the end of your analysis.

1. If you start with it and allow it to limit you from considering other input, you are going to have an incomplete analysis of the industry and of the competition.

2. Porter should be only a foundation for starting the analysis of the industry and competition.

F. Sample Industry Analysis – see **Appendix B.**
Chapter 7. Company Analysis

I. Applying the Business Appraiser’s Analysis to the Company

A. All analysis performed is intended to help the business appraiser understand how the identified factors affect:
   1. The company’s financial performance
   2. The company’s value (i.e., “k” or “g” representing the denominator in the value formula)

B. The four basic types of company analysis are:
   1. General economic and political analysis
   2. Industry analysis
   3. Operational analysis
   4. Financial analysis

II. Financial Performance Analysis

A. The Objectives of Financial Statement Analysis
   1. Identify trends and what caused them.
   2. Identify unusual items and why they happened.
   3. Ascertain the uncertainty of income flows to the company’s various capital suppliers. (The higher the risk to any category of capital supplier, the higher the cost of that class of capital.)
   4. Compare the company to an industry norm or peer group. (Analyze and explain similarities and differences.)
   5. Provide a basis for comparing the subject company with guideline companies in the market approach.
   6. Provide a basis for developing financial projections or assessing company projections in the income approach.

B. Types of Financial Analysis
   1. Trend analysis
      a. Consists of a multi-year spread of income statement, balance sheet and possibly accounting statement of cash flows. For key items, may include annual growth rates or compound growth rates for the period.
      b. The goal is to identify positive and negative trends, review past growth patterns, and assess what is “normal” for the subject company.
c. The number of periods in the spread

   (i) Should depend on the specific case facts. Five years is common, but it is unrealistic to assume that five years is appropriate in every circumstance.

   (ii) For a cyclical company, capturing a full business or economic cycle may be appropriate.

   (iii) If there have been dramatic changes in business condition or strategy, data from even two or three years ago may be largely irrelevant to the analysis.

d. Income statement trends

   (i) Review level and trend in revenue and key expense items.

   (ii) Review level and trend in profitability: EBITDA, EBIT, pre-tax, net income.

   (iii) Identify reclassifications, new items, nonrecurring items, non-operating items.

e. Balance sheet trends

   (i) Note significant classes of assets and liabilities.

   (ii) Review level and trend in working capital (current assets less current liabilities)—with and without interest-bearing debt.

   (iii) Review level and trend in fixed assets.

   (iv) Review level and trend in interest-bearing debt and equity.

f. Statement of cash flows trends

   (i) The purpose of the statement of cash flows is to report cash inflows and outflows for a specific period and to reconcile the accrual income statement to the cash flow generated by the business.

   (ii) Cash flows are classified into three categories:

       (a) Cash flow from operating activities (CFO)—cash generated/used in the firm’s normal operating activities, including revenue, expense and changes in working capital items

---

1For firms with significant currency conversion issues, a fourth category is required: Effect of Exchange Rate Changes
(b) Cash flow from investing activities (CFI)—cash used/received from acquisition or disposal of plant, equipment and other investments

(c) Cash flow from financing activities (CFF)—cash used/received from transactions with sources of capital, e.g., proceeds from borrowing or issuing equity, outflows for payment of debt principal, dividends or repurchase of equity (Interest payments are included in CFO because they are deducted as an expense on the income statement.)

(iii) Changes in balance sheet accounts as shown on the cash flow statement:

(a) An increase in an asset account is a negative cash flow and decreases cash on hand (e.g., buying a building).

(b) A decrease in an asset account is a positive cash flow and increases cash on hand (e.g., collecting a receivable).

(c) An increase in a liability account is a positive cash flow and increases cash on hand (e.g., borrowing money from a bank).

(d) A decrease in a liability account is a negative cash flow and decreases cash on hand (e.g., paying off a loan).

(iv) Usefulness of analyzing trends of a business

(a) Assess liquidity—review of trends in cash generation, receivables collection, and timing of cash flows versus accrual income

(b) Assess financial strength—trends in cash flow from operations, ability to finance capital expenditures and debt service from operating cash flow

(c) Assess financial decisions—review of fixed asset purchases/disposals and investment trends

(v) Cautions and potential pitfalls

(a) Misclassification among the three types of cash flows can distort a firm’s financial picture (e.g., abuses by Qwest and Tyco involving the classification of cash inflows as “operating cash flow” and the costs associated with them as “investment cash flow,” thereby overstating CFO).

(b) In the long run, positive cash flow from operations is necessary for survival. However, a period of high growth generally produces significant negative cash flow, which may nonetheless be a positive sign for the business.
(c) Leasing fixed assets rather than buying them will result in different CFO. Lease expense is in CFO; purchased assets are in CFI.

2. Common-size analysis

a. Each line item on the income statement is expressed as a percentage of revenue. Each item on the balance sheet is expressed as a percentage of total assets.

b. Very useful in comparing companies, particularly companies of different size.

c. Identifies relative trends (expense relative to sales, current assets relative to total assets).

d. Helps in making projections or evaluating budgets

<table>
<thead>
<tr>
<th>Current Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>$62,362</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>23,050</td>
</tr>
<tr>
<td>Inventory</td>
<td>12,325</td>
</tr>
<tr>
<td>Other Current Assets</td>
<td>2,398</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>100,135</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td></td>
</tr>
<tr>
<td>FF&amp;E</td>
<td>498,115</td>
</tr>
<tr>
<td>Less Accum. Deprec.</td>
<td>(426,726)</td>
</tr>
<tr>
<td>Other Fixed Assets</td>
<td>1,500</td>
</tr>
<tr>
<td>Total Fixed Assets</td>
<td>72,889</td>
</tr>
<tr>
<td>Other Assets</td>
<td></td>
</tr>
<tr>
<td>Purchased Goodwill (net)</td>
<td>25,469</td>
</tr>
<tr>
<td>Other Assets</td>
<td>65,193</td>
</tr>
<tr>
<td>Total Other Assets</td>
<td>90,662</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$263,686</td>
</tr>
<tr>
<td>Current Liabilities</td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>$52,661</td>
</tr>
<tr>
<td>Lines of Credit</td>
<td>15,000</td>
</tr>
<tr>
<td>Current Portion LTD</td>
<td>1,223</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>49,875</td>
</tr>
<tr>
<td>Total Current Liabilities</td>
<td>118,759</td>
</tr>
<tr>
<td>Long Term Debt</td>
<td>32,118</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>150,877</td>
</tr>
<tr>
<td>Owner’s Equity</td>
<td>112,809</td>
</tr>
<tr>
<td>Total Liabilities &amp; Equity</td>
<td>$263,686</td>
</tr>
</tbody>
</table>
3. Ratio analysis

a. Important points about ratio analysis

(i) Ratios calculated for the subject company should express relationships that have significance, i.e., average accounts receivable collection period for a fast-food restaurant is not meaningful.

(ii) It is difficult to interpret ratios for the subject company unless they are compared with an industry average, peer group and/or guideline companies, or compared to historical trends within the company itself.

(iii) It is helpful to calculate the same ratios for historical results and for projections. Any changes in future performance can then be identified and explained.
b. Ratio categories

(i) **Liquidity ratios**—measure the ability of a company to meet its short-term financial obligations as they become due

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

\[
\text{Quick (Acid Test) Ratio} = \frac{\text{Cash} + \text{Cash Equivalents} + \text{Trade Receivables (net)}}{\text{Current Liabilities}}
\]

\[
\text{Working capital turnover} = \frac{\text{Sales}}{\text{Working Capital}}
\]

(ii) **Activity or turnover ratios**—measure how effectively a company employs its assets

(a) This determinant of value directly addresses the ability of a firm to manage its productive asset base and the need for an enterprise to invest in its asset base to provide for future operations. The investment in the productive assets of the enterprise includes not only reinvestment to replace capital consumed but also new investment to fund growth.

(b) Generally speaking, reinvestment and new investment requirements in tangible assets such as net working capital and net fixed assets are measured in terms of “turnover ratios” (sales divided by assets—or how many dollars of sales “were generated” by one dollar of invested assets), which, when coupled with the growth in sales activity, helps assess the expected net investment in assets.

(c) However, it should be noted that reinvestment in intangible assets such as the assembled workforce generally does not appear as a separate “line item” on the cash flow statement. This is because such investments are expensed on a current basis, and not “capitalized” as are investments in fixed assets.

(d) Below are some examples of asset management turnover ratios. It is important to observe that these turnover ratios combine a flow measurement from the income statement in the numerator with a point-in-time value from the balance sheet in the denominator. Because of this, these ratios are generally calculated two ways:
(1) With the denominator expressed as an average of the beginning and ending balance sheet account amount (this is theoretically more correct), or

(2) With the denominator expressed only as of the ending balance sheet account amount (this is more common for many financial reporting services such as RMA).

\[
\begin{align*}
\text{Inventory Turnover} &= \frac{\text{Cost of Goods Sold}}{\text{Inventory}} \\
\text{Accounts Receivable Turnover} &= \frac{\text{Sales}}{\text{Accounts Receivable}} \\
\text{Average Collection Period} &= \frac{\text{Accounts Receivable}}{\text{Sales per Day}} \\
\text{Fixed Asset Turnover} &= \frac{\text{Sales}}{\text{Fixed Assets}} \\
\text{Working Capital Turnover} &= \frac{\text{Sales}}{\text{Working Capital}} \\
\text{Total Asset Turnover} &= \frac{\text{Sales}}{\text{Total Assets}}
\end{align*}
\]

(iii) **Leverage/coverage ratios** – measures the ability of the company to cover its debt obligations

(a) The extent to which debt is used in a company’s capital structure (financial risk)

(b) The company’s long-term ability to meet payments to creditors

(c) Measures financial risk, particularly when contrasted with peer group risk and/or guideline company risk

(d) This determinant of value directly addresses the utilization of “financial leverage” or the use of debt in the capital structure of the right-hand side of the balance sheet.

(e) In its broadest meaning, debt can be thought of as all capital supplied by investors other than equity holders, including trade accounts payable, accrued expenses, deferred taxes and interest-bearing debt. All of these various “stakeholders” have claims on the future income of the business enterprise that are senior to those of the equity holders (they get their money first). Hence, financial leverage is generally measured either as a ratio of total liabilities “debt” to total assets or as a ratio of debt to equity investment.
Total Debt/Total Assets = \( \frac{\text{Total Liabilities}}{\text{Total Assets}} \)

Interest-Bearing Debt/Equity = \( \frac{\text{Total Interest-Bearing Debt}}{\text{Equity}} \)

Times Interest Earned = \( \frac{\text{Earnings Before Interest & Taxes (EBIT)}}{\text{Interest Charges}} \)

Fixed Charges Coverage = \( \frac{\text{EBIT} + \text{Fixed Charges}}{\text{Interest Charges} + \text{Fixed Charges}} \)

Total Assets/Total Equity = \( \frac{\text{Total Assets}}{\text{Total Equity}} \)

(iv) **Profitability ratios** - measure how effectively the company manages expenses and profits.

(a) This determinant of value directly addresses the ability of the enterprise to control its operating costs relative to its revenue stream.

(b) Profitability is usually measured as a “profit margin” (the percentage ratio of profits to sales). The “bottom line” traditionally is defined as “net income after tax”, although other measures of profitability such as gross profit and operating profit are also important to consider. In addition, measures of profitability differ depending upon whether invested capital or equity is being valued.

(c) Volatility of profit margins, as with volatility in sales, is a manifestation of risk regarding future returns and therefore tends to increase the perception of investment risk and reduce value.

\[
\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}}
\]

\[
\text{Operating Profit Margin} = \frac{\text{Operating Income}}{\text{Sales}}
\]

\[
\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}}
\]

\[
\text{After Tax Return on Total Assets}^* = \frac{\text{Net Income}}{\text{Total Assets}}
\]

\[
\text{After Tax Return on Equity}^* = \frac{\text{Net Income Available to Stockholders}}{\text{Stockholder’s Equity}}
\]

*Can also be calculated on pre-tax basis*
(v) Return on equity

(a) Return on equity (net income/equity) is a very important summary statistic about the performance of a business.

(b) The DuPont Formula breaks ROE into its components, including profitability, turnover and leverage.

\[ \text{ROE} = \frac{\text{Net income}}{\text{Equity}} = \frac{\text{Net income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}} \]

(vi) Growth rates

(a) The expected future growth of returns to the enterprise investors is a key determinant of value. An investor in an enterprise (or income-generating economic asset owned by such an enterprise) receives two types of return: current cash distributions and growth in the value of the investment. The “capital appreciation” of the investment is directly dependent upon the expected growth in future returns.

(b) Volatility of growth rates generates uncertainty regarding future returns and therefore tends to increase investment risk and reduce value. Two methods of measuring growth are:

1. Average annual growth: the average of growth for one period calculated for two or more consecutive periods

2. Compound average annual growth rate (CAGR), calculated as follows:

\[ \left\{ \left( \frac{\text{Amount in period n}}{\text{Amount in period 1}} \right)^{\frac{1}{n-1}} - 1.0 \right\} \times 100 \]

or

\[ \left[ \frac{\left( \frac{\text{Amount in period n}}{\text{Amount in period 1}} \right)^{\frac{1}{n}} - 1.0}{\frac{\text{Amount in period n}}{\text{Amount in period 1}}} \right] \times 100 \]

Where:

- \( n \) = number of data points, and
- \( n - 1 \) = number of compounding periods.
(c) Average and compound growth rates are important but can be misleading because they are based only on the beginning and ending years. They say nothing about what happened in the years in between.

(vii) **Equity vs. invested capital ratios**

(a) When you are valuing invested capital or using an invested capital basis in the income or market approach, it is helpful to express some ratios on an invested capital basis.

(b) Instead of total return on equity, use return on invested capital.

(c) Instead of pretax or net income margins on equity, use EBITDA, EBIT or NOPAT margins on invested capital.

(d) Illustrative comparison of equity and invested capital ratios:

<table>
<thead>
<tr>
<th>Profitability for Equity:</th>
<th>Profitability for Invested Capital:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit / Sales</td>
<td>Gross Profit / Sales</td>
</tr>
<tr>
<td>Operating Profit / Sales</td>
<td>Operating Profit / Sales</td>
</tr>
<tr>
<td>Pre-tax Income / Sales</td>
<td>EBIT / Sales</td>
</tr>
<tr>
<td>n/a</td>
<td>EBITDA Cash Flow (pre tax) / Sales</td>
</tr>
<tr>
<td>NIAT / Sales</td>
<td>NOPAT / Sales</td>
</tr>
<tr>
<td>Gross Cash Flow (after tax) / Sales</td>
<td>n/a</td>
</tr>
</tbody>
</table>
(c) Industry average financial data

(1) Risk Management Association (RMA) Annual Statement Studies

a. Note that RMA suggests that it is necessary to request permission to quote its financial data.

(2) Other print sources such as Troy’s Almanac of Business and Industrial Financial Ratios and Financial Statement Studies of the Small Business

(3) Online providers of data such as www.integrainfo.com & www.bizminer.com

(4) Performance analysis reports (PARs) and other analyses prepared by trade associations.

(5) Industry data prepared by trade publications

(ix) Guideline publicly traded or transaction data

(a) This is the most important comparison for the market approach.

(b) Analyze the performance of the subject company compared to the performance of chosen guideline companies.

(x) Analysis used to consider adjustments to the market multiples (market approach) or discount rate (income approach) applied to the subject company

III. Financial Statement Adjustments

A. Adjustments depend on the valuation approach and whether a minority or controlling interest is being valued.

B. Four purposes of adjustments in the market and income approaches.

1. GAAP adjustments - To more properly compare the subject company with industry counterparts or guideline companies—applicable in both control and minority valuations

   a. Inventory method—Normally FIFO (first in—first out) is considered a better economic representation of the balance sheet than LIFO (last in—first out).

   b. Depreciation method
2. Non-operating or Excess Items - To separate out assets and/or liabilities not necessary for operating the business and their related income and expense—more applicable in control valuations than lack of control valuations
   a. Non-operating assets—Examples include vacation homes, boats, etc., not used in core operations.
   b. Excess assets—Is there excess cash or plant capacity? Is real estate owned but not used? Review the fixed asset register.

3. Nonrecurring Items - To adjust historical statements to be more representative of expected future performance (Adjust out income or expense that under normal circumstances would not be expected to occur in the future. This is applicable in both control and minority valuations.)
   a. Nonrecurring items
   b. Extraordinary items
   c. Expense or revenue levels that have changed significantly (e.g., increased rent)

4. Discretionary Items - To adjust for discretionary expenses of the business—more applicable in control valuations than minority
   a. Owners’ compensation and perks (this is not always considered to be a control adjustment)
   b. Travel and entertainment
   c. Above or below market rent, when property is owned by a related party
   d. Others—each expense category should be reviewed.

5. Adjustments to balance sheet illustrated.
### Assets

#### Current Assets
- **Cash and Equivalents**: $740,000
- **Accounts Receivable**: $2,155,409
- **Inventory**: $1,029,866 + $200,300 = $1,230,166
- **Prepaid Expenses**: $2,500

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Year $</th>
<th>Adjustment $</th>
<th>As Adjusted $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>3,927,775</td>
<td>200,300</td>
<td>4,128,075</td>
</tr>
</tbody>
</table>

#### Fixed Assets
- **Land & Building**: $302,865 - $49,760 = $253,105
- **Furniture & Fixtures**: $155,347 - $113,120 = $42,227
- **Automobiles**: $478,912 - $391,981 = $86,931
- **Machinery & Equipment**: $759,888 - $343,622 = $416,266

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Year $</th>
<th>Adjustment $</th>
<th>As Adjusted $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Fixed Assets (at cost)</strong></td>
<td>1,697,012</td>
<td>(898,483)</td>
<td>798,529</td>
</tr>
<tr>
<td><strong>Accumulated Deprec.</strong></td>
<td>(1,298,325)</td>
<td>1,298,325</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Fixed Assets (net)</strong></td>
<td>398,687</td>
<td>399,842</td>
<td>798,529</td>
</tr>
<tr>
<td><strong>Real Estate (non-operating)</strong></td>
<td>90,879</td>
<td>43,121</td>
<td>134,000</td>
</tr>
</tbody>
</table>

**Other Assets**
- **Goodwill (net)**: $95,383 - $95,383 = $0
- **Organization Costs (net)**: $257 - $257 = $0
- **Investments**: $150,000 + $20,000 = $170,000
- **Patents**: $0 + $100,000 = $100,000

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Year $</th>
<th>Adjustment $</th>
<th>As Adjusted $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Other Assets</strong></td>
<td>245,640</td>
<td>24,360</td>
<td>270,000</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>4,662,981</td>
<td>667,623</td>
<td>5,330,604</td>
</tr>
</tbody>
</table>

### Liabilities & Equity

#### Current Liabilities
- **Accounts Payable**: $1,935,230
- **Notes Payable-Current**: $50,000
- **Accrued Expenses Payable**: $107,872
- **Income Taxes Payable**: $0 + $267,049 = $267,049

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Year $</th>
<th>Adjustment $</th>
<th>As Adjusted $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>2,093,102</td>
<td>267,049</td>
<td>2,360,151</td>
</tr>
<tr>
<td><strong>Long Term Debt</strong></td>
<td>350,000</td>
<td></td>
<td>350,000</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>2,443,102</td>
<td>267,049</td>
<td>2,710,151</td>
</tr>
</tbody>
</table>

#### Equity
- **Common Stock**: $2,500
- **Additional Paid in Capital**: $500,000
- **Retained Earnings**: $1,717,379 + $400,574 = $2,117,953

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Year $</th>
<th>Adjustment $</th>
<th>As Adjusted $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Equity</strong></td>
<td>2,219,879</td>
<td>400,574</td>
<td>2,620,453</td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Equity</strong></td>
<td>4,662,981</td>
<td>667,623</td>
<td>5,330,604</td>
</tr>
</tbody>
</table>

**Adjustments**

A. Add back LIFO reserve
B. Deduct economic depreciation
C. Remove accounting depreciation
D. Add appreciation in value, per real estate appraisal
E. Remove historical goodwill. Value identifiable intangibles and put on books
F. Add appreciation in value of other investments and adjust to FMV
G. Add tax liability of total adjustment at 40% tax rate
H. Summation of adjustments
IV. Company Risk Factors

A. Company risk factors are organized into external and internal risk factors.

B. External risk factors are the risks that have been studied in the previous two chapters:
   1. Changes in the macroeconomic environment
   2. Changes in the political environment
   3. Changes in the microeconomic environment

C. Internal risk factors are the factors that the company’s management has the most ability to influence or control. Examples of these risks, taken from the CPA’s auditing standards, include:
   1. New personnel
   2. New or revamped information systems
   3. Rapid growth
   4. New technology
   5. New business models, products or services
   6. Corporate restructuring
   7. Expanded foreign operations
   8. New accounting pronouncements
   9. Acquisitions
   10. Internal controls
   11. Employee communications

V. Analytical Frameworks

A. DuPont formula

1. The DuPont formula is a three-factor analysis focusing on how well the company is managing the company’s financial returns on an enterprise investment level.

2. The DuPont formula was developed in the early 1900s at either General Motors or the DuPont Corporation. But no one disagrees that the DuPont CFO at the time made the formula famous.
3. The three financial factors monitored via the DuPont formula are:
   a. Profitability
   b. Turnover
   c. Leverage

4. The three financial factors summarize the effects of operational and financial management decisions on the financial return performance of the company.
   a. The company’s profitability is used to monitor the effects of management decisions related to the efficiency of operations.
   b. The company’s turnover is used to monitor how effectively management is using its asset investments in the company.
   c. The company’s leverage is used to monitor how effectively management is controlling its financial capital structure.

5. The DuPont formula is most important for its structured analysis of a financial return, but is most well known for its breakdown of the classic formula for return on equity.

6. The structure of the formula is as follows:

   \[ \text{Return on Equity} = \text{Profitability \times Asset Turnover \times Leverage} \]

7. The classic formula follows:

   \[
   \frac{\text{Net Income}}{\text{Stockholders' Equity}} = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Stockholders' Equity}}
   \]

8. The company’s financial statements can be added to the chart to take the financial statement users from the statement themselves through the return analysis.
   a. In addition, a second level can be added to the analysis to allow the analyst or management to look at “what if” scenarios and their effects on the company’s financial returns.

9. The formula can be modified to monitor financial performance. For example, financial performance can be monitored on an invested capital basis or for a particular industry’s type of revenue or asset type.

   \[
   \frac{\text{Earnings}}{\text{Type of Investment}} = \frac{\text{Earnings}}{\text{Type of Revenue}} \times \frac{\text{Type of Revenue}}{\text{Type of Asset}} \times \frac{\text{Type of Asset}}{\text{Type of Investment}}
   \]
10. Examples of modifying the formula:
   
a. Invested capital emphasis

\[
ROIC = \frac{\text{NOPAT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Total Invested Capital}}
\]

11. Management use of the formula
   
a. At the enterprise level, the management team can only monitor a limited number of key items. The DuPont three factor returns allow them to monitor three of the key areas in the company: profitability, turnover and leverage.

b. Using a time series line graph for each of the items, management can quickly discover the any negative tendencies and quickly drill down into the company to take corrective action.

c. In addition to the DuPont items, management will probably want to monitor sales, EBITDA, operation cash flows and free cash flows, and the related growth rates of the items.

VI. SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats)

A. One of the more common ways to assess the qualitative factors of a company is based on the SWOT analysis. There are many stories of how it developed, but none are unquestionably accepted and it is assumed by most that the method evolved through classroom teaching.

B. The following table demonstrates the most common view of the analysis’ output:

<table>
<thead>
<tr>
<th>Strengths (internal)</th>
<th>Weaknesses (internal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you do better than your competitors?</td>
<td>What do the competitors do better than you do?</td>
</tr>
<tr>
<td>What intellectual property do you own – and exercise?</td>
<td>What do you need to do to compete more effectively?</td>
</tr>
<tr>
<td>Opportunities (external)</td>
<td>Threats (external)</td>
</tr>
<tr>
<td>What changes are occurring in the industry or customer demands that you can take advantage of?</td>
<td>What changes are occurring in the industry or in consumer demand that your competitors can take advantage of better than you can?</td>
</tr>
<tr>
<td>What weaknesses of your competitors can you take advantage of?</td>
<td>What are your competitors doing to attract your customers?</td>
</tr>
</tbody>
</table>

C. Application of SWOT:
   
1. Analysis/audit - where are we now?
2. Preparation for strategic plan
3. Problem-solving tool
4. Decision-making tool
5. Resource allocation tool
6. Counseling a client—personnel
7. Current situation appraisal tool (to determine whether corrections are needed)

D. The benefits of using a SWOT analysis are that it provides:
   1. A framework for identifying and analyzing strengths, weaknesses, opportunities and threats
   2. An impetus to analyze a situation and develop suitable strategies and tactics
   3. A basis for assessing core capabilities and competences
   4. The evidence for, and cultural key to, change

E. SWOT analysis should be considered in an organized framework like the one below

<table>
<thead>
<tr>
<th>Strengths and Weaknesses</th>
<th>Opportunities and Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial capital</td>
<td>Industry – Marketplace</td>
</tr>
<tr>
<td>Physical capital</td>
<td>Industry – Competitive forces</td>
</tr>
<tr>
<td>Human capital</td>
<td>Industry – Suppliers</td>
</tr>
<tr>
<td>Customer capital</td>
<td>Political</td>
</tr>
<tr>
<td>System capital</td>
<td>Economic</td>
</tr>
<tr>
<td>Organizational capital</td>
<td>Socio-cultural</td>
</tr>
<tr>
<td></td>
<td>Competitors</td>
</tr>
</tbody>
</table>

F. When performing a SWOT analysis, the analyst should always keep the following questions in mind for each of the four areas:
   1. Strengths (the company’s core competencies and resources):
      a. What does the company do well?
      b. How strong is the company in the market, or what is its market position or share?
      c. Does the company have a clear communicable vision or direction?


d. Does the company have a positive corporate culture that makes for a work environment that will attract the employees desired?

e. What are the company’s definable resources (tangible and intangible)?

2. Weaknesses (the company’s liabilities in the competitive marketplace):
   a. What systems could be improved at the company?
   b. What does the competition do better?
   c. What does the company do poorly?
   d. Does the company have the financial resources to purchase needed equipment, technology or facilities?
   e. Does the company have the financial resources to withstand a downturn or unforeseen negative circumstances?
   f. Can the company support its growth rate?

3. Opportunities (with the company’s customers and in the marketplace):
   a. What changes are taking place in the market that open up opportunities? Is the company positioned to take advantage of the opportunities?
   b. Is the company entering new markets?
   c. Can the company upgrade its technology to lower costs?
   d. Can the company expand its geographic coverage?
   e. Can the company improve its use of the Internet for marketing or customer relations?

4. Threats (what your competitors are doing and other potential challenges):
   a. What obstacles / challenges is the company facing?
   b. What are your competitors doing?
   c. Are regulatory requirements or customer demands forcing a change in your products or services?
   d. Is technology threatening your market position?
   e. If there is pressure on your profit margins, what is its source?

5. One of the criticisms of the typical company SWOT analysis is that it lacks a disciplined approach to analysis and collecting management input.

6. Exhibit 7-1 provides a formal questionnaire for collecting input from management. The questionnaire has been developed using 13 capital resources, economic and
political categories with approximately 144 underlying characteristics. The basic questionnaire provided can be modified for industry-specific application.

G. The first stage of a formal SWOT analysis is collecting input from the management team. The results must be tallied to determine the mean and standard deviation of management’s opinions which can subsequently be rank ordered according to the mean scores. There are automated systems you can use, or the questionnaires can be tallied and computed on an Excel or other financial spreadsheet.

H. The second stage of the formal analysis is to identify and understand the implications of management’s collective input. For example, if the management team states that financial resources are their primary strength, the question must be asked, “What specifically about our financial resources are strengths?” It may be the cash reserves, the borrowing capacity, etc.

I. The third stage involves exploring with management what implications these strengths, weaknesses, opportunities or threats have on the company’s:
   a. Strategy
   b. Risks
   c. Future growth
   d. Financial performance

VII. Company-Specific Value Drivers (Operational and Financial)

A. Every company has specific operational and financial value drivers.

B. Generally, these value drivers are related to the industry and to the company’s critical success factors.

C. Unless the analyst can identify the company’s specific value drivers, it will be impossible to select the appropriate guideline companies and to develop the company’s discount and capitalization rates.

D. Financial value drivers are the individual items that drive return on equity and invested capital, operating and net free cash flows.

E. Operating value drivers are the operational procedures that allow the company to successfully provide the customer with the level of service or product that:
   1. Meet the customer-related critical success factors, demands or needs
   2. Are set at a price point such that it provides the company with a sufficient return on equity and is acceptable to the paying customer.
See Exhibit 7-2, Common Value Enhancers and Detractors

Appendix B contains an entire section on data analysis using many of the techniques discussed in this and the previous two chapters. This appendix is designed particularly for those students that need some additional help in applying these concepts.

Homework Assignment: Using the information included in Appendix C for GDT, Inc., perform a financial analysis about the company. Start by filling in the missing information for the year 2008, where required. Be prepared to discuss your analysis in class.
Exhibit 7-1

SWOT Questionnaire
This SWOT Analysis questionnaire will assist the organization with a disciplined approach to understanding its strengths, weaknesses, threats and opportunities. The analysis provided will allow management to develop strategies to leverage the organization’s strengths and opportunities and to minimize the impact of the organization’s weaknesses and external negative forces.

In the questionnaire you will rank the organization’s strengths and weaknesses in six critical areas on a six-point scale from major weakness to major strength. The externally generated opportunities or and threats to the organization in seven critical areas will similarly be ranked on a six point scale from major threats to major opportunities. In addition, you will be given the opportunity to identify four major strengths and weaknesses of the organization, to identify four critical competencies of the organization and to identify four major threats and opportunities facing the organization in the next three to five years.

The resulting analysis will play a major role in setting the organization’s future strategic direction. Please thoughtfully rank every potential strength, weakness, threat or opportunity listed.

**Strengths and Weaknesses**

An organization’s strengths and weaknesses relate to its internal characteristics that affect its performance, especially as compared to the performance of its competitors. These characteristics will drive the organization’s competitive position in the marketplace and will affect the organization’s ability to implement its corporate strategy.

This questionnaire groups an organization’s potential strengths and weaknesses into six categories. Rank the extent that each of the organization’s characteristics is a strength or weakness.

**Financial Capital**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>NA</th>
<th>Major Weakness</th>
<th>Weakness</th>
<th>Minor Weakness</th>
<th>Minor Strength</th>
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<th>Major Strength</th>
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### Customer Capital

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### Organizational Capital

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### Human Capital

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<th>Strength</th>
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<td>best people</td>
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<tr>
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System Capital

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</table>

Core Competencies

What are the four most important core competencies of the organization?

- The organization’s most important core competency is:
- The organization’s second most important core competency is:
- The organization’s third most important core competency is:
- The organization’s fourth most important core competency is:

Greatest Strengths

What are the four greatest strengths of the organization?

- The organization’s greatest strength is:
- The organization’s second greatest strength is:
- The organization’s third greatest strength is:
- The organization’s fourth greatest strength is:

Biggest Weaknesses

What are the four biggest weaknesses of the organization?

- The organization’s biggest weakness is:
- The organization’s second biggest weakness is:
- The organization’s third biggest weakness is:
- The organization’s fourth biggest weakness is:
Opportunities and Threats

Every organization encounters external environmental forces that provide opportunities and threats that will affect its future performance. Identifying and understanding the organization’s future opportunities and threats is necessary to adopt a strategy or modify a strategy that takes advantage of its biggest opportunities, while minimizing its material threats. The following section of the questionnaire groups an organization’s potential opportunities and threats in to seven categories. Rank the extent that each of the following external environmental forces is an opportunity or a threat.

Industry – Marketplace

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>NA</th>
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<th>Threat</th>
<th>Minor Threat</th>
<th>Major Opportunity</th>
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<td>○</td>
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<tr>
<td>Access to new markets for our products/services</td>
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<td>○</td>
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<td>Size of our market</td>
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<td>Potential product/service substitutes</td>
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Industry - Competitive Forces

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<th>Major Opportunity</th>
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<td>New competitors entering our market</td>
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Industry – Suppliers

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Political
### Economic

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<td>Financial community views industry as favorable</td>
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Socio-cultural

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Competitors

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<td>Size of competitors</td>
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<td>Location of competitors</td>
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</table>
Biggest Opportunities

What are the four biggest opportunity of the organization?

• The organization’s biggest opportunity is:
• The organization’s second biggest opportunity is:
• The organization’s third biggest opportunity is:
• The organization’s fourth biggest opportunity is:

Biggest Threats

What are the four biggest threat of the organization?

• The organization’s biggest threat is:
• The organization’s second biggest threat is:
• The organization’s third biggest threat is:
• The organization’s fourth biggest threat is:
Exhibit 7-2

Common Value Enhancers and Detractors
COMMON VALUE ENHANCERS
AND DETRACTORS:

Businesses generally have favorable and unfavorable characteristics that cause it to stand apart from other businesses in general or within its own industry. Rank each of the following from 1 to 3 (three being highly significant and one being a minor enhancer or detractor). If not applicable, mark with a zero.
Enhancers

- Maintains higher gross margins than industry
- Has audited or reviewed financial statements
- Has made significant historical capital expenditures
- Part of an industry with a consistent demand
- Has low working capital requirements to support future growth
- Has good internal financial controls
- Requires little ongoing research and development
- Cost to obtain new customers is minimal
- Has historical sales growth rates higher than industry growth rates
- Has a strategic planning process in place
- Serves a growing market
- Has a strong market position
- Competitors have high barriers to entry (i.e. capital, skills, etc.)
- Industry attractive to multiple buyers—both economically & synergistically
- Has intellectual property (patents, copyrights, trade secrets, etc.)
- Part of stable industry - not subject to volatility
- Has own private label products
- Sells brand name products recognizable to customers
- Has high investment in priority software or production equipment
- Has significant backlog and/or work in progress
- Has contracts with customers/suppliers
- Established business - years in business
- Has established reputable name with customers and in the market place
- Key player in a “niche” market
- Has a quality customer base
- Has a defined product line is not a job shop
- Customers buy because quality or cost/benefit—not because of price
- Has an established management team - not owner dependent
- Trained and stable work force in place (non-union, low turn over, etc.)
- Pays competitive salaries, wages, and benefits - within 10% of market
- Has seasoned management in all key positions
- Maintains a high percentage of repeat business
- Has a diverse customer base which serves several markets and/or industries
- Has a broad customer base – no customer accounts for more than 5% of sales
- Has modern, attractive and efficient facilities
- Has an established and effective quality control program in place
- Has license agreements with brand names
- Has established products/services
- Has a franchisee agreement with a strong franchisor or a master franchisee
- Has products at the beginning of their product life cycles vs. mature products
- Has a favorable facility lease – (assignment rights are an additional enhancer)
- Has products with life cycles - minimal product obsolescence
- Weak competitive environment
### Detractors

- Has high customer concentration – more than 10% of sales to any one customer
- Is a job shop – always dependent on next order
- Is a sub contractor – always dependent on the success of prime contractors
- Low price multiples paid for companies in the industry (no to minimal goodwill)
- Its owner(s) or key management are ready to retire or depart immediately
- Has low barriers to entry (requires minimal capital, skills, etc.)
- In industry attractive only to a few buyers (eg. with special skills, etc.)
- Has non-competitive salaries, wages, and benefits and/or high turnover
- Has minimal repeat business from customers
- Has high cost to obtain new customers
- It’s historical sales growth rate is lower than the industry’s growth rate
- Has no strategic plan in place
- Has a union work force with near term contract renewals
- Has aggressive competitors on price and/or quality
- Has a history of work disruption (strikes, stoppages, etc.)
- Is in a tight labor market and work force requires many highly-paid skilled employees
- Has short-term leases on facilities and location is important
- **Has a Limited number of and/or controlling suppliers** -
- Has a low gross margin, may be inadequate to fund future growth
- In a poor market with unfavorable economic trends
- Located in inadequate facilities (functional obsolescence, poorly maintained, etc.)
- Has poor quality financial statements and cost records
- Has made inadequate capital expenditures (especially, if in capital intensive business)
- Is a start up company (less than 3 years old or has not reached breakeven)
- Is in a flat or declining market
- Has commodity products and sells mostly on price, not on product features
- Is owner dependent and has no depth in management
- Has unproven products or new technology that has just entered the market place
- Has products at the end of their life cycles
- Products have short life cycles and/or high product obsolescence
- Requires high R&D costs (maybe more than 15% for high tech business)
- Has high working capital requirements to support future growth
- Has poor internal financial controls
- Has unfavorable facility leases (or leases that cannot be assigned)
Chapter 8. Overview of the Market Approach

I. Introduction

A. Definition

1. The market approach is a general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities, or intangible assets that have been sold.

B. Overview

1. The market approach is probably the most fundamental approach in a fair market value appraisal. Since fair market value is supposed to come from the "market," it seems natural that this approach should be greatly emphasized. However, the application of this approach can, at times, be the most difficult approach to use in a business valuation.

2. In real estate appraisal, the appraiser looks for properties similar to the piece of real estate being appraised in order to compare the similarities and dissimilarities between the properties. After the comparison is made, the real estate appraiser estimates the value of the subject property using the sales price of the "comparable" properties as a starting point.

3. This concept can be illustrated using the following example. Property A sold for $200,000. It is a single-family house on a busy main road; it is on one acre of land and has three bedrooms, two baths, and a newly renovated family room. Property B sold for $175,000. It is also a single-family residence in the same neighborhood, but it is up the street off the main road on one acre of land, and it has two bedrooms, two baths, and a well-maintained interior. Property C sold for $190,000 on the same block as property B; it is also on one acre, has two bedrooms, has two-and-one-half baths, and is in relatively good shape on the inside. An appraisal of property D is requested. The comparative statistics about the properties are given in the following table.
4. After a comparison of the features of properties A, B, and C with those of property D, it appears that property D most closely resembles property C, except the appraisal subject has an extra bedroom. Therefore, the real estate appraiser concludes that the appraised value of property D is $200,000.

5. This is a simplistic example and is not intended to make light of the role of the real estate appraiser. However, real estate sales are generally available in public records, and therefore, the real estate appraiser has a definite advantage over the business valuation analyst. The point being made is that an estimate of fair market value is an interpretation of market data indicating the worth of a property. The role of the valuation analyst is that of an interpreter, not a market maker. Our job is to use the information available in the market to estimate the value of the appraisal subject. Despite the similarities to real estate appraisal, business valuation methods are a bit different.

C. Principle of Substitution

1. The market approach is based upon the principle of substitution premise that a prudent buyer will pay no more for a property than it would cost to acquire a substitute property with the same utility. Therefore, we analyze prices at which the equity or invested capital in similar businesses has changed hands. To do this we analyze guideline company transaction data from sources such as:

   a. Publicly traded companies

   b. Acquired/merged companies

   c. Other market approach methods include:

      (i) Analysis of prior transactions in the subject company’s stock


<table>
<thead>
<tr>
<th>Property A</th>
<th>Property B</th>
<th>Property C</th>
<th>Property D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales price</td>
<td>200,000</td>
<td>175,000</td>
<td>190,000</td>
</tr>
<tr>
<td>Acreage</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Location</td>
<td>Main road</td>
<td>Quiet street</td>
<td>Quiet street</td>
</tr>
<tr>
<td>Bedrooms</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Baths</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Interior</td>
<td>New condition</td>
<td>Good condition</td>
<td>Good condition</td>
</tr>
<tr>
<td>All else</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
</tr>
</tbody>
</table>
The use of industry-based rules of thumb

Buy-sell agreements

Bona fide offers to buy the subject company

Previous acquisitions of similar businesses by the subject company

D. Strengths and Weaknesses

1. Strengths of the market approach (real and perceived) include:
   a. Relatively easy to get data
   b. Easy to understand and apply
   c. Includes all assets (tangible and intangible)
   d. Does not rely on forecasts (usually)
   e. Users tend to think they are objective and reliable
   f. Incorporates current market conditions—reflecting investor growth and risk expectations

2. Weaknesses of the market approach (real and perceived) include:
   a. Requires comparable/guideline companies
   b. Cannot be used for a variety of individual assets
   c. Hidden assumptions, e.g., growth
   d. In the merger and acquisition method, transactions often reflect synergies and buyer-specific value. Information about the acquired company and terms of the deal may be inadequate

II. Basic Principles Underlying the Market Approach

A. These basic principles should guide decisions made in applying the market approach.

B. Comparability – In order for the market approach to be properly applied, the subject company must be comparable to the companies that it will be compared to. Comparability is generally considered with respect to the following:

1. Industry – The guideline companies should be in the same or a very similar business as the subject.

2. Size – Size can be expressed in terms of sales, total assets or market capitalization. Numerous studies indicate that smaller companies have lower pricing multiples than larger companies, primarily because of differences in business and financial risk.

3. Growth expectations – The prices of public companies are strongly correlated with
growth expectations. It is important to research analyst growth expectations for potential guidelines and to look at their historical growth. The subject company may have higher or lower growth expectations, but often cannot finance the same level of growth because of its more limited access to capital.

4. **Business risk** – Qualitative factors such as market penetration, distribution channels, and geographic diversification also have a substantial impact on comparability. Another factor is how long the company has been in business. Relatively new businesses tend to have lower multiples because there tends to be more uncertainty about their future and they are more risky.

5. **Financial risk** – The guideline companies should be as similar as possible in their financial metrics. It may be necessary to adjust the financial statements of both the guidelines and the subject so they are on a similar basis (e.g., eliminating non-recurring items and adjusting LIFO to FIFO inventory accounting method) before making comparisons.

6. The guideline public company method of appraisal is based on the premise that pricing multiples (a relationship between the price of a publicly traded stock and some other variable, such as earnings, sales, book value, etc.) of publicly traded companies can be used as an indicator of value to be applied in valuing the closely held appraisal subject. Using multiples of public companies in this manner is suggested in Revenue Ruling 59-60 in the famous eight factors to consider (at a minimum). The Revenue Ruling tells us to consider the market price of stocks of corporations engaged in the same or similar line of business having their stocks actively traded in a free and open market either on an exchange or over the counter.

7. The merger and acquisition method uses the same concept in establishing multiples but it uses transactions rather than a single share price.

8. The mechanics of the method require the valuation analyst to use the stock price of the public company in conjunction with some other factor (such as earnings, cash flow, book value, etc.), to create a pricing multiple. With certain adjustments, the pricing multiple is applied to the appraisal subject's similar factor to determine an estimate of value for the company. A price-to-earnings multiple would be applied to the company's earnings, a price-to-cash flow multiple would be applied to the company's cash flow, and so forth.

9. To use this method properly, the publicly traded companies that are used as surrogates must be comparable to the closely held appraisal subject. The comparable companies will not be identical to the appraisal subject but should be similar enough to provide guidance to the valuation analyst during the appraisal process. The similar companies, formerly known as "comparative companies" or "comparables," a term taken from the real estate appraisal world, are known as "guideline companies" in our world. This terminology was suggested by the Business Valuation Committee of ASA to highlight the fact that no two companies are truly comparable, but rather, that similar companies can provide guidance about other companies in the marketplace.
10. In business valuation, the requirements for “similarity” are considered from an investment point of view. The factors that will be considered by the valuation analyst will vary from assignment to assignment. One concise list of factors to consider in determining the similarity of the guideline companies is impossible. However, some of the factors to consider have been included in the writings of Graham, Dodd, and Cottle; Stockdale; and Bolten, Brockardt, and Mard. The following are some of the factors to consider, though not necessarily in any special order:

a. Past growth of sales and earnings
b. Rate of return on invested capital
c. Stability of past earnings
d. Dividend rate and record
e. Quality of management
f. Nature and prospects of the industry
g. Competitive position and individual prospects of the company
h. Basic nature of the activity
i. General types of goods or services produced
j. Relative amounts of labor and capital employed
k. Extent of materials conversion
l. Amount of investment in plant and equipment
m. Amount of investment in inventory
n. Level of technology employed
o. Level of skill required to perform the operation
p. Size
q. Financial position
r. Liquidity

s. Years in business
t. Financial market environment
u. Quality of earnings
v. Marketability of shares
w. Operating efficiency
x. Geographical diversification
y. Similarity of business model

11. Various writings have created a substantial list of attributes to consider in determining whether the guideline companies are "comparable" enough to be used as good surrogates in an appraisal. The guideline company must be "similar" and "relevant" to be used as a surrogate. Comparing the local hardware store with The Home Depot may involve similar businesses, but let's face it, where's the relevance?

12. How do we really identify guideline companies? In the real world, the search for guideline companies can be accomplished the old-fashioned way, by legwork at the library, or the modern way, sitting at your desk in front of a computer. Those of us who started in this business a long time ago did not have a choice. Today, we opt for the latter alternative. It's much faster and a lot less work.

III. Basic Steps of the Market Approach Process

A. Step 1 – Choose Guideline Companies That are Similar or Comparable to the Subject
B. Step 2 – Normalize the Financial Statements of the GPCs
C. Step 3 – Calculate Various Market Multiples
D. Step 4 – Select the Multiple(s) to be Applied to the Subject Company
E. Step 5 – Compare the Subject Company to the Guidelines
F. Step 6 – Adjust the Level of the Selected Market Multiple(s)
G. Step 7 – Apply the Adjusted Market Multiple(s) to the Subject Company
H. Step 8 – Reconcile the Different Indications of Values
I. Step 9 – Consider the Necessity of Applying Discounts/Premiums

IV. ASA Standards and Definitions

A. ASA Business Valuation Standards for the Market Approach
2. Statement on Business Valuation Standard 1 (SBVS-1) – The Guideline Company Valuation Method (last revised November 2005), and


B. Business Valuation Standard V (BVS-V)

1. BVS-V addresses the market approach in general.

2. BVS-V, II defines the market approach as follows:
   a. The market approach is a general way of determining a value indication of a business, business ownership interest, or security by using one or more methods that compare the subject to similar businesses, business ownership interests, or securities that have been sold.
   b. Examples of market approach methods include the guideline company method (see SBVS-1) and the analysis of prior transactions in the ownership of the subject company.

3. BVS-V, III addresses what is a “reasonable basis for comparison,” as follows:
   a. The business, business ownership interest, or security used for comparison must serve as a reasonable basis for such comparison.
   b. Factors to be considered in judging whether a reasonable basis for comparison exists include:
      (i) A sufficient similarity of qualitative and quantitative investment characteristics
      (ii) The amount and verifiability of data known about the similar investment
      (iii) Whether or not the price of the similar investment was obtained in an arm’s-length transaction, or a forced or distress sale

4. BVS-V, IV addresses the “selection of valuation ratios,” as follows:
   a. Comparisons are normally made through the use of valuation ratios. The computation and use of such ratios should provide meaningful insight about the value of the subject, considering all relevant factors. Accordingly, care should be exercised with respect to issues such as:
      i. The selection of the underlying data used to compute the valuation ratios
      ii. The selection of the time periods and/or the averaging methods used for the underlying data
      iii. The computation of the valuation ratios
      iv. The timing of the price data used in the valuation ratios
v. How the valuation ratio or ratios were selected and applied to the subject’s underlying data

b. In general, comparisons should be made by using comparable definitions of the components of the valuation ratios. However, where appropriate, valuation ratios based on components that are reasonably representative of ongoing results may be used.

5. BVS-V, V discusses “rules of thumb,” as follows:

a. Rules of thumb may provide insight on the value of a business, business ownership interest, or security. However, value indications derived from the use of rules of thumb should not be given substantial weight unless they are supported by other valuation methods and it can be established that knowledgeable buyers and sellers place substantial reliance on them.

C. ASA Glossary of Terms

1. The ASA Business Valuation Standards include a glossary of terms. The following terms from this glossary are important in the market approach:

a. Capitalization – a conversion of a single period of economic benefits into value

b. Capitalization factor – any multiple or divisor used to convert anticipated economic benefits of a single period into value

c. Capitalization of earnings method – a method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate

d. Capitalization rate – any divisor (usually expressed as a percentage) used to convert anticipated economic benefits of a single period into value

e. Market (market-based) approach – a general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities or intangible assets that have been sold

f. Market multiple – the market value of a company’s stock or invested capital divided by a company measure (such as economic benefits, number of customers)

g. Multiple – the inverse of the capitalization rate

h. Price/earnings multiple – the price of a share of stock divided by its earnings per share

i. Valuation ratio – a fraction in which a value or price serves as the numerator and financial, operating, or physical data serves as the denominator

j. Guideline public company method – a method within the market approach whereby market multiples are derived from market prices of stocks of companies
that are engaged in the same or similar lines of business, and that are actively traded on a free and open market.

k. **Merger and acquisition method** – a method within the market approach whereby pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business

l. **Rule of thumb** – a mathematical formula developed from the relationship between price and certain variables based on experience, observation, hearsay or a combination of these; usually industry specific

m. **Market capitalization of equity** – the share price of a publicly traded stock multiplied by the number of shares outstanding

n. **Market capitalization of invested capital** – the market capitalization of equity plus the market value of the debt component of invested capital

**Homework Assignment:** Read Exhibit 8-1, Estate of Joyce C. Hall and be prepared to discuss.
Exhibit 8-1

Estate of Joyce C. Hall
Checkpoint Contents
Federal Library
   Federal Source Materials
   Federal Tax Decisions
   Tax Court Reported Decisions
      Tax Court & Board of Tax Appeals Reported Decisions (Prior Years)
         1989
            TCR Vol. 92
               ESTATE OF HALL, 92 TC 312, Code Sec(s) 2031, 02/14/1989

Tax Court & Board of Tax Appeals Reported Decisions

ESTATE OF HALL v. COMMISSIONER, 92 TC 312, Code Sec(s) 2031.

Estate of Joyce C. Hall, Deceased, Donald J. Hall, Executor, Petitioner v. Commissioner of Internal Revenue, Respondent

Case Information:

| Code Sec(s):   | 2031[pg. 312] |
| Docket:       | Docket No. 39319-86. |
| Date Issued:  | 02/14/1989 |
| Judge:        | Opinion by COHEN, J. |
| Tax Year(s):  | Date of death, Oct. 29, 1982. |
| Disposition:  | Deficiencies redetermined. |

HEADNOTE

1. ESTATE TAX—Gross estate—valuation of closely-held stock based on comparison with other companies—value established in buy-sell agreement.
   Stock in closely-held corp. was included in gross estate at its adjusted book value on date of decedent's death, where shares in corp. were subject to transfer restrictions and buy-sell agreements establishing adjusted book value as sales price of stock. Transfer restrictions on stock were respected in determining value because IRS was unable to prove that restrictions had no bona fide business purpose and would not be enforced by corp. Adjusted book value was based on book value of assets, with goodwill premium based upon recent earnings and premium or discount based on voting power or liquidation and dividend preference of stock. Use of several experts to compare adjusted book value with price to earnings ratio of 6-10 comparable companies provided most accurate measure of fair market value of stock on shareholder's death. And fair market value of stock couldn't exceed adjusted book value because corporation's right of first refusal would preclude sale at any other price. IRS's valuation based on data from only one comparable company and minimal five percent discount for lack of marketability was rejected as artificially high valuation.

Reference(s): 1989 PH Fed. ¶120,312.3, 120,312.5. Code Sec. 2031.  
Syllabus

Official Tax Court Syllabus

P filed a Federal estate tax return and reported its equity interest in H, a closely held corporation, at the adjusted book value of the shares as of the date of decedent’s death. The shares were subject to various transfer restrictions and buy-sell agreements establishing adjusted book value as the sales price under the agreements. Based on comparisons with a number of comparable companies, P’s experts determined that the adjusted book value provided a reasonable estimate of the fair market value of the shares at the valuation date. Held, R's expert erred in, among other things, ignoring the transfer restrictions and in limiting his market comparison to a single comparable. Fair market value was the adjusted book value as of the date of death.

Counsel


Kendall C. Jones, Lewis R. Carluzzo, and Nancy B. Romano, for the respondent.

Cohen, Judge:

Respondent determined a deficiency of $201,776,276.84 in the Federal estate tax of the estate of Joyce C. Hall, deceased, Donald J. Hall, executor. After concessions, the issue for decision is the value for estate tax purposes of decedent's equity interest in Hallmark Cards, Inc.[pg. 313]

FINDINGS OF FACT

Some of the facts have been stipulated, and the facts set forth in the stipulations are incorporated in our findings by this reference. Joyce C. Hall (decedent) died testate on October 29, 1982. At the time of his death, decedent resided in Leawood, Kansas. Decedent's will, which named his son Donald J. Hall as executor of the estate, was admitted to probate in the District Court of Johnson County, Kansas, on November 29, 1982. Under the provisions of his will, decedent left his entire residuary estate, after specific bequests of his residence and personal belongings to his children, to charity.

Decedent's executor timely filed a Federal estate tax return. All assets included in the gross estate were valued as of the date of death (the valuation date). The gross estate included 70,083,000 shares of class C common stock of Hallmark Cards, Inc. (Hallmark), and 1,797,000 certificates of participating interest representing voting trust certificates of Hallmark class B common stock.

Petitioner reported the class C common stock on decedent's Federal estate tax return at a value of $1.87835 per share, for a total of $131,640,403.05. Petitioner reported the certificates of participating interest on decedent's Federal estate tax return at a value of $1.98157 per share, for a total of $3,560,881.29.
In the notice of deficiency, respondent determined a deficiency of $201,776,276.84, primarily arising from (a) the determination that the value of the gross estate should be increased by $167,614,006.95 as to the class C common stock; and (b) the determination that the value of the gross estate should be increased by $4,507,648.71 as to the certificates of participating interests.

Overview of Hallmark

Originally founded in 1910 and incorporated in 1923, in 1982 Hallmark Cards, Inc. (Hallmark), was the leader in the United States in the design, manufacture, and sale of greeting cards and related products. Although Hallmark was privately held, if it had been a public corporation it would have ranked in size among the "Fortune 500" largest industrial companies in the United States.[pg. 314]

Decedent was the founder of Hallmark and served as chairman of the board until his death. Decedent's son was the chief executive officer of Hallmark at the time of decedent's death. Hallmark's board of directors consisted of 12 members, 5 who were employees of Hallmark, 5 who were not employees, and 2 who were family members.

Hallmark grew rapidly in the early years of its business, and by 1927, sales exceeded $1 million. In the 1930's, Hallmark pioneered the use of freestanding display fixtures to sell its cards, an important retailing innovation. In the 1940's, Hallmark began to develop a national market through a nationwide advertising campaign centered on its now familiar slogan "when you care enough to send the very best." Hallmark also initiated in the 1940's its first product diversification strategy, selling gift wrap and party goods to complement its greeting card sales.

By the 1950's, Hallmark, established as the premium brand of greeting cards, had developed a network of card shops, the "class" distribution channels, which sold primarily cards and gift items. In 1959, Hallmark introduced the Ambassador brand of products in an effort to augment its sales to the "mass" distribution channels. The Ambassador brand was not as profitable as the Hallmark brand due to the more competitive marketing environment of the "mass" channels, and at the valuation date, Ambassador represented only 11 percent of Hallmark's business.

In the late 1950's, Hallmark founded its International Division. During the 1970's and early 1980's, Hallmark continued to expand its International Division, and at the valuation date had operations in Canada, Ireland, Germany, New Zealand, England, Scotland, France, and Australia. To expand its product lines and to reduce its reliance on a single source of revenue, Hallmark acquired Trifari, Krussman & Fishel, a manufacturer of costume jewelry; Charles D. Burnes Co., Inc., a manufacturer of picture frames; and Litho-Krome Co., a lithographic printing shop. Hallmark also had a retail division, which operated three high quality department stores in Kansas City, Missouri. Hallmark's subsidiaries and its retail division were all losing money in the years prior to the valuation date.[pg. 315]

During the 1960's, Hallmark embarked on a major real estate development project in Kansas City, Missouri. Hallmark organized a subsidiary, Crown Center Redevelopment Corp. (Crown Center), to undertake this project. Crown Center was unprofitable, and was subsidized by Hallmark throughout its existence to the time of trial in May 1988. On July 17, 1981, two suspended concrete and steel walkways (skywalks) spanning the lobby of the Kansas City Hyatt Regency Hotel, Crown Center, collapsed, killing 114 people and seriously injuring 238 more. At the valuation date, Hallmark and Crown Center were embroiled in major litigation arising out of that disaster.
**Hallmark Capital Stock**

At the valuation date, Hallmark had three classes of stock outstanding—class A preferred stock, class B common stock, and class C common stock. The class A preferred stock was created in a 1977 recapitalization of Hallmark and was held by the Hallmark Employee Profit-Sharing and Ownership Plan (the Plan) and by Hallmark employees participating in the plan. The class A preferred stock was a class of nonvoting common stock with dividend and liquidation preferences. Decedent did not own any class A preferred stock.

The class B common stock was the sole voting class of common stock. Each share had the right to cast one vote for the election of directors and for any other matter subject to a vote of shareholders. The class B common stock had a right to receive dividends and liquidating distributions, subject to the preferences for class A preferred stock.

In 1963, certificates representing all of the shares of class B common stock were deposited with the First National Bank of Lawrence, Kansas, as trustee under a trust indenture dated December 17, 1963 (the 1963 indenture). Beneficial owners of class B common stock held certificates of participating interest issued by the trustee, and they retained all of the economic incidents of ownership of the underlying shares, including the right to receive all dividends and the right to vote the shares.[pg. 316]

The 1963 indenture will remain in effect until 20 years after the death of the last survivor of the descendants of decedent who were living on December 17, 1963. It is estimated that this event will occur sometime after the middle of the next century. The 1963 indenture served to enforce transfer restrictions on the class B common stock. By its terms, the 1963 indenture may be terminated or amended only upon the vote of the holders of certificates representing 95 percent of the outstanding class B common shares. At no time did decedent hold certificates representing 95 percent of the outstanding class B common shares of Hallmark.

The class C common stock, created in a 1980 recapitalization of Hallmark, was nonvoting common stock, except to the extent that Missouri law or Hallmark’s January 2, 1980, restated articles of incorporation (the restated articles) expressly conferred voting rights upon it. Subject to the preferences of the class A preferred stock, the class C common stock participated on a share-for-share basis with class A preferred and class B common in any dividend or liquidating distribution made by Hallmark.

At the valuation date, decedent owned less than 25 percent of the total outstanding shares of both class B and class C common stock. The remaining outstanding shares of class B and class C common stock not held by decedent at the valuation date were held by or for his descendants. All class A preferred stock was held by the plan.

**Policy to Keep Hallmark Private**

Hallmark maintained a policy against public disclosure of financial information. As of the valuation date, it had always been and continued to be Hallmark’s policy to remain a privately held company.

Decedent’s objective in ensuring that Hallmark remained a private company was to retain the ability to make long-range decisions without worrying about short-term earnings and stock prices. As a private corporation, Hallmark had a greater ability to maintain the confidentiality of its operating information as well as to save the cost and management time public companies must spend for regulatory and compliance requirements.
Decedent’s policy (pg. 317) of keeping Hallmark a private corporation was shared by members of the Hall family and by the board of directors of Hallmark.

Decedent believed that three groups should share the ownership of Hallmark: the Hall family, Hallmark employees, and charities. Between 1930 and 1960, decedent and his wife transferred large blocks of Hallmark stock to long-term irrevocable trusts for their family. Gift tax was paid with respect to each transfer that was subject to tax.

Hallmark had a policy to inspire employee productivity and interest in the corporation’s results by offering employees the opportunity to participate in Hallmark’s success. In furtherance of this policy to provide incentives to a broad spectrum of employees, Hallmark established a profit-sharing plan in 1956.

Both decedent and his wife made substantial contributions to charities in the Kansas City area during their lifetimes. Both left the residue of their estates to charity, expressing a preference for the Hallmark Educational Foundation of Kansas (the foundation).

The policy of keeping Hallmark a private corporation was successful. At the valuation date, no Hallmark security had ever been listed on any public exchange or traded in any public market. Similarly, at the valuation date, no Hallmark security had ever been held except by private charitable foundations, by or for the Hall family, and by or for current or former employees.

**Voting Trust Agreement**

All of decedent’s class B common stock was held by a voting trust created under a voting trust agreement (voting trust) dated December 4, 1968. The voting trust held 54.6 percent of Hallmark's total outstanding shares of class B common stock. Decedent owned 43.3 percent of the class B shares subject to the voting trust.

Pursuant to a 1981 amendment, the voting trust provided for five voting trustees. Of these five trustees, one was designated as the Hallmark trustee and was elected by the other trustees from among Hallmark’s outside directors for a 1-year term. The remaining four trustees were elected for staggered 4-year terms by vote of the other trustees. At the valuation date, the voting trustees were decedent, his son, his two daughters, and Irvine O. Hockaday, Jr., the Hallmark trustee.

The voting trust, as amended, provided that by action of any three trustees, the trustees had the exclusive right to vote the shares of class B common stock deposited in the voting trust with respect to the election of Hallmark’s directors and to vote on all other matters on which a vote of class B common shares was required or permitted. A vote of 79 percent of the voting trust certificate holders, however, was required before the voting trustees could vote to liquidate or merge Hallmark or sell all the shares in the voting trust. Under its terms, the voting trust will remain in effect until after the middle of the next century. The voting trust could be dissolved only upon the vote of the holders of 79 percent of the voting trust certificates and a majority of the trustees of the voting trust.

**Stock Transfer Restrictions**

All classes of Hallmark stock were subject to share transfer restrictions; however, there were more transfer restrictions on the class B common stock than there were on the other classes of shares. All shares of class B common stock not subject to the voting
trust, as well as all voting trust certificates (including the certificates held by decedent), were subject to the restrictions set forth in the 1963 indenture.

The 1963 indenture, as amended, provided that the class B common stock could not be transferred to any person other than a "permitted transferee" (as defined in the 1963 indenture) without first being offered for purchase, initially to Hallmark and thereafter to the other class B shareholders. "Permitted transferees" included Hallmark, members of the Hall family or their estates, and trusts for their benefit.

In addition, the 1963 indenture provided that class B common shares could be purchased at a price equal to the then prevailing adjusted book value, and permitted the purchaser to elect to pay only 10 percent of the purchase price in cash with the balance to be paid in nine equal annual installments with interest of 5 percent. If the first refusal rights were not exercised and a class B share [pg. 319] interest passed to an "outside" holder, that interest remained subject to the same rights of first refusal upon any subsequent proposed transfer. The "outside" shares were also subject to a continuing call under which Hallmark's board of directors could require the holder to sell the shares to Hallmark or other holders of first refusal rights on the terms set forth above.

The restated articles provided that no class C common shares could be transferred, other than to a "permitted transferee," without first being offered to Hallmark and to the other class C shareholders in accordance with procedures set forth in the restated articles.

1974 Buy-Sell Agreement

Decedent, Hallmark, and U.S. Trust Co. of New York (U.S. Trust), as trustee of the Hallmark Employee Profit-Sharing and Ownership Plan (the plan), entered into an agreement dated November 4, 1974. Decedent agreed that on his death his executor would sell to U.S. Trust, and U.S. Trust agreed that it would buy, approximately two-thirds of decedent's Hallmark stock at the current adjusted book value.

In connection with a 1977 recapitalization of Hallmark, the plan exchanged all of its shares of class B voting common stock for shares of nonvoting class A preferred stock having the same aggregate adjusted book value. In 1978, the buy-sell agreement was amended to release decedent from his obligation to sell class B voting common stock and to substitute an obligation to sell class A preferred stock.

Following a 1980 recapitalization, the buy-sell agreement was changed to permit decedent's executor to deliver to Hallmark shares of class C stock having the same aggregate adjusted book value as (a) 1,250,000 shares of class B stock and (b) 48,750,000 shares of class C stock. Hallmark was obligated to issue to the estate shares of class A preferred stock having the same aggregate adjusted book value.

At decedent's death, his estate plan was carried out as he intended. Decedent's executor exchanged 50,068,691 shares of class C common stock for 47,460,612 shares of class A [pg. 320]preferred stock. The class A shares were sold to the plan for the sum of $94,046,525, the adjusted book value of those shares as of December 31, 1981.

1981 Option Agreement

Decedent and Hallmark entered into an option agreement granting Hallmark an option to buy decedent's shares of class C common stock not subject to the 1974 buy-sell agreement at a fixed price equal to the December 31, 1981, adjusted book value of the
shares as computed by Hallmark. At decedent's death, Hallmark's outside directors voted
to exercise the option, and acquired the remainder of decedent's class C common stock
for the cash price of $37,593,877.31, the adjusted book value of those shares as of
December 31, 1981.

Adjusted Book Value

Hallmark maintained its financial records on a calendar year basis. Hallmark used
adjusted book value to establish the price of its stock for the purposes of the transfer
restrictions as well as to value participation in and termination of individual employee
accounts in the plan.

Adjusted book value was computed once per year at the end of each calendar year. The
1963 indenture and the restated articles provided that the computation of adjusted book
value began with Hallmark's book value per share. A goodwill premium was added to
book value if average return on equity for the previous 5 years exceeded 10 percent.
Alternatively, a goodwill discount was deducted from book value if average return on
equity fell below 10 percent. The goodwill premium or discount was computed by taking
Hallmark's average earnings per share for the previous 5 years, subtracting 10 percent of
the book value per share, and multiplying the result by 5.

In computing adjusted book value, an additional adjustment was made to account for
differences in voting rights and liquidation and dividend preferences. A premium, 5
percent of the unadjusted class B book value per share, was added to class B common
shares because this class of stock had voting power. Similarly, a 5-percent premium was
added to class A preferred shares because this class of stock had liquidation and
dividend preferences. A discount, equal to the aggregate premium added to the class A
preferred and class B common shares divided by the number of class C common shares,
was subtracted from class C shares because this class of stock did not have voting rights
or dividend or liquidation preferences.

At the valuation date, Hallmark computed the adjusted book value at $1.98157 per class
B common share and $1.87835 per class C common share.

The Greeting Card Industry

Although greeting card dollar sales nearly doubled from 1972 to 1981, this dollar growth
was primarily the result of inflation and some substantial price increases. At the valuation
date, Hallmark was part of a mature industry that was not growing in real terms.

Two factors at the time of the valuation date were considered immediate and material
threats to the greeting card industry. In the year prior to the valuation date, there had
been two price increases in the cost of a first-class postage stamp. In March 1981, the
cost of a first-class stamp jumped 20 percent, from 15 cents to 18 cents. Just 7 months
later, in November 1981, the postal service raised the price of a first-class stamp again,
to 20 cents, an 11-percent increase. These increased postal rates, accompanied by less
reliable mail delivery service, were painful to the greeting card industry.

The telephone had long been an alternative to the greeting card. At the time of the
valuation date, long-distance telephone rates were expected to decrease due to the
proposed breakup of AT&T and increased competition from such companies as MCI and
Sprint. The lower cost of telephone service, like the increase in postal rates, worked to
slow the growth of the greeting card market.
Hallmark's Position in the Greeting Card Industry

At the valuation date, two firms were leaders in the greeting card industry, Hallmark and American Greetings Corp. (American Greetings). Together, the two firms held [pg. 322]approximately 68 percent of the greeting card market. Although Hallmark was the larger of the two firms, American Greetings was better positioned in the faster growing mass distribution market.

Although the class distribution channels still maintained a greater share of the market than the mass channels, from 1979 to 1981 the mass channels gained 11.4 percent of market share, whereas the class channels lost 3.5 percent of market share. The fastest growing distribution channel at the time of the valuation date was food stores. In this channel, American Greetings had a 51.2-percent share compared to Hallmark's 38.1-percent share. The channel in which Hallmark was dominant, the card and specialty shop channel, had become saturated by the valuation date and fewer of the larger regional malls where most card shops were located were expected to open. The negative growth in the card and specialty shop channel, coupled with a channel shift towards the more competitive convenience channels in which Hallmark was not the dominant force, diminished Hallmark's growth prospects.

Financial Condition of Hallmark

Despite Hallmark's diversification efforts, at the valuation date its earnings remained totally dependent on greeting cards. In 1981, Hallmark's sales of greeting cards alone accounted for approximately 50 percent of sales and 96 percent of profits. Although its future growth prospects were diminished, Hallmark experienced significant growth in market share and net sales during the 5-year period 1978 through 1982. During this period, Hallmark maintained a strong financial position, with minimal leverage and a large surplus of working capital.

At the valuation date, approximately 112 suits were pending against Hallmark and Crown Center resulting from the Hyatt Skywalk disaster. The individual plaintiffs in these actions were seeking in the aggregate more than $1 [pg. 323]billion in compensatory damages and approximately as much in punitive damages.

In addition, as of the valuation date it was expected that plaintiffs in a pending Federal court class action would seek an additional $500 million in punitive damages against Hallmark and Crown Center. All of these plaintiffs were claiming there could be multiple punitive damages awards under Missouri law, and there was no Missouri case on point to the contrary. It was unclear whether the insurance policies carried by Hallmark and Crown Center would provide coverage for punitive damages. Hallmark and its counsel believed that the outcome of these lawsuits would not have a material adverse effect on its consolidated financial position. Shortly prior to the valuation date, these beliefs were communicated to the public accounting firms employed by Hallmark to prepare its financial statements.

Economic Conditions at the Valuation Date

At the valuation date, the American economy was experiencing a transition from a recession to a recovery. Interest rates had come down, the stock market was suddenly and sharply moving higher, and inflation was moderating. The Federal Funds rate had decreased from 15.3 percent to 9.4 percent in 1 year, and the American dollar was very
strong. At the valuation date, the average price-to-earnings ratio for Standard and Poor's 500 Stocks was 9.9, and the ratio for the Dow Jones 30 Industrials was 9.4.

**Expert Valuations**

Petitioner's expert witnesses, George B. Weiksner (Weiksner) and William A. Shutzer (Shutzer), and respondent's expert witness, Lynn McCrary (McCrary), valued the stock in issue. Because of fundamental differences in approach between respondent's and petitioner's experts, particularly with respect to the effect of the transfer restrictions on the Hallmark stock, the amounts arrived at in the valuations were extremely far apart. The experts all concluded that, as of the valuation date, there existed only one publicly traded greeting card company, American Greetings, that was comparable to Hallmark. Petitioner's experts, [pg. 324]therefore, selected additional comparable companies from other industries because they believed that comparing Hallmark with only one company would be potentially misleading. Respondent's expert, however, based his determination on only one comparable company, American Greetings.

From their estimates based on comparable companies, petitioner's experts deducted a percentage discount because shares in Hallmark were closely held rather than publicly traded, and were subject to voting restrictions. Respondent's expert, however, added a percentage "market premium" to his estimate of Hallmark share values vis-à-vis American Greetings share values. Respondent's expert then deducted a percentage discount to reflect decedent's minority share interest in Hallmark, but did not deduct any discount for voting restrictions.

The following chart lists the different values arrived at by petitioner's experts, Shutzer and Weiksner, and respondent's expert, McCrary:

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<th>Class A</th>
<th>Class B</th>
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<td>Weiksner</td>
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<td>$1.87835</td>
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<td>Shutzer</td>
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<td>1.59707</td>
<td>1.59544</td>
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<td>McCrary</td>
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**Weiksner**

In 1982, petitioner retained the First Boston Corp. (First Boston), an investment banking firm, to value Hallmark class A preferred stock and class B and class C common stock as of the valuation date. Weiksner was a managing director of First Boston and participated in the appraisal of the Hallmark stock. In November 1982, First Boston determined that the class A preferred stock had a fair market value of $1.98157 per share, the class B common stock had a fair market value of $1.98157 per share, and the class C common stock had a fair market value of $1.87835 per share.

Petitioner reported on its estate tax return the 70,083,000 shares of class C common stock and the 1,797,000 class B voting trust certificates at the values for which First Boston appraised the shares in its report dated November 17, 1982. First Boston prepared an additional report dated[pg. 325] May 1988, in which it described in greater detail the valuation process that was used in 1982.

First Boston began its valuation by analyzing the greeting card industry and Hallmark's position therein. Next, First Boston examined Hallmark's financial statements for the 5 years immediately preceding the valuation date and computed various financial ratios. First Boston found that American Greetings, Hallmark's principal competitor, had
accelerating growth in sales and net income, improving profit margins, and a shift to the mass marketing distribution channel. At the valuation date, however, this competitive activity had not had an adverse impact on Hallmark's leading position in the greeting card industry.

First Boston conducted a study to evaluate the accuracy of the Hallmark formula for computing adjusted book value of its stock by using the Hallmark formula to value the stock of comparable companies for a 10-year period ending with the valuation date. First Boston believed that a number of comparable companies must be analyzed, and that comparison to a single company was not sufficient, even if such company were the principal competitor of the company being valued.

Accordingly, First Boston selected six companies for comparison with Hallmark. In addition to American Greetings, First Boston chose A.T. Cross Co., a leading manufacturer of writing instruments; Avon Products, Inc., the world's largest manufacturer of cosmetics, fragrances, and fashion jewelry; The Coca-Cola Co., the largest maker of soft drinks; Lenox, Inc., the nation's leading producer of fine china; and Papercraft Corp., a manufacturer of gift wrap items and household products. First Boston believed that these companies provided useful comparisons because they produced brand name consumer goods, were leading companies in their industries, had publicly traded common stock, and had business and financial characteristics similar to Hallmark.

After selecting the comparable companies, First Boston calculated adjusted book values for each company according to the Hallmark formula for the years 1973 to 1982. First Boston then compiled the annual high and low common stock prices, adjusted for stock splits, for the comparable [pg. 326] companies over the same time period. Because Hallmark stock was privately held, First Boston discounted the stock prices of the comparable companies by 35 percent to estimate private company stock values for each comparable.

In general, the adjusted book value for each of the comparable companies was between the high and low stock prices for each year. The adjusted book value of American Greetings, Hallmark's most direct competitor, was greater than its high stock price in 6 of the 10 years prior to the valuation date. Based on the results of this study of the Hallmark adjusted book value formula, First Boston concluded that the Hallmark formula provided a reasonable estimate of the fair market value of Hallmark stock at the valuation date. First Boston, therefore, computed a final value of $1.98157 and $1.87835 per share for the class B and class C common stock, respectively.

**Shutzer**

In February 1986, petitioner retained Shearson Lehman Hutton Inc. (Shearson Lehman), an investment banking firm, to value Hallmark stock at the valuation date. Shutzer was a managing director of Shearson Lehman and participated in the appraisal of the Hallmark stock. In May 1988, Shearson Lehman determined that the class B common stock had a fair market value of $1.59707 per share, and the class C common stock had a fair market value of $1.59544 per share. Shutzer communicated these values to petitioner prior to Shearson Lehman's receiving any notice of the values reported on decedent's estate tax return or the conclusions reached by Weiksner or McCrory. Shearson Lehman prepared a detailed report dated May 1988 supporting its opinion as to Hallmark stock values, and Shutzer was petitioner's principal expert witness at trial.

The valuation process used and the conclusions reached by Shearson Lehman were similar to those of First Boston. After performing a detailed analysis of Hallmark, the
greeting card industry, and economic conditions as of the valuation date, Shearson Lehman compared Hallmark with American Greetings as well as 15 other comparable companies. Shearson Lehman believed that considering several comparable companies reduced the probability that individual characteristics, temporary market inefficiencies, or aberrations relating to one company might bias the valuation analysis.

Although American Greetings was Hallmark’s most proximate publicly held competitor, Shearson Lehman believed that this broad group of comparable companies shared one or more of the following similarities with Hallmark:

1. sold low-cost, consumer, nondurable goods through channels similar to those used by greeting card companies;
2. had a stable, high-profile, quality reputation with the consumer and a leading brand name;
3. sold products in which the images of both the product and the company and the product’s function were differentiable from that of its competitors; and
4. sold products that involved some element of social expression.

In addition to the companies selected on the basis of the criteria described above, Shearson Lehman also selected four other companies that were comparable to Hallmark in that they were leaders in their respective industries and possessed excellent financial records: McDonald’s, Anheuser Busch, IBM, and Coca-Cola. Each of these additional comparable companies was highly regarded by the investment community for its quality management, leading market position, and excellent financial condition. Had Hallmark stock been publicly traded, Shearson Lehman believed it would have enjoyed a similar reputation.

Shearson Lehman believed that an investor might use one or more of the following valuation ratios in valuing closely held stock:

1. price-to-earnings, the current market price per share divided by earnings per share;
2. market-to-book, the current market price per share divided by common book value or net worth per share;
3. dividend capitalization, the annual dividends per share divided by the current market price per share;
4. adjusted operating return on total capitalization, income from operations plus interest income and depreciation divided by the current market value of total outstanding common shares plus long-term debt and other long-term liabilities; and
5. market price to net revenues, current market price per share divided by net revenues per share.

Although current market price is an element of each of the above ratios, an investor can appraise a closely held stock by determining all elements of the ratio other than current market price and then estimating the aggregate ratio by comparisons with publicly traded companies whose ratios are readily available. Of these market valuation ratios, Shearson Lehman believed that the price-to-earnings multiple most directly and unambiguously reflected the financial market’s assessment of the future earnings potential of a business. According to Shearson Lehman, the price-to-earnings ratio was the ratio it and other leading investment banking firms utilized for stock and business valuations, and was the ratio most often considered by investors.
Chapter 8. Overview of the Market Approach

Shearson Lehman believed that the other valuation ratios were not useful in valuing Hallmark stock. Shearson Lehman considered the market-to-book ratio to be an unreliable indicator of current value because historic asset cost often did not reflect future earnings potential. Shearson Lehman believed that dividend capitalization was a useful method for determining market value for companies in industries in which reinvestment opportunities are limited by economics or law. Because there were no such limitations on Hallmark's reinvestment opportunities, Shearson Lehman believed the dividend capitalization ratio was of little use in valuing Hallmark common stock. Similarly, Shearson Lehman believed that the adjusted operating return on total capitalization ratio was misleading for manufacturing businesses like Hallmark that must reinvest their cashflow into operations. Shearson Lehman considered the market price to net revenues ratio to be useful where the subject company, unlike Hallmark, had extremely high growth expectations and little current income. This valuation method, however, fails to reflect a company's fundamental operating characteristics, and was considered misleading when comparing companies in different industries. Shearson Lehman, therefore, primarily relied on the price-to-earnings ratio in valuing Hallmark common stock through a comparable company analysis.

Shearson Lehman did not, however, rely exclusively upon historical earnings or earnings-based financial data in valuing Hallmark stock. In estimating the price-to-earnings ratio for which Hallmark's common stock would trade in a public market, Shearson Lehman carefully compared Hallmark with each of the comparable companies and considered all factors that Shearson Lehman believed might affect that ratio. In addition to earnings data, these factors included the U.S. economy, the greeting card industry, Hallmark's position in that industry, the competitive environment, and Hallmark's growth potential. Shearson Lehman also estimated the effects of the large potential liabilities arising from the legal claims associated with the Hyatt Skywalk disaster.

Shearson Lehman concluded that Hallmark stock would sell for a lower multiple of earnings than would American Greetings, even though Hallmark was the leading firm in its industry and American Greetings was a smaller competitor. Shearson Lehman found that other leading firms considered in their analysis also traded at a lower multiple than their smaller competitors. Shearson Lehman believed that investors were more concerned with future growth opportunities than with absolute size, which reflects past accomplishments. When future growth expectations for a small company are greater than those for a larger, stronger competitor, the smaller company will trade at a higher price-to-earnings multiple.

After estimating a preliminary price-to-earnings ratio of Hallmark stock based upon comparisons of Hallmark with each of the comparable companies, Shearson Lehman adjusted this preliminary price-to-earnings ratio by 20 percent to take into account the negative effects of the Hyatt Skywalk litigation on Hallmark's public market value. Shearson Lehman then undertook similar comparative analyses using the market-to-book and adjusted operating return on total capitalization ratios. The results of these alternative methods confirmed the reasonableness of the adjusted preliminary price-to-earnings ratio. Shearson Lehman also examined Hallmark's balance sheet and considered whether the value of Hallmark's assets might justify a higher valuation for Hallmark's stock than an appraisal using the price-to-earnings method. Because Hallmark's assets consisted primarily of specialized manufacturing and office equipment, Shearson Lehman concluded that the liquidation value of Hallmark's assets would not exceed the adjusted preliminary price-to-earnings valuation.

Shearson Lehman concluded that all classes of Hallmark common shares would trade in a public market for $3.16 per share, computed by multiplying the adjusted preliminary
price-earnings ratio by Hallmark’s 1982 earnings per share. Shearson Lehman then discounted the $3.16 figure by 36 percent to reflect the lack of liquidity and voting restrictions applicable to the Hallmark stock, yielding an unrestricted/illiquid value of $2.02 per share. Shearson Lehman, however, believed that the $2.02 value ignored the complex transfer restrictions that governed transfers of Hallmark stock at the valuation date. Without considering the specific restrictions on Hallmark stock, Shearson Lehman believed that the existence of any sale or transfer restrictions on any investment asset reduced the value of that asset to a potential buyer.

As described above, the price at which Hallmark securities could be purchased pursuant to the transfer restrictions was the adjusted book value of the shares. The transfer restrictions essentially provided Hallmark and the existing shareholders with rights of first refusal to purchase the securities at their adjusted book values each time the securities were offered for sale to a third party. Those exercising the rights of first refusal could elect to pay 10 percent of the purchase price in the year of the purchase, and pay the remainder over 9 years with notes bearing interest at 5 percent. Shearson Lehman did not believe that an investor would buy Hallmark shares and attempt through risky, costly, and time-consuming litigation to have these transfer restrictions removed. Shearson Lehman believed, therefore, that the effect of the transfer restrictions was to set a maximum value at which Hallmark securities would trade, regardless of the higher unrestricted/illiquid value calculated above.

In summary, Shearson Lehman concluded that, due to the trading restrictions governing the securities and the fact that the restrictions permitted payment with 10-percent cash and the remainder in 9-year below-market notes, at the [pg. 331]valuation date the restricted value of Hallmark Class B and Class C stock was approximately $1.60 per share.

McCrary

McCrary was a senior vice president of Philadelphia Capital Advisors (PCA), a firm specializing in investment analysis and business valuation. Respondent engaged PCA in 1985 to value Hallmark stock as of the valuation date. The values for Hallmark class B voting trust certificates and class C common stock set forth in the notice of deficiency were based on a report submitted to respondent by PCA on January 9, 1986.

The PCA report provided both a business enterprise valuation and a minority share valuation for the shares in issue. PCA noted that the business enterprise valuation applied to the sale of an entire company as a going concern, while the minority share valuation applied to any number of shares less than 50 percent of the total outstanding shares.

PCA used two major techniques to develop both the business enterprise and the minority share valuations for Hallmark shares: the market comparison approach and the income capitalization approach. Like petitioner’s experts, respondent’s expert also compared Hallmark to a similar company. PCA noted in its valuation report that:

A prudent investor essentially views anticipated dividends and market appreciation as a potential return on his investment commensurate with the risks and hazards involved and in consonance with a wide range of alternate, identically-risky investment opportunities.

In performing its comparative analysis, however, PCA selected only one comparable company, American Greetings. In selecting the appropriate market comparison ratios, PCA gave consideration to four major factors: (1) Reasonably similar companies; (2)
respective industry grouping; (3) economic climate; and (4) stock market environment. After reviewing representative publicly traded industry groupings and firms, PCA concluded that American Greetings was the only reasonably comparable company to Hallmark because it had a similar product mix and capital structure and served the same markets.

PCA noted that, at the valuation date, Hallmark was larger and more profitable than American Greetings. PCA, [pg. 332]therefore, presumed a “functional relationship” between price-to-earnings ratios and earnings growth. PCA, however, provided no theoretical or empirical research to support the use of this “functional relationship” to value equity securities.

Based on this “functional relationship” between price-to-earnings ratios and earnings growth, PCA concluded that, if it were publicly traded, Hallmark stock would command a "market premium" over American Greetings of not less than 118 percent. In deriving a price-to-earnings ratio for Hallmark, however, PCA compared Hallmark's earnings for the 5-year period ended December 31, 1982, with American Greetings' earnings for the 5-year period ended February 28, 1982.

PCA applied this 118 percent "market premium" to American Greetings' market ratios to arrive at the market ratios applicable to Hallmark. PCA then applied an additional 48-percent control premium and concluded that the market comparison approach indicated a business enterprise value of $8.05 per share, if Hallmark stock had been publicly traded at the valuation date.

PCA also used the income capitalization approach, a technique whereby fair market value is determined based on the value of the cash flow that an asset can be expected to generate over its useful life. In calculating Hallmark's projected cash-flow, PCA began its analysis with Hallmark's reported net income and added back the noncash charges for depreciation. PCA, however, did not add back to reported net income any noncash charges for deferred taxes and did not subtract from reported net income any estimated cash needs for future capital expenditures and increases in working capital.

After calculating Hallmark's projected cash-flow, PCA discounted this cash-flow using a "weighted average cost of capital" which combined both an equity discount rate as well as a debt discount rate. PCA thus determined that the business enterprise value of Hallmark's stock under the income capitalization approach was $6.49 per share.

PCA then calculated a weighted average business enterprise value by weighting the two previously computed values as follows: 65 percent to the value calculated under [pg. 333]the market comparison approach and 35 percent to the value calculated under the income capitalization approach. PCA thus determined that the weighted average business enterprise value of Hallmark's stock was $7.50 per share, exclusive of Crown Center. PCA calculated the net book value of Crown Center as of December 31, 1982, at $0.12 per share. PCA then added these two figures to determine the total business enterprise value of Hallmark's stock at the valuation date as $7.62 per share.

PCA also used the market comparison and income capitalization techniques to calculate a minority share valuation for Hallmark shares. As it had done in calculating the business enterprise valuation under the market comparison approach, PCA applied the previously determined "functional relationship" between price-to-earnings ratios and earnings growth to determine that Hallmark stock would command a "market premium" of not less than 118 percent over American Greetings stock. PCA thus concluded that the minority share value of Hallmark stock under the market comparison approach was $5.11.
Similarly, as it had done in calculating the business enterprise valuation under the income capitalization approach, PCA calculated Hallmark’s discounted cash-flow using the projected cash-flow and the weighted cost of capital discussed above. PCA then discounted this figure by 32 percent to arrive at a minority share value of Hallmark stock under the income capitalization approach of $4.04.

PCA then calculated a weighted average minority share valuation by weighting the market comparison value by 65 percent and the income capitalization value by 35 percent. PCA thus determined that the weighted average minority share value of Hallmark stock was $4.49. To reflect the lack of voting rights for Hallmark’s Class A preferred stock and Class C common stock, PCA discounted the $4.49 per share value by 5 percent.

PCA’s appraisal gave no consideration to the transfer restrictions in the restated articles of incorporation, nor to the voting trust agreement. PCA did, however, apply a 5-percent discount to reflect the lack of marketability associated with shares of a closely held company. PCA calculated this discount by estimating the flotation costs of an initial public offering by which Hallmark could “go public.” After applying this discount for lack of marketability, PCA concluded that the minority share value of Hallmark Class A and Class C stock was $4.27, and the minority share value of the Class B stock was $4.49 at the valuation date.

ULTIMATE FINDINGS OF FACT

The fair market values of the voting trust certificates of Hallmark Class B common stock and of the Hallmark Class C common shares includable in decedent’s gross estate equaled the adjusted book values per share on the valuation date.

OPINION

Petitioner contends that, as a matter of law, the 1974 buy-sell agreement and the 1981 option agreement fixed the value of decedent’s Class C stock for Federal estate tax purposes and that, in any event, the value of all of decedent’s stock was the price set in the first refusal restriction. Petitioner relies on cases such as Bradrick v. Gore, 224 F.2d 892, 896 (10th Cir. 1955); Lomb v. Sugden, 82 F.2d 166, 167-168 (2d Cir. 1936); Wilson v. Bowers, 57 F.2d 682, 683-684 (2d Cir. 1932); Estate of Bischoff v. Commissioner, 69 T.C. 32, 39-42 (1977); Fiorito v. Commissioner, 33 T.C. 440, 444 (1959); Estate of Littick v. Commissioner, 31 T.C. 181, 185-188 (1958); Estate of Well v. Commissioner, 22 T.C. 1267, 1273-1274 (1954).

Respondent attempts to distinguish the cases relied on by petitioner, arguing that the agreements purporting to fix the price of the stock should be disregarded because they were merely estate planning devices and serve no bona fide business purpose. Sec. 20.2031-2(h), Estate Tax Regs. As indicated above, respondent’s expert did not consider the effect of the agreements or the transfer restrictions on the value of the stock. McCrary testified during trial that he was instructed by respondent’s agents to ignore the transfer restrictions.

There is no justification, in our view, for totally ignoring the transfer restrictions in this case and the prices set in [pg. 335]the buy-sell and option agreements. Despite
respondent’s suspicion and speculation about decedent’s estate planning and testamentary objectives, there is no persuasive evidence to support a finding that the restrictions, or the offers to sell set forth in the agreements, were not susceptible of enforcement or would not be enforced by persons entitled to purchase under them.

Respondent argues that the buy-sell agreement, for example, merely “incidentally coincided with” the policy of keeping Hallmark private. This assertion is no more convincing than one that the agreements and transfer restrictions merely “incidentally coincided with” decedent’s testamentary objectives. Agreements and restrictions not invalid on their face cannot be disregarded on such tenuous evidence of coincidence.

We need not here conclude, however, that the agreements indelibly fixed the value of the stock for estate tax purposes. We can avoid drawing inferences concerning the relative importance of decedent’s motivations in entering into or instigating various agreements over the decades prior to his death, and can concentrate on the more objective evidence of fair market value. After weighing the respective opinions of the parties’ experts, we cannot conclude that the fair market value is more than the adjusted book value of the stock.

Property includable in a decedent’s gross estate is generally included at its fair market value on the date of the decedent’s death. Sec. 2031(a); 2 sec. 20.2031-1(b), Estate Tax Regs. Fair market value is the price at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts. United States v. Cartwright, 411 U.S. 546, 551 (1973); sec. 20.2031-1(b), Estate Tax Regs. The trier of fact must weigh all relevant evidence and draw appropriate inferences. Hamm v. Commissioner, 325 F.2d 934, 938 (8th Cir. 1963), afig. a Memorandum Opinion of this Court; Estate of Andrews v. Commissioner, 79 T.C. 938 (1982).[pg. 336]

In determining the value of unlisted stocks, actual arm’s-length sales of such stock in the normal course of business within a reasonable time before or after the valuation date are the best criteria of market value. Estate of Andrews v. Commissioner, 79 T.C. at 940. Neither petitioner nor respondent argues, however, that the sales between petitioner and the plan or between petitioner and members of the Hall family after the valuation date are factors to be considered in establishing the value of decedent’s stock at the valuation date.

In the absence of arm’s-length sales, the value of closely held stock should be based upon, in addition to all other factors, the value of listed stock of corporations engaged in the same or a similar line of business. Sec. 2031(b). The value of closely held stock must also be determined indirectly by weighing the corporation’s net worth, prospective earning power, dividend-paying capacity, and “other relevant factors.” Estate of Andrews v. Commissioner, 79 T.C. at 940; sec. 20.2031-2(f), Estate Tax Regs. These other relevant factors include the goodwill of the business, the economic outlook in the particular industry, the company’s position in the industry and its management, and the degree of control represented by the block of stock to be valued. Sec. 20.2031-2(f), Estate Tax Regs., provides:

(f) Where selling prices or bid and asked prices are unavailable. If the provisions of paragraphs (b), (c), and (d) of this section are inapplicable because actual sale prices and bona fide bid and asked prices are lacking, then the fair market value is to be determined by taking the following factors into consideration:
(1) In the case of corporate or other bonds, the soundness of the
security, the interest yield, the date of maturity, and other relevant
factors; and
(2) In the case of shares of stock, the company’s net worth,
prospective earning power and dividend-paying capacity, and other
relevant factors.

Respondent contends that Hallmark's adjusted book value was not the fair market value
of decedent's stock because under the transfer restrictions, sales could have been made
at a higher price to "permitted transferees." This contention fails for several reasons.
Under the hypothetical willing buyer/willing seller standard, decedent's [pg. 337] stock
cannot be valued by assuming that sales would be made to any particular person. In
particular, we may not assume that the purchaser is a member of decedent's family.

Propstra v. United States, 680 F.2d 1248, 1251-1252 (9th Cir. 1982); Estate of Bright
v. United States, 658 F.2d 999, 1001 (5th Cir. 1981); Minahan v. Commissioner,
88 T.C. 492, 499 (1987); Estate of Andrews v. Commissioner, 79 T.C. 938, 954-56
(1982). Moreover, the court must not "permit the positing of transactions which are
unlikely and plainly contrary to the economic interest of a hypothetical buyer." Estate of
Curry v. United States, 706 F.2d 1424, 1429 (7th Cir. 1983). There is nothing in the
record to suggest that there was even a remote possibility that any investor, including a
permitted transferee, would purchase Hallmark shares at a price higher than adjusted
book value. Despite the existence of permitted transferees for over 50 years, there has
never been a purchase or transfer of Hallmark stock at more than its adjusted book
value.

Respondent also contends that the transfer restrictions on Hallmark stock should be
ignored because of decedent's success over the years in changing the categories of
permitted transferees. Decedent, as a minority shareholder, could not unilaterally amend
or terminate the transfer restrictions. The changes over the years within the three basic
categories of permitted transferees—the Hall family, Hallmark employees, and charity—
do not give rise to the inference that the transfer restrictions would be terminated or
changed to permit transfers outside that limited group. Instead, the parties have
stipulated that there has never been a proposal to sell stock to an outsider, and the
transfer restrictions have never been changed to permit transfers other than transfers to
or for the benefit of the Hall family. All of the evidence supports the conclusion that
Hallmark's owners intended to maintain the privately held status of the corporation.

Petitioner, on the other hand, now contends that the fair market value of the stock was
less than the adjusted book value, relying on Shearson Lehman's valuation. The stock
was reported on decedent's estate tax return at adjusted book value, and the reported
values are an admission by petitioner, so that lower values cannot be substituted [pg.
338] without cogent proof that the reported values were erroneous.

Each of the experts, appropriately, was purporting to determine the price at which the
stock would have traded publicly if it were publicly held. Those methods are necessarily
imprecise and involve estimates, and estimates and approximations are generally less
reliable than evidence of actual sales of the property to be valued. See Tripp v.
Commissioner, 337 F.2d 432, 434-435 (7th Cir. 1964), affg. a Memorandum Opinion
of this Court.

The differences among the expert valuations in this case demonstrate the caution that is
necessary in weighing expert valuations that zealously attempt "to infuse a talismanic
precision into an issue which should frankly be recognized as inherently imprecise. 

(Messing v. Commissioner, 84 T.C. 722, 734-735 (1985).)

In this case, there is no question that the expert witnesses were qualified to state the opinions expressed by them. Respondent's expert, McCrary, however, was particularly hampered by respondent's instruction that he ignore any effect on value of the transfer restrictions and the agreements.

Although McCrary testified only as to the unrestricted value of the stock, he admitted that restrictions on the transferability of stock were factors to be considered "from a buyer's point of view," and that transfer restrictions would have an effect on value. Because the hypothetical buyer assumed in the definition of fair market value, i.e., [pg. 339]one "having reasonable knowledge of relevant facts," would give some consideration to the effect of the restrictions, McCrary's opinion of unrestricted value of the stock is not reasonable or reliable evidence of fair market value.

Moreover, it is inconceivable to us that a potential buyer of Hallmark stock would consider only one alternative "comparable," i.e., American Greetings stock. The parties agree that American Greetings is the publicly traded company whose products are most comparable to Hallmark's, and all three experts treated it as such. Having made the comparison between Hallmark and American Greetings, however, petitioner's experts concluded that an investor would have taken other factors into account. In valuing shares of a closely held corporation, the value of publicly traded comparable companies is but one factor of many to be taken into account. Sec. 2031(b); sec. 20.2031-2(f), Estate Tax Regs.

Respondent argues that it is "simply wrong as a matter of law" to look beyond the single, publicly held company engaged in the sale of greeting cards to other companies engaged in the sale of other types of consumer nondurable goods or having similar financial characteristics. Respondent's argument too narrowly construes the concept of comparability and ignores the use of "similar" as well as "same" in section 2031(b).

Respondent relies on Northern Trust Co., Transferee v. Commissioner, 87 T.C. 349, 376 (1986), affd. sub nom. Citizens Bank & Trust Co. v. Commissioner, 839 F.2d 1249 (7th Cir. 1988). That case, however, rejected expert opinions based on companies that were found to be noncomparable and concluded that "the market comparable approach is not available in this case." 87 T.C. at 377. That opinion does not justify using a market comparable approach based on a single competitor.

Respondent and McCrary describe the PCA valuation as based on a "funnel" approach. Even that terminology suggests inconsistency with the definition of fair market value. Finally, either accepting or rejecting the market comparable approach in this case would require rejection of respondent's expert report to the extent that it relies solely on comparisons to American Greetings.[pg. 340]
The PCA valuation report stated that the market comparison approach "utilizes financial and market data on publicly-traded securities of companies engaged in same or similar business pursuits to the subject company." PCA's application of the market comparison approach, however, did not apply this (correct) description. Any one company may have unique individual characteristics that may distort the comparison. Similarly, the good fortune of one company in an industry may be at the expense of its direct competitors; American Greetings' dominance in the rapidly growing mass distribution channels posed a threat to Hallmark, whose strength was in the mature class distribution channels. PCA's market comparison analysis is thus defective in that it relied on only one comparable company with sales in a different market channel.

In addition to the flaws in PCA's overall approach to its valuation, there are serious problems with its application of specific valuation methods. We note below the more egregious of those problems.

Under its market comparison approach, PCA posited a "functional relationship" between price-to-earnings ratios and earnings growth in order to arrive at a "market premium" of 118 percent for Hallmark over American Greetings. PCA provided no academic research or empirical evidence to support the use of this "functional relationship" to value equity securities, and McCrery admitted on cross-examination that when PCA's "functional relationship" was applied to sample pairs of companies, one leading company and one smaller aggressive competitor, the "functional" price-to-earnings ratios bore no relationship to the actual price-to-earnings ratios for those companies.

In deriving a price-to-earnings ratio for Hallmark, PCA considered American Greetings' earnings for the 5-year period ended February 28, 1982, approximately 8 months before the valuation date and 10 months before the period ended December 31, 1982, which was used for Hallmark's earnings. McCrery testified that if he had used American Greetings' earnings for the 5-year period ended February 28, 1983, a period more comparable to the 5-calendar-year period 1978 through 1982 used for Hallmark, his "functional relationship" would have produced substantial discounts [pg. 341] for Hallmark's price-to-earnings ratio when compared to American Greetings'.

In addition to the flaws in its market comparison valuation, PCA's income capitalization valuation had numerous defects. In its application of the discounted future cash-flow valuation, PCA incorrectly defined cash-flow as net income plus depreciation, omitting consideration of deferred taxes, capital expenditures, and increases in working capital. PCA also used a weighted average cost of capital that combined both debt and equity discount rates, rather than using the pure equity discount rate to capitalize the expected returns for an equity investor.

Finally, the PCA valuation applied a 5-percent discount for lack of marketability, based on the expected costs of an initial public offering of Hallmark common stock. As a minority shareholder, a purchaser of decedent's shares could not have forced Hallmark to "go public." Hallmark intended to remain closely held by the Hall family, and none of the common shareholders intended to sell any shares to outsiders, as of the valuation date. PCA's 5-percent discount is too low, and the greater discounts employed by petitioner's experts are within the range used in the vast majority of decided cases. See, e.g., Estate of Gilford v. Commissioner, 88 T.C. 38, 61 (1987); Estate of Oman v. Commissioner, T.C. Memo. 1987-71; Estate of Gallo v. Commissioner, T.C. Memo. 1985-363; Carter v. Commissioner, T.C. Memo. 1985-19.
Overall, we can only conclude that PCA was instructed to prepare and did prepare an analysis that led to an artificial and excessive value for the Hallmark stock. In contrast to PCA, petitioner's experts acted reasonably in selecting comparable companies in the similar businesses of consumer nondurable goods, in drawing conclusions based upon careful comparisons of Hallmark with individual comparables, and in relying primarily upon the price-to-earnings method of valuation to test the reasonableness of Hallmark's adjusted book value formula.

In one respect, petitioner failed to provide its expert Shearson Lehman with pertinent information that affects our view of the value of decedent's stock. Shearson Lehman adjusted a preliminary computation by 20 percent to take into account the negative effects of the Hyatt Skywalk litigation on Hallmark stock. Shutzer was not advised, however, that Hallmark and its counsel believed that the outcome of the lawsuits would not have a material adverse affect on its consolidated financial position—an opinion that presumably would have been conveyed by sellers to prospective buyers of Hallmark stock.

We are also not persuaded that an additional discount should be applied to reflect that the transfer restrictions on the stock permitted payment with 10-percent cash and remainder in notes bearing below market interest rates. Petitioner has not cited any precedent for applying this additional discount and has not persuaded us that such an approach is appropriate under these circumstances. Sales in the record were made for cash without resort to the favorable financing option.

We have no reason, however, to reject the opinion of First Boston. That opinion coincided with the admission on the estate tax return and with the price determined under the agreements. We are persuaded that it is the most reliable evidence of fair market value, and we adopt it.

In order to give effect to the stipulations of the parties,

Decision will be entered under Rule 155.

By agreement of the parties and order of the Court, numerous portions of the record were sealed at petitioner's request. Because most of such confidential evidence consists of sensitive financial information relating to Hallmark, we have, to the extent possible, minimized specific findings concerning Hallmark's financial condition. We have, nevertheless, considered the entire record, and our general findings are consistent therewith.

All section references are to the Internal Revenue Code as amended and in effect as of the date of decedent's death.

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Chapter 9. GPC Step 1 – Guideline Search and Selection

I. Overview of the Guideline Public Company Method

A. ASA’s BV Standards glossary defines this method as a method within the market approach whereby market multiples are derived from market prices of stocks of companies that are engaged in the same or similar lines of business and that are actively traded on a free and open market.

B. The essential characteristics of this appraisal method are:

1. Share prices of similar, actively traded publicly owned companies are applied to the subject company through valuation multiples.

2. Normally it is possible to select transactions on the date of value, or close to the date of value, assuring timeliness of the evidence.

II. ASA SBVS-1 Conceptual Framework for the GPC Method and Guidance for the Search for and Selection of GPCs

A. SBVS-1 addresses the guideline company valuation method for transactions involving either minority interests or control interests under the market approach.

1. SBVS-1, I explains that the purpose of the statement is to define and describe the requirements for the use of the guideline company valuation method, under Standard BVS – V, the Market Approach to Business Valuation.

2. SBVS-1, II provides the conceptual framework for the use of the guideline company valuation method as follows:

   a. Market transactions in securities can provide objective, empirical data for developing valuation ratios for use in business valuation.

   b. The development of valuation multiples from guideline companies should be considered in the valuation of businesses, business ownership interests, and securities to the extent that adequate information is available.

   c. Guideline public companies are those that provide a reasonable basis for comparison to the investment characteristics of the company being valued.

3. SBVS-1, III provides guidance on the search for a selection of guideline companies as follows:

   a. A thorough, objective search for guideline public companies is required to establish the credibility of the valuation analysis. The procedure must include criteria for screening and selecting guideline public companies.

   b. Guideline public company empirical data can be found in market based valuation ratios of guideline public companies that are engaged in the same or similar lines of business, and that are actively traded on a free and open market.
III. **GPC Selection Process**

A. The first step under the GPC method is to identify a group of publicly traded or acquired guideline companies which can be examined to derive valuation ratios/multiples that may be applied to the subject company data. Rarely are the guideline publicly traded companies strictly comparable to the subject. Since the appraiser is interested in comparability from an investment perspective, we need to find similar companies.

B. The following list of questions touches the tip of the iceberg when it comes to identifying possible GPCs. Ask the following:

1. What is the Business of the Subject Company.

2. What industry does the company participate in?
   a. Is the industry concentrated or fragmented?
   b. Is the industry capital intensive?

3. Is the company in one, two or more lines of business?
   a. If it has more than one line of business, how important are each of the business segments to the overall performance of the company? (Probably the most important measure of performance is profitability.)
   b. How closely related are these businesses?

4. What is the nature of the market?

5. What are the nature, level, and basis of competition?
   a. Is the company a market leader/follower?
   b. Does the company have distinctive competencies?

6. Does the company have advantageous intellectual capital?

7. Does the company operate locally, regionally, nationally or globally?

8. What has the financial performance of the company been like?

C. Your procedures for employing the guideline public company method may go something like the following:

1. **Creating a List of Potential Guideline Companies**
   a. The first step in each guideline public company analysis is to generate a list of potential guideline companies. It is important to consider as many potential guideline companies as possible, and that means that you must perform a thorough and comprehensive search to locate as many as possible.
2. Consider, at a minimum, these four sources for learning about or finding potential guideline companies:

   a. Management

      (i) A management interview is a useful part of every valuation assignment. While you are asking management everything that was on your questionnaire, make sure to specifically ask about any publicly traded competitors. Good managers have a real handle on their competitive environment and will know who their public competitors are. This is a good starting point for each guideline company search. This will also be very helpful because many databases that classify companies by SIC code use different codes for the same company. If you perform a search of a database and you do not come up with a company that management told you about, see what SIC code that company is categorized under and expand your search. You may find other companies there as well.

   b. SIC or NAICS code search (we are going to refer to these as SIC but NAICS can be substituted)

      (i) An intuitive starting point when you are back at your computer is an SIC code search. If you do not know the SIC code for the subject or are not sure if your subject is correctly defined, there are many sources for SIC code information. The Occupational Safety and Health Administration (OSHA) website site lists all SIC codes. This website allows you to review two, three, and four digit SIC code descriptions, which is helpful in determining the subject's SIC code.

      (ii) Remember that the goal of this exercise is to locate companies that are in a same or similar industry as the subject company. Using the information available on this site, you can research other SIC codes to determine if you could possibly use multiple codes to search for guideline companies.

      (iii) A useful tool on this page is the "SIC Search." This search allows a user to search SIC codes by keyword. If the subject manufactures metal pipe, for instance, you may want to search on "metal pipe." In addition to the subject company's SIC code, you have codes for all businesses that deal with metal pipe.

      (iv) Now that you have an SIC code or group of SIC codes, you can use one of many search engines to find companies by industry code. The question becomes which one to use. There are many free Web sites that allow you to get information about guideline companies. There are also many fee-based websites that charge without mercy. Basically, it works out that the higher the fees, the more services you sometimes get. The free sites have most of the same information; it's just not packaged as well.
(v) For free (or almost free) public company information, you can try out some of these sites:

(a) Securities Exchange Commission  
(www.sec.gov/edgar/searchedgar/webusers.htm)

(b) EDGAROnline (www.edgaronline.com)

(c) 10K Wizard (www.10kwizard.com)

(d) Each of these sites provides EDGAR filings with minimal or no charge. However, keep in mind that the search should also be performed with keywords, and not just SIC codes because many of these databases used the primary SIC code that appears in the header of the 10K that is filed by the company.

(e) These sites change regularly.

(f) EDGAROnline is available by subscription. Once you have subscribed, you can search by company name, ticker symbol, or SIC code. Simply plugging SIC code(s) into this search engine results in a list of companies in the subject's classification. It is always a good idea to print your search so that your work file includes sufficient documentation to support your work. You can print the screens as you go along.

(g) An alternative to using EDGAROnline is 10K Wizard. In addition to searching by SIC Code, 10K Wizard allows you to search by their own industry categorizations. The SIC Code search takes only a few minutes, and allows the analyst to quickly and easily develop a list of potential guideline companies. Previously, this search could take hours and sometimes days, in the library. The companies that show up in your search will be based on the SIC Code that is listed in the documents filed by the public company with the SEC.

(h) If the subject has one major business and a number of relatively small businesses, then the value of the overall company will be driven by the major business segment. If, on the other hand, the subject comprises numerous businesses which are relatively large, then its value is really that of a composite company. Finding comparable companies can be tricky. In the first case, the valuator should try to find companies engaged primarily in one business (sometimes referred to as “pure play” companies); the business being that of the subject. In the latter case, it is unlikely that other companies could be found with the same type of mix as the subject; therefore, pure play companies in all of the subject’s lines of business should be found.
c. Online databases

(i) There are a multitude of financial advice webpages in existence that will provide some type of industry analysis. These tools should not be substituted for performing a thorough industry analysis, but can serve as a useful tool in locating guideline companies. For instance, Hoover’s Online (www.hoovers.com) provides free industry lists on its website. However, these industry lists are nothing more than company names. Do not depend on these types of services as a sole source for locating guideline companies, but they do help to expand a potential guideline companies list.

(ii) Some of the more sophisticated databases allow you to put in a greater search criteria than those which were just described. For example, using a database such as Standard & Poor's or Disclosure, you can enter your search criteria, which may include the SIC Code, country of location, and maximum sales volume.

d. Industry research

(i) As previously discussed, an analyst should have a thorough understanding of the valuation subject and its industry. In performing your industry analysis, you will frequently become aware of publicly traded companies in the subject company’s industry. Trade journals and published industry reports are excellent tools for locating potential guideline companies. Another great source of information is industry experts. Business brokers, financial analysts, accountants and industry consultants can be excellent sources of information.

3. Get the Business Description

a. After the possible guideline companies are identified by the initial set of criteria, we used to examine the corporate description included in databases such as Standard & Poor's. Now, we look at the business descriptions that are included in the company's Form 10-K. Since access to the 10-K is free, we can view a more in-depth description than we used to do by looking at the databases. This allows us to look at the narrative about the possible guideline company to further determine if the company appears to be similar enough to use in our analysis.

b. From this description, you can find the business purpose, products, market segments, and many other significant pieces of information. You can use this information to perform a qualitative analysis of the potential guideline company.

c. Search engines can also be a valuable tool when finding information about the guideline companies. A quick search on a company name can turn up valuable information that may not have been picked up by a major news service. In addition to getting the 10-K, we generally will visit the company's Web site.
4. **Size Criteria**

a. You can still use public company data when applying the market approach to smaller companies. The standards do not differentiate between valuing large and small companies. Your budget with the client certainly cannot influence the work you are required to do when you perform a valuation engagement.

b. It is generally a good idea to place a size restriction as part of the criteria used to select guideline companies. What should that size restriction be? It depends! In a perfect world, some appraisers say that the guideline companies should be no more than 10 times the sales revenues of the valuation subject. However, this is not a perfect world. There will be times that others increase the size restriction to 20 or 25 times revenue. There are even times that others will go higher.

c. For a company with $100 million in revenues, a guideline company with $4 billion may be appropriate. In fact, large companies will have fewer restrictions placed on them for size. But what about a $25 million sales company? Would a $2 billion sales company be a good guideline company?

d. An interesting fact that you should be aware of is that at the time that this course was being updated, there were 1,947 companies listed on a public stock exchange with revenues of $10 million or less. There are a lot of small public companies. The problem with many of these companies is that they may be too thinly traded to be used as a good guideline company.

e. There are many valuation analysts who believe that no size restriction should be placed on the guideline company search criteria. The size differential should be made up in the multiple because of the risk factors relative to the size differential.

f. You might have difficult time comparing Microsoft with a small software developer. Here also, common sense must be applied. If the guideline companies are too big, they lose relevance to the appraisal subject. It is not so much that they are too big, but rather the much larger companies tend to have a very different business model and are frequently much more diversified.

g. A size adjustment will be discussed later in the course.

5. **Active Trading and Penny Stocks**

a. Once you have located possible guideline companies, it is generally a good idea to test these companies to see if their stocks are actively traded, and while you're at it, make sure that these stocks are not penny stocks.

b. According to Revenue Ruling 59-60, guideline companies should have their stock actively traded in the market. Active trading is essential if the market forces are to interact in the manner necessary to reach the equilibrium point in the market known as fair market value.

c. Greater market activity increases the possibility that fair market value will be achieved because many of the personal motivations of particular buyers and
sellers would have been eliminated by offsetting their unique situations in arriving at the equilibrium point.

d. The question is what does active trading mean? Most valuation textbooks do not provide an explanation of active trading. There really cannot be a definitive level of trading for each situation. Certain industries trade more frequently than others.

e. The problem with using stocks that are thinly traded is that the analyst must be able to investigate whether the trading that took place is among market participants or possibly insiders. If insiders are involved, they may have knowledge that the hypothetical individual may not have, and therefore, the true definition of fair market value may be violated. Many data sources provide information about insider trading, so this can be investigated.

f. With that being said, if you have many companies that are thinly traded, it may still be better than having no guideline companies at all. It may come down to how much weight do you place on the conclusions derived using this method. Even if you cannot use the guideline company method for this reason, it may serve as a good sanity check on the income approach.

6. Stock Pricing Reports

a. Before selecting guideline companies from the pool of businesses that comprises our initial list, we check the stock price and trading activity of each. A pricing report can tell you many important things about a company. From this report you can see if a business has a very low stock price and would be classified as a penny stock. There is often speculation in the market for penny stocks, which may limit the quality of the pricing multiples.

b. Stock price volatility is another factor that can be seen on a stock pricing history. Highly volatile stocks, or stocks that have high swings in stock value, will suggest that you should take a closer look at that company. Large price swings could indicate changes in the economy, industry, or company, and you will need to understand these factors to properly apply guideline company multiples.

c. Trading activity can also be calculated with the assistance of a stock pricing report. Calculating the average trading over a certain period will allow the analyst to see if the stock is trading regularly, or if it is thinly traded. If some of the company’s shares are owned by insiders, you might want to subtract those shares to get an average float for this calculation.

d. Many of the small public companies are relatively "thinly traded." Little activity makes it a bit more uncomfortable for the valuation analyst, but it does not mean that the company cannot be used. After all, what is the alternative? In general, thinly traded data can be used, albeit cautiously, if the valuation analyst can determine adequate information about the thin trading.

e. In order to learn more about a company's trading activity, we will search the public documents filed with the SEC, look for press releases and other announcements, and even go as far as to call the investor relations people in the
company to inquire whether there is anything special about the stock transactions that would disqualify the activity from being used in this analysis. Often, the thin trading takes place among insiders. This information can be used if it is determined that the logical market for the appraisal subject is insiders.

f. There are many times when a valuation analyst must struggle to decide who the logical players in the market are. A fractional interest in a closely held business may be worth more in the hands of an insider than in those of an outside investor. As a matter of fact, there are many times when there may not be a market for a minority interest in a closely held business, other than for the other shareholders of the company. Swing votes and insider knowledge may create value for the insiders that an outsider would not be privy to. Remember, one of the components of fair market value is that the willing buyer and willing seller must have knowledge about the subject property.

7. For Those That Pass Muster . . .

a. For those companies that pass muster, we now download financial information that is included as part of the Form 10-K filed with the SEC from EDGAR or a similar database. In fact, we will generally download the entire Form 10-K so that we can gain a thorough understanding about the public company. This will allow us to take a much more detailed look at the company to determine its level of comparability to the appraisal subject. This can be accomplished by comparing financial ratios and other attributes of the guideline companies with those of the appraisal subject. Before we can do this, certain adjustments may be necessary to the guideline company data. These will be discussed in the next chapter.

8. Data Sources for Publicly Traded Company Research

a. The primary data sources for guideline public company information are the following (each is filed with the SEC on a periodic basis):

   (i) The 10K provides a narrative on company’s operations, competition, customer base, industry and employment force, as well as the financial statements for the prior two years.

   (ii) The 10Q is the quarterly financial statement filed with the SEC on a quarterly basis. Necessary if a latest 12-month (LTM) analysis is to be performed.

   (iii) 8K is filed with the SEC to mark significant events in the company such as a change in key personnel, major acquisitions, divestitures, etc.

b. There are a variety of other sources of financial statement information on public companies; virtually all provide data in electronic format. Besides EDGAR (the SEC Web site), these include: Standard & Poor’s, Compustat, OneSource, EdgarScan, Hoovers, Value Line, Reuters, Bloomberg, Thomson, Dialogue, Yahoo!Finance, 10K Wizard, Capital IQ, Fetch XL, and Mergent (formerly Moody’s).
c. The advantage of using electronic sources is that the data can be downloaded into a spreadsheet or some other computer program, eliminating the need for manual data entry. This can speed the analysis as well as reduce the potential for data entry errors. In addition, many of these providers put the companies’ data in a standard format; this facilitates cross-comparisons.

d. The negative side of using any electronic sources is in the existence of data errors; while infrequent, there are data entry errors in these sources. (The exception to this is with EDGAR. Since the electronic documents filed with the SEC are now the official documents, they are, by definition, without error.)

e. With the standardization of data comes the loss of detail. This can be important for certain companies which have unique product or service mixes. Sales and profit information by product line is often shown in the written financial statements. Much of this detail and precision are lost when the information is placed onto electronic media. Further, when a company’s written data is put into a standard format, the data entry clerk might misinterpret some of the information and categorize it incorrectly.

f. Each of these electronic sources has certain advantages and disadvantages apart from the general issues discussed above. Some of these data sets have a large amount of textual information (such as footnotes, names of auditors, detailed business descriptions, etc.), but have a limited number of numeric concepts. This can be useful when the valuator is trying to identify and obtain basic financial statement data on guideline companies. Other electronic data providers have very limited textual information, but a large number of pre-calculated financial ratios as well as sophisticated analytical capabilities which allow users to create their own financial measures.

g. With the exception of EDGAR, the SEC, and the company itself, this type of data can be quite costly. Some of these data sets are available through large public or university libraries. Of course, the information is almost always subject to copyright restrictions.

h. There are multiple sources for stock price data separate from the financial statement information; many of these are without cost. The simplest place to obtain most stock price information is from a local newspaper or from an on-line service (such as AOL, Bloomberg, BigCharts or Yahoo!Finance). You may want to search for GPCs on more than one database.

IV. Getting and Setting Up the GPC Financial Statements

A. Part of using public company information in the valuation process requires the valuation analyst to obtain and analyze the financial and operating data of the guideline companies. The valuation analyst will use this information to ensure that the appraisal subject can be properly compared with these other companies. Sometimes, there will be differences in the manner in which the publicly traded company reports its financial results, or non-recurring events may have taken place that require the valuation analyst to recompute the
multiples used after adjusting the public company data. These adjustments are made to compare the appraisal subject more appropriately with the guideline companies.

B. Using Latest Twelve Month’s Financial Data.

1. When searching for publicly traded company financial information, you want to get as close to the date of the valuation as possible. Many times, this will mean calculating the latest 12 months' financial results.

2. Example. Tables 1 and 2 that follow reflect financial statements for Jones Corp. Notice in this analysis we have performed a latest 12 months calculation for the last period on the income statement. This is done using quarterly statements. For instance, Jones Corp.'s year end is September 30, but the valuation date is March 1. The market is pricing companies based on all available information, including the December 31 quarterly earnings. To estimate revenues for the latest 12 months, we would perform the following calculation:

   December 31, 2009   Quarterly Revenues
   + September 30, 2009 Annual Revenues
   - December 31, 2008   Quarterly Revenues
   = December 31, 2009   LTM Revenues

3. This calculation may be repeated for all line items, and the result is an income statement reflecting all known financial information as close to the valuation date as possible, without going past it. The result looks like this:
### TABLE 1
JONES CORP.
INCOME STATEMENT
FOR YEARS ENDED

<table>
<thead>
<tr>
<th></th>
<th>September 30,</th>
<th></th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(In Thousands of Dollars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenues</td>
<td>466,795</td>
<td>492,414</td>
<td>876,642</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>406,648</td>
<td>426,005</td>
<td>751,437</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>60,147</td>
<td>66,409</td>
<td>125,205</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>23,754</td>
<td>31,981</td>
<td>45,039</td>
</tr>
<tr>
<td>Operating Income</td>
<td>36,393</td>
<td>34,428</td>
<td>80,166</td>
</tr>
<tr>
<td>Other Income</td>
<td>975</td>
<td>1,995</td>
<td>1,765</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>86</td>
<td>274</td>
<td>4,404</td>
</tr>
<tr>
<td>Income Before Income Taxes</td>
<td>37,282</td>
<td>36,149</td>
<td>77,527</td>
</tr>
<tr>
<td>Provision for Income Taxes</td>
<td>14,345</td>
<td>15,838</td>
<td>32,372</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td><strong>22,937</strong></td>
<td><strong>20,311</strong></td>
<td><strong>45,155</strong></td>
</tr>
<tr>
<td>Earnings Per Share</td>
<td>0.68</td>
<td>0.59</td>
<td>1.12</td>
</tr>
</tbody>
</table>

The last column of the balance sheet reflects the balance sheet of the latest quarter prior to the valuation date.
TABLE 2  
JONES CORP.  
BALANCE SHEET  
AS OF  

<table>
<thead>
<tr>
<th></th>
<th>September 30,</th>
<th>Dec. 31,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2008</td>
</tr>
<tr>
<td><strong>Cash and Equivalents</strong></td>
<td>$24,106</td>
<td>$15,906</td>
</tr>
<tr>
<td><strong>Marketable Securities</strong></td>
<td>5,517</td>
<td>17,224</td>
</tr>
<tr>
<td><strong>Accounts Receivable</strong></td>
<td>61,622</td>
<td>69,318</td>
</tr>
<tr>
<td><strong>Inventories</strong></td>
<td>57,321</td>
<td>79,017</td>
</tr>
<tr>
<td><strong>Other Current Assets</strong></td>
<td>7,278</td>
<td>9,932</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>155,844</td>
<td>191,397</td>
</tr>
<tr>
<td><strong>Net Property, Plant and Equipment</strong></td>
<td>26,517</td>
<td>35,868</td>
</tr>
<tr>
<td><strong>Intangible Assets</strong></td>
<td>-</td>
<td>408</td>
</tr>
<tr>
<td><strong>Deposits and Other Assets</strong></td>
<td>1,993</td>
<td>1,963</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>184,354</strong></td>
<td><strong>229,636</strong></td>
</tr>
<tr>
<td><strong>Current Portion of Interest Bearing Debt</strong></td>
<td>672</td>
<td>10</td>
</tr>
<tr>
<td><strong>Accounts Payable</strong></td>
<td>41,272</td>
<td>55,928</td>
</tr>
<tr>
<td><strong>Other Current Liabilities</strong></td>
<td>22,741</td>
<td>25,048</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>64,685</td>
<td>80,986</td>
</tr>
<tr>
<td><strong>Long-Term Interest Bearing Debt</strong></td>
<td>2,587</td>
<td>142</td>
</tr>
<tr>
<td><strong>Other Long-Term Liabilities</strong></td>
<td>1,219</td>
<td>2,105</td>
</tr>
<tr>
<td><strong>Total Long-Term Liabilities</strong></td>
<td>3,806</td>
<td>2,247</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>68,491</td>
<td>83,233</td>
</tr>
<tr>
<td><strong>Stockholders' Equity</strong></td>
<td>115,863</td>
<td>146,403</td>
</tr>
<tr>
<td><strong>Total Liabilities and Equity</strong></td>
<td><strong>184,354</strong></td>
<td><strong>229,636</strong></td>
</tr>
<tr>
<td><strong>Common Shares Outstanding at End of Year (000)</strong></td>
<td>33,688</td>
<td>34,646</td>
</tr>
</tbody>
</table>
C. We typically present financial statements for the guideline companies for periods similar to those that we have for the subject. Doing so allows us to look at trends in operating performance of the guideline companies over as much time as possible. These trends, among other things, will indicate a level of comparability. For instance, if all of the guideline companies experience a sales decline, but the subject company's sales do not, it may indicate that the subject company is not sensitive to similar economic factors. Another tool that will help us in this analysis is a financial ratio analysis. Comparative financial ratio analysis allows us to look at what some businesses do better, or worse, than others and gives us a quantitative basis to compare subject to guidelines.

Classroom Assignment M-1: Selection of Potential Guideline Public Companies (GPC) (10 minutes)

GPC Selection Criteria

Using the financial statements included in Exhibit 2-2 and the SIC descriptions included in Exhibit 9-1, list the primary and secondary criteria for the selection of GPCs. Write your criteria in the space allotted below.

Primary Selection Criteria

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Secondary Selection Criteria

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Classroom Assignment M-2: Selection of the Guideline Public Companies (15 minutes)

The initial search for GPCs has been completed. Review Handout 9-2 and begin to narrow down the list of possible GPC candidates. Write the reasons for including or excluding a potential GPC.
Assignment M-3: Selection of the Guideline Public Companies (15 minutes)

After narrowing down the number of potential GPCs, using the brief descriptions of the GPCs that were provided, now review Handout 9-3, Potential GPC: Stock Pricing and Trading Activity. Use this information to determine if any of these potential GPCs should be eliminated. List which companies and the reasons for elimination.
Assignment M-4: Selection of the Guideline Public Companies (10 minutes)

Using the information in Handout 9-4, which potential GPCs would you eliminate? Why?
Homework Assignment M-5: Selection of the Guideline Public Companies

Based on the remaining potential GPCs, you have now downloaded the entire Form 10-K or other pertinent documents. Review Handout 9-5 and narrow down your potential GPCs further. Which additional companies did you eliminate? Why?
Exhibit 9-1

SIC Description
SIC Description for 4212

Description for 4212: Local Trucking Without Storage

Establishments primarily engaged in furnishing trucking or transfer services without storage for freight generally weighing more than 100 pounds, in a single municipality, contiguous municipalities, or a municipality and its suburban areas. Establishments primarily engaged in furnishing local courier services for letters, parcels, and packages generally weighing less than 100 pounds are classified in Industry 4215; those engaged in collecting and disposing of refuse by processing or destruction of materials are classified in Industry 4953; those engaged in removing overburden from mines or quarries are classified in Division B, Mining; and construction contractors hauling dirt and rock as a part of their construction activity are classified in Division C, Construction.

- Baggage transfer
- Carting, by truck or horse drawn wagon
- Debris removal, local carting only
- Draying, local: without storage
- Farm to market hauling
- Furniture moving, local: without storage
- Garbage, local collecting and transporting: without disposal
- Hauling live animals, local
- Hauling, by dump truck
- Local trucking, without storage
- Log trucking
- Mail carriers, bulk, contract: local
- Refuse, local collecting and transporting: without disposal
- Rental of trucks with drivers
- Safe moving, local
- Star routes, local
- Truck rental for local use, with drivers
- Trucking timber
Description for 4213: Trucking, Except Local

UNITED STATES DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION

www.OSHA.gov
A-Z Index: ABCDEFGHIJKLMNOPQRSTUVWXYZ

SIC Description for 4213
Description for 4213: Trucking, Except Local

Division E: Transportation, Communications, Electric, Gas, And Sanitary Services
Major Group 42: Motor Freight Transportation And Warehousing

Industry Group 421: Trucking And Courier Services, Except Air

4213 Trucking, Except Local

Establishments primarily engaged in furnishing "over-the-road" trucking services or trucking services and storage services, including household goods either as common carriers or under special or individual contracts or agreements, for freight generally weighing more than 100 pounds. Such operations are principally outside a single municipality, outside one group of contiguous municipalities, or outside a single municipality and its suburban areas. Establishments primarily engaged in furnishing air courier services for individually addressed letters, parcels, and packages generally weighing less than 100 pounds are classified in Industry 4513 and other courier services for individually addressed letters, parcels, and packages generally weighing less than 100 pounds are classified in Industry 4215.

- Long-distance trucking
- Over-the-road trucking
- Trucking rental with drivers, except for local use
- Trucking, except local

[SIC Search | Division Structure | Major Group Structure | OSHA Standards Cited]

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Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210
Handout 9-1

Initial Search Criteria and List of Potential Guideline Companies
Handout 9-2

Potential Guideline Company Profiles
Handout 9-3

Potential Guideline Companies
Stock Pricing & Trading Activity
Handout 9-4

Potential Guideline Companies
Trading Activity Analysis
Handout 9-5

Potential Guideline Companies
Remaining Potential GPCs
10-K Information
Chapter 10. GPC Step 2 – Normalize Financial Statements

I. GPC Step 2 – Normalize the Financial Statements of the Guideline Companies

A. The historical financial performance statements of the guideline companies may need to be adjusted in order to make them more relevant to the assessment of value. The second step in the market approach is to review the financial statements of the guideline companies and “normalize” them by making the following adjustments:

1. Accounting Translation Adjustments (Comparability) – changes so that the financial statements can be made comparable to the other GPCs and to the subject company accounting. These adjustments are intended to place the GPCs and the subject company on the same basis of accounting.

2. Extraordinary/Nonrecurring Adjustments (Predictability) – changes so that the past history of financial performance can be made more predictive of future financial performance, and

3. Nonessential Operating or Excess Asset Adjustments (Core Operations) – changes so that the past financial performance reflects only the economic performance of the core operations which are expected to continue on an indefinite basis, and sometimes those non-core operations which are also expected to continue on an indefinite basis.

B. With the financial statements normalized, the valuation analyst can now (1) calculate the various market multiples using adjusted operating metrics for the denominators and (2) perform the essential comparative analysis between the GPCs and the subject company which will allow the final application of adjusted market multiples to derive indications of value.

II. ASA SBVS-1 Guidance Concerning Analyzing GPCs and Normalizing Financial Statements

A. SBVS-1, IV provides guidance on analysis of the guideline companies as follows:

1. It is necessary to obtain and analyze the financial and operating data on the guideline companies.

2. Adjustments to the financial data of the subject company and guideline companies should be considered to minimize the difference in accounting treatments and eliminate unusual or nonrecurring items.

III. Accounting Translation Adjustments (Comparability)

A. These adjustments are made to the historical financial statements to make them more comparable to peer group accounting by adjusting for such issues as LIFO-FIFO, accelerated versus straight-line depreciation, cash versus accrual, differences in accounting from country to country, and etc. The following are examples:
1. Inventory Accounting

   a. Differences in inventory accounting (LIFO to FIFO) are common. The following is an example.

   **Tax Rate:** 40%

### Summary

<table>
<thead>
<tr>
<th></th>
<th>200A</th>
<th>200B</th>
<th>200C</th>
<th>200D</th>
<th>200E</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFO Reserve</td>
<td>40,100</td>
<td>42,600</td>
<td>45,400</td>
<td>47,200</td>
<td>49,400</td>
</tr>
<tr>
<td>Adjustment to Cost of Goods Sold</td>
<td>(2,500)</td>
<td>(2,800)</td>
<td>(1,800)</td>
<td>(2,200)</td>
<td></td>
</tr>
<tr>
<td>Adjustment to Earnings Before Tax</td>
<td>2,500</td>
<td>2,800</td>
<td>1,800</td>
<td>2,200</td>
<td></td>
</tr>
</tbody>
</table>

### Details

<table>
<thead>
<tr>
<th></th>
<th>200A</th>
<th>200B</th>
<th>200C</th>
<th>200D</th>
<th>200E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning LIFO Inventory</td>
<td>37,985</td>
<td>51,364</td>
<td>49,793</td>
<td>51,628</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>157,882</td>
<td>132,878</td>
<td>127,211</td>
<td>110,090</td>
<td></td>
</tr>
<tr>
<td>Ending LIFO Inventory</td>
<td>37,985</td>
<td>51,364</td>
<td>49,793</td>
<td>51,628</td>
<td>48,529</td>
</tr>
<tr>
<td>LIFO Cost of Goods Sold</td>
<td>170,650</td>
<td>144,503</td>
<td>134,449</td>
<td>125,376</td>
<td>113,189</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>200A</th>
<th>200B</th>
<th>200C</th>
<th>200D</th>
<th>200E</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFO Reserve</td>
<td>40,100</td>
<td>42,600</td>
<td>45,400</td>
<td>47,200</td>
<td>49,400</td>
</tr>
<tr>
<td>Beginning FIFO Inventory</td>
<td>78,085</td>
<td>93,964</td>
<td>95,193</td>
<td>98,828</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>157,882</td>
<td>132,878</td>
<td>127,211</td>
<td>110,090</td>
<td></td>
</tr>
<tr>
<td>Ending FIFO Inventory</td>
<td>78,085</td>
<td>93,964</td>
<td>95,193</td>
<td>98,828</td>
<td>97,929</td>
</tr>
<tr>
<td>FIFO Cost of Goods Sold</td>
<td>142,003</td>
<td>131,649</td>
<td>123,576</td>
<td>110,989</td>
<td></td>
</tr>
</tbody>
</table>

(i) To adjust the balance sheet from LIFO to FIFO at year-end 200E, the accounting entry would be:

**Debit:**

Inventory 49,400 (LIFO reserve)

**Credit:**

Deferred taxes 19,760 (LIFO reserve x 40%)
Retained earnings 29,640 (LIFO reserve at YE 200E x (1 – 40%))

(The adjustment to RE includes the impact on 200E earnings.)

(ii) Thus, if asked to adjust YE 200E inventory from LIFO to FIFO, the calculation would be:

Ending 200E LIFO inventory 48,529
Plus: YE 200E LIFO reserve 49,400
Equals: Ending 200E FIFO inventory 97,929
(iii) If asked to calculate the adjustment to retained earnings (tax affected), the calculation would be:

\[
\begin{align*}
\text{YE 200E LIFO reserve} & \quad 49,400 \\
\text{Times: (1 – 40%)} & \quad 60\% \\
\text{Equals: Tax-affected adjustment to retained earnings} & \quad 29,640
\end{align*}
\]

(iv) If asked to calculate the impact on 200E net income of an adjustment from LIFO to FIFO, the calculation would be:

\[
\begin{align*}
\text{Change in LIFO reserve during 200E} & \quad 2,200 \\
\text{Times: (1 – 40%)} & \quad 60\% \\
\text{Equals: 200E net income adjustment} & \quad 1,320
\end{align*}
\]

**Assignment M-6: Normalizing Adjustments (10 minutes)**

Review Handout 10-1 to see what obvious adjustments may require investigation for normalizing the GPCs.

What items may need to be adjusted for the GPCs?
Handout 10-1

Company Financial Information
Chapter 11. GPC Steps 3-4 – Calculation and Selection of Multiples

I. ASA SBVS-1 Guidance for the Calculation and Selection of Multiples

A. SBVS-1, V provides guidance concerning the use of multiples (valuation ratios) as follows:

1. Comparisons are made through the use of valuation ratios. The computation and use of such ratios should provide meaningful insight about the value of the subject, considering all relevant factors. Accordingly, care should be exercised with respect to issues such as:
   a. Selection of the underlying data used to compute the valuation ratios
   b. Selection of the time periods and/or the averaging methods used for the underlying data
   c. Computation of the valuation ratios
   d. Timing of the price data used in the valuation ratios
   e. How the valuation ratio or ratios were selected and applied to the subject’s underlying data

2. In general, comparisons should be made by using comparable definitions of the components of the valuation ratios. However, where appropriate, valuation ratios based on components that are reasonably representative of ongoing results may be used.

3. Several valuation ratios may be selected for application to the subject company. These ratios may require adjustment for differences in qualitative and quantitative factors between guideline public companies and the subject. One or more indications of value may result. The appraiser must consider the relative importance or weight accorded to each of the indications of value used in arriving at the opinion or conclusion of value.

II. GPC Step 3 – Calculating Market Multiples

\[
\text{Numerator} = \frac{\text{Price}}{\text{Denominator} = \text{Financial Metric}}
\]

A. The third step in the GPC method is to calculate the various market multiples to be used in the appraisal process (this market value measure is also referred to as a valuation ratio). Market multiples may take many forms:

1. The numerator (i.e., price) can be on an equity or invested capital basis:
   a. Equity price = market capitalization (number of shares x price per share),
   b. Invested capital price = market capitalization + interest-bearing debt;
c. The denominator can use a variety of financial performance metrics on a pretax or after-tax basis such as operating earnings, net income, cash flow; and
d. The analyst must also choose what time period he will draw the denominator’s financial performance metric from, such as trailing 12 months, five-year average, and next year’s expected.

2. The generic market based valuation ratio is:

\[
\frac{\text{Price}}{\text{Benefit}} = \frac{\text{MVE}}{\text{Benefit}} \quad \text{or} \quad \frac{\text{MVIC}}{\text{Benefit}}
\]

where

- MVE is the market value of shareholders’ equity,
- MVIC is the market value of invested capital and
- Benefit is the appropriate balance sheet or income statement measure (e.g., sales, earnings, book value of equity, etc.)

B. Valuation multiples are considered to be usable if the valuation analyst has good information about companies that are "similar enough" to the appraisal subject and if the engagement is to value the equity or invested capital of the appraisal subject.

C. Once the multiples are derived from the marketplace, they must be adjusted for the differences between the valuation subject and the guideline companies. The multiple that will ultimately be used for the appraisal subject will probably not be exactly the same as that which was derived from the guideline companies.

1. Risk and other characteristics generally play an important part in the process of adjusting the multiples.

2. For example, if the publicly traded guideline companies have price-to-earnings multiples of 15 (assume an incredible coincidence and that all companies were the same), and the closely held company that is being appraised is considered to be more risky, the logical conclusion is that the closely held company would be worth less. Therefore, a lower multiple would be used. This is discussed further in Chapter 12.

D. Following are some of the more commonly used equity multiples:

1. Price to net earnings
2. Price to pretax earnings
3. Price to cash flow
4. Price to operating income
5. Price to book value
6. Price to dividend-paying capacity or dividend yield
E. The price represented in the above multiples is the equity price of the common stock of the public company. This is used when the valuation analyst chooses to value the equity directly.

F. There will be times when the valuation analyst chooses to value the invested capital of the company. This is usually done when there are significant differences in the financial leverage between the subject and guideline companies.

G. When the valuation analyst values invested capital, some of the multiples that are common include:
   1. MVIC to revenues
   2. MVIC to EBIT
   3. MVIC to EBITDA
   4. MVIC to debt-free net income (NOPAT)
   5. MVIC to tangible book value and debt

H. In these instances, MVIC represents the market value of invested capital, defined as the market value of equity and the market value of debt.

I. Those valuation analysts who value small and medium-sized companies often lose sight of the reason why certain multiples are used rather than others. Comparability is probably the single most important factor in choosing a particular multiple. Sometimes, the choice of multiples depends on the availability of good data. Avoid choosing your favorite multiple and using it in every appraisal. Chances are if you stick with the same multiple all of the time, you will be wrong a good portion of the time.

III. Which Multiples Should Be Used?

A. Price to Net Earnings
   1. The appropriate situation for using a price-to-net earnings multiple is
      a. when the appraisal subject has relatively high income compared to its depreciation and amortization, or when depreciation represents actual or economic physical wear and tear, and
      b. when the appraisal subject has normal tax rates.
      c. If a company has higher net income compared to depreciation and amortization, a price-to-earnings multiple is considered to be the appropriate multiple to use.
      d. However, this considers the fact that the depreciation and amortization must be a good representation of the actual wear and tear of the assets, so that replacements are being accounted for properly.
e. If book or tax depreciation is used, rather than economic depreciation, the company may need to replace these assets either more quickly or more slowly than the manner in which depreciation is being recorded.

f. Capital expenditures can greatly affect the cash flow of the company and, therefore, have an impact on its value. In that case, a cash flow multiple rather than an earnings multiple would be more appropriate.

2. A company with normal tax rates allows comparison to publicly traded guideline company data that is reported on an after-tax basis.

3. If the company has a unique tax structure (S corporation, limited liability corporation, IC DISC, etc. For non-tax people, an IC DISC is an interest charge domestic international sales corporations that does not pay tax. The shareholders are taxed on the income when it is distributed. Enough tax stuff.), better comparability may be achieved by using pretax earnings. Of course, a valuation analyst could also tax-affect the subject company's earnings to make them consistent with those of the guideline companies. Tax-affecting pretax earnings means that a provision for income taxes is subtracted as if the company paid these taxes in the normal course of business.

B. Price to Pretax Earnings

1. A price-to-pretax earnings multiple should be used when the subject company
   a. has a relatively high income compared to its depreciation and amortization, or when depreciation represents actual physical wear and tear, but
   b. has abnormal tax rates.
   c. Once again, the same rules apply for the first two items. Pretax earnings should be used when taxes are different from those of the guideline companies.
   d. Many analysts prefer to use pretax earnings for smaller companies since they frequently pay no taxes. Most smaller companies (and professional practices) conduct business in a manner that minimizes taxes, as opposed to maximizing shareholder wealth.
   e. Comparing these companies with similar companies or industry composite data (not large public companies) will frequently be more meaningful if it is performed on a pretax basis.

C. Price to Cash Flow

1. A price-to-cash flow multiple is generally used when the appraisal subject has a relatively low level of income compared to its depreciation and amortization, or when depreciation represents a low level of physical, functional, or economic obsolescence.

2. Low levels of physical, functional, or economic depreciation generally mean that the assets will not have to be replaced in the near term. Many profitable businesses go out of business because of insufficient cash flow. On the other hand, many businesses that have high levels of depreciation and amortization are cash machines, generating
very high levels of cash for the owners in comparison to low earnings. These are typical situations in which a cash flow multiple makes sense.

3. Many experienced business valuation analysts are of the belief that "cash is king." Let's face it, the more cash you have, the more you can buy. Therefore, it seems logical that a great emphasis should be placed on cash flow. In many small companies, there is little difference between cash flow and earnings so either becomes a pretty good surrogate for the other.

D. Price to Sales

1. A price-to-sales (really MVIC to sales since this measure is before interest expense is deducted) multiple is generally appropriate in two situations.
   a. The first situation is when the appraisal subject is "homogeneous" to the guideline companies in terms of operating expenses.
   b. The second situation in which this multiple may be appropriate is when smaller businesses, particularly cash businesses, are appraised.
   c. Service companies and companies that are light in tangible assets are considered to be candidates for application of a price-to-sales multiple.
   d. Some analysts use a price-to-sales multiple based on an equity price, rather than invested capital, under the theory that there is no major difference between the two. For smaller businesses that do not have the ability to have a lot of debt on their balance sheets, this is probably true. Just keep in mind that whichever you use, the answer needs to make sense.

E. Price to Dividend or Dividend-Paying Capacity

1. A price-to-dividend multiple is probably best utilized when the appraisal subject actually pays dividends.
2. It can also be useful when the company has the ability to pay dividends, even if it does not actually pay them.
3. Of course, dividend-paying capacity can be measured only after the valuation analyst considers the appraisal subject's ability to finance its operations and growth.
4. Revenue Ruling 59-60 tells us to consider "the dividend-paying capacity of the company." But even the Revenue Ruling suggests that this is not as important as the other factors to consider.
5. In a valuation of a minority interest, actual dividends are more important than the dividend-paying capacity, since the minority interest cannot force dividends to be paid.
6. Sometimes you may find that actual dividends paid are disguised as excess compensation.
a. For example, assume you are appraising a 45 percent interest in GRT Corp. The company has two stockholders: one owns 55 percent of the stock, and the interest that you are appraising owns the balance.

b. Compensation and bonuses are taken in proportion to the stockholdings. The salaries were $55,000 and $45,000, respectively, and the stockholders-officers received bonuses of $110,000 and $90,000.

c. The minority stockholder received a total compensation of $135,000.

d. Some professionals may argue that if the minority interest is truly a minority, the compensation should not be adjusted, since that individual cannot change the policy of the company, nor can he or she force dividends to be paid. However, if you look at the relationship between the two individuals in the above example, you may find that they run the company together, they have been friends and business partners for quite a while, and all major decisions are made jointly. In this situation, you may also find that reasonable compensation—defined as what it would take to replace the individual with someone of sufficient talent, experience, etc. to do the job that is currently being done—will be less than the sum of the salary and the bonus.

e. If reasonable compensation is deemed to be $75,000, a dividend was actually paid ($135,000 - $75,000 = $60,000).

f. In this instance, a multiple of dividends may allow you to value the minority interest directly by using multiples from the public market and adjusting them for risk.

g. Another consideration in determining the dividend-paying capacity for minority shareholder valuations is whether the minority shareholder would be considered "oppressed" under state statutes. Oppression is a legal term, and the valuation analyst should not try to make a determination without input from legal counsel. If a company has the ability to pay dividends but the controlling shareholder refuses to do so, the minority shareholders may have recourse against the controlling shareholder under the oppressed shareholder statute in that jurisdiction. This could result in a mandatory buyout at fair value, or dividends may have to be paid. What all of this means is that a minority shareholder may have legal rights, at the expense of litigation, to force dividends. This could make this multiple feasible even when dividends are not actually being paid.

F. Price to Book Value

1. A price-to-book value multiple may be appropriate when the appraisal subject is in an industry that has a meaningful relationship between the book value and the price of the company's stock. In the determination of the book value, smaller companies would use the sales price of the entire company as the "price" and only those assets that were actually to be sold.

2. The valuation analyst can use return on equity to assist in the adjustment of the price-to-book value ratio to compensate for differences in quality between the company
being appraised and the guideline companies being used to assist in the development of the multiple.

G. Valuing Invested Capital Instead of Equity

1. There may be circumstances in which it makes more sense to value the invested capital of the appraisal subject instead of the equity.

2. One of the questions often posed in a valuation assignment is when to use invested capital methods.

3. If the appraisal subject's capital structure is significantly different from those of the publicly traded guideline companies, consider using an invested capital multiple.

   a. For example, if the appraisal subject is highly leveraged (or operating with all equity) but the industry has a very different debt-to-equity relationship, it could make sense to eliminate the effects of leveraging to make a more meaningful comparison. This does not eliminate the financial risk of the subject company. This assumes, however, that the interest being appraised has the ability to change the capital structure of the business. A minority interest does not, and accordingly, the capital structure will generally not be altered in the valuation.

4. When an invested capital method is used, the valuation analyst will determine the value of the company's total invested capital (equity plus debt at market values) rather than just the equity.

5. When a valuation analyst values a company based on the total invested capital, some modifications are generally made during the valuation process. Some of these modifications include the following steps:

   a. Add the market value of the publicly traded guideline company's equity (price per share times the number of shares outstanding) to the guideline company's market value of the interest-paying debt. The sum of these two items takes the place of the "price" in the various multiples previously discussed.

   b. Interest expense reflected on the income statement is added back to the earnings (or cash flow) used in the denominator of the various multiples. If the valuation analyst is using an after-tax basis, interest expense is added back to earnings or cash flow, net of taxes, since there is a tax benefit that is derived from the deductibility of interest expense.

   c. Once an estimate of value has been reached on a total-invested-capital basis, the valuation analyst then deducts the fair market value of the appraisal subject's debt to determine the value of the company's equity.

6. Market multiples are the inverse of capitalization rates and include the market’s assessment of (1) the risk-adjusted cost of capital and (2) the present value weighted expected earnings growth rate.

7. The conventional way of matching the price to the appropriate measure of inflow (i.e., revenues, earnings, cash flows) is to do it based on which providers of capital
will be paid with the monies given in the denominator. For example, in price to EBIT, the price concept is market value of invested capital (MVIC). The earnings before interest payments and taxes will have to be paid to both the debt and equity holders.

8. In price to net income, price is the market value of equity only, since net income is after interest payments to debt holders and represents amounts potentially available to share holders. Another way to view this is any denominators that include interest (e.g., EBIT or EBITDA) must be matched with its corresponding numerator (e.g., MVIC).

IV. Time Period for Financial Operating Metrics (Denominator)

A. The valuation analyst must choose what period of time the financial operating metric will be taken from. There are a number of choices ranging from an average of several years’ history to an estimate of next year’s operations.

1. Latest Twelve Months (LTM)
   a. As the name implies, these are the data measured over the last 12 months or the latest four quarters. Balance sheet items are shown for the latest month or quarter and income and cash flow statement items are summed over the last twelve months or four quarters. The advantage of using these data is that the very latest information is being displayed. The disadvantage is that if the latest 12 months’ data are taken from interim financial statements, these statements may lack some of the scrutiny and detail found in the annual statements.
   b. Occasionally, the latest 12 months’ data may not be available. The partial year’s income and cash flow statements may then be annualized to represent a full year. For example, if the partial year contains only nine months, the income and cash flow items might be multiplied by 12/9 (1.33) to annualize them. While this may be mathematically sound, it may result in some errors in practice. The errors arise if the business whose numbers are being annualized is highly seasonal. The adjustment given in the preceding example assumes that all months are alike; that is, they contribute the same amount of revenues, profits, etc. However, if you are valuing a retailer with a large Xmas holiday season and you only have information for the nine-month period January-September, simply multiplying these nine months by 1.33 would severely understate annual sales and earnings. When you use the LTM, you do not have this seasonality problem.

2. Last Fiscal Year (LFY)
   a. The data from the interim financial statements are not considered; only the data from the latest full year statement are used. The data are as detailed and scrutinized as they are likely to be. Year-end adjusting entries are included in the year-end financial statements, avoiding the mismeasurement of earnings possible when using interim financial statements—for example, inventories and cost of goods sold may not be synchronized until the annual inventory is taken. Seasonality is not a problem either. Timeliness is a concern. The time difference between the valuation date and the annual reporting date can be a year or more.
Furthermore, annual reporting dates across companies can vary by up to a year, whereas interim reporting dates are usually only up to three months apart.

3. Projected Next Fiscal Year
   a. Use of projected next fiscal year earnings can be very useful, but it may be difficult to get projections for all GPCs. Many of the public companies which are most comparable to closely held companies are too small to be monitored closely by analysts and projections may not be available. Also, analyst projections which are available for public companies tend to have a sell-side bias.
   
   b. Many appraisers prefer to compute pricing ratios (particularly price/earning) using prospective information. Prospective information is particularly helpful when the most recent year’s earnings are significantly different from the earnings expected in the future, as when there have been recent acquisitions, significant nonrecurring events (for which adjustment is not possible), important technological changes, or substantial changes in market conditions.

4. Historical Averages or Weighted Averages
   a. These can be useful for businesses with significant variability in historical earnings, which is expected to continue in the future.

5. Complete Business Cycle
   a. The complete business cycle is usually longer than three to five years; it may be as long as 10 years. The advantage of using these measures for a stable company in a stable industry is that the margins and growth rates are probably sustainable over a very long period of time.

V. Time For a Simple Example

A. Exhibit A below provides you with a simple example illustrating the application of the market approach using guideline company information. As you review Exhibit A, there are several points to keep in mind. First, the selection of the guideline companies would have come from a careful review of many of the items discussed previously that makes these companies similar to the appraisal subject. Another consideration is that the median multiple rather than the arithmetic average is calculated. This is because the median is often a better statistical measurement, since it eliminates highs and lows that may skew the average. Do not worry yet about the ultimate selection of the multiples. We will cover that in the next chapter.
### Exhibit A

**Example of the Guideline Public Company Method**

#### Guideline Company Information

<table>
<thead>
<tr>
<th>GUIDELINE COMPANIES</th>
<th>PRICE/EARNINGS</th>
<th>PRICE/SALES*</th>
<th>PRICE/BOOK VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Toy Company, Inc.</td>
<td>8.70</td>
<td>55.30%</td>
<td>2.85</td>
</tr>
<tr>
<td>XYZ Funtime, Inc.</td>
<td>9.30</td>
<td>47.43%</td>
<td>4.65</td>
</tr>
<tr>
<td>Toys, Inc.</td>
<td>8.50</td>
<td>35.25%</td>
<td>3.65</td>
</tr>
<tr>
<td>Games Corp.</td>
<td>6.60</td>
<td>54.80%</td>
<td>3.90</td>
</tr>
<tr>
<td>Fun Corp.</td>
<td>7.80</td>
<td>48.20%</td>
<td>4.25</td>
</tr>
<tr>
<td>Median Multiple</td>
<td>8.50</td>
<td>48.20%</td>
<td>3.90</td>
</tr>
<tr>
<td>Selected Multiple</td>
<td>6.20</td>
<td>44.00%</td>
<td>2.50</td>
</tr>
</tbody>
</table>

The selected multiples are now applied against the figures of the appraisal subject.

<table>
<thead>
<tr>
<th></th>
<th>Price/Earnings</th>
<th>Price/Sales*</th>
<th>Price/Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aftertax Earnings</td>
<td>$ 959,446</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Sales</td>
<td>$ 13,983,541</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book Value (Without Non-operating Items)</td>
<td>$ 2,415,822</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>x 6.20</td>
<td>x 44.00%</td>
<td>x 2.50</td>
</tr>
<tr>
<td>Operating Entity Value</td>
<td>$ 5,948,565</td>
<td>$ 6,152,758</td>
<td>$ 6,039,555</td>
</tr>
<tr>
<td>Net Non-operating Assets</td>
<td>+ 250,000</td>
<td>+ 250,000</td>
<td>+ 250,000</td>
</tr>
<tr>
<td>Total Entity Value</td>
<td>$ 6,198,565</td>
<td>$ 6,402,758</td>
<td>$ 6,289,555</td>
</tr>
<tr>
<td>Rounded</td>
<td>$ 6,200,000</td>
<td>$ 6,400,000</td>
<td>$ 6,300,000</td>
</tr>
</tbody>
</table>

*More often than not, the Price to Sales multiple is reflected as MVIC to Sales. However, many practitioners still use an equity price instead of MVIC.*

This example intentionally omits any calculation of valuation discounts or premiums, which are discussed in **BV204**.
B. The selection of the multiple is a subjective process based on the analysis that the valuation analyst performs throughout the valuation assignment. This process considers the risk elements, as well as the differences between the guideline companies and the appraisal subject with respect to growth expectations, size, financial performance, and everything else that makes these companies different. The differential in the multiples has to consider the differences between the companies under analysis, and you have to test your conclusion to see if it makes sense. If your value conclusion makes sense, your multiples are probably reasonable.

C. You will also notice that the multiplication of the base amount by the multiple results in the value of the operating entity. This amount includes all the operating assets and liabilities of the company (assuming that you are valuing the equity). The non-operating assets and liabilities are added or subtracted from the value of the operating entity to reach the final entity value. However, this assumes that the non-operating income and expenses were adjusted in the first place. There may be the need to adjust this figure further for items that are not necessarily non-operating, however, they would not be considered as part of the operations of the business.

D. Now that we have the basic concept of the guideline company method for equity under control, let's go back to our discussion about valuing the invested capital of the appraisal subject. As indicated previously, there are several different steps that the valuation analyst must take to accomplish this.

E. Let's use one of the guideline companies from the previous example. ABC Toy Company, Inc. had a price-to-earnings ratio of 8.70 on December 31, 2006. If the price of ABC's stock was $47.50 on this date, this means that ABC's earnings would have to have been $5.46 per share. The price-to-earnings ratio would be calculated as follows:

\[
\text{Price/earnings} = \frac{\text{Multiple}}{
\frac{\text{Price}}{\text{Earnings}}} = \frac{\frac{47.50}{5.46}}{\text{8.70}}
\]

F. To convert the price-to-earnings ratio from an equity multiple to an invested capital multiple, we need to adjust both the price and the earnings.

1. First, the price. To determine the market value of the company's equity, we would multiply the price per share by the number of outstanding shares. The outstanding shares can be obtained from the annual report. Let's assume that there were one million shares outstanding. This would make the market value of ABC's equity $47.5 million (1,000,000 shares x $47.50 per share).

2. ABC's balance sheet reflects interest-bearing debt in the amount of $5 million. Assume that this debt is at a market rate of interest (this way, the market value of the debt is equal to the face amount). Therefore, the market value of the company's invested capital is $52.5 million, or $52.50 per share. This becomes the new price in the price-to-earnings ratio. The price is now referred to as MVIC (market value of invested capital).
3. Now we need to adjust the earnings. The earnings previously calculated for ABC were $5.46 per share. This means that the net income, after taxes, was $5.46 million ($5.46 x 1,000,000 shares). Upon review of the company's income statement, you find that the interest expense was $500,000 for the year. The adjustment to the earnings in the price-to-earnings ratio would be as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income after taxes</td>
<td>$5,460,000</td>
</tr>
<tr>
<td>Add: Interest expense (net of taxes)</td>
<td></td>
</tr>
<tr>
<td>Interest expense</td>
<td>$500,000</td>
</tr>
<tr>
<td>Effective tax rate</td>
<td>x 40%</td>
</tr>
<tr>
<td>Tax benefit</td>
<td>$200,000</td>
</tr>
<tr>
<td>Debt-free net income</td>
<td>$5,760,000</td>
</tr>
</tbody>
</table>

4. ABC's earnings have now been adjusted to an invested capital basis of $5.76 million, or $5.76 per share. The new ratio for the market value of invested capital to debt-free net income (MVIC/DFNI) would be:

\[
\frac{52.50}{5.76} = 9.11
\]

5. This same calculation would be performed for each of the guideline companies. The valuation analyst then selects the appropriate multiple to apply to the appraisal subject's debt-free net income.

6. In this situation, our appraisal subject had an after-tax net income of $959,446. Its interest expense, net of taxes, would be added back to get to the debt-free net income. It would be this figure against which a multiple would be applied.

7. Let's recalculate the price-to-earnings portion and do the new calculations. For simplicity, Exhibit B already has the new price-to-earnings multiples for the guideline companies on an invested capital basis.

### Exhibit B
**Guideline Public Company Method Using Invested Capital**
**Guideline Company Information**

<table>
<thead>
<tr>
<th>GUIDELINE COMPANIES</th>
<th>MVIC/DFNI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Toy Company, Inc.</td>
<td>9.11</td>
</tr>
<tr>
<td>XYZ Funtime, Inc.</td>
<td>10.15</td>
</tr>
<tr>
<td>Toys, Inc.</td>
<td>9.45</td>
</tr>
<tr>
<td>Games Corp.</td>
<td>7.30</td>
</tr>
<tr>
<td>Fun Corp.</td>
<td>8.90</td>
</tr>
<tr>
<td>Median Multiple</td>
<td>9.45</td>
</tr>
</tbody>
</table>
8. The selected multiples are now applied against the figures of the appraisal subject.

\[
\begin{align*}
\text{Aftertax earnings} & \quad \text{MVIC/DFNI} \\
\text{Add: Interest (net of taxes)}^1 & \quad 90,000 \\
\text{Debt-free net income} & \quad 1,049,446 \\
\text{Multiple} & \quad \times \ 6.90 \\
\text{Value of operating invested capital}^2 & \quad 7,241,177 \\
\text{Net nonoperating assets} & \quad + \ 250,000 \\
\text{Total value of invested capital} & \quad 7,491,177 \\
\text{Rounded} & \quad 7,500,000
\end{align*}
\]

\(^1\)Interest expense for the year was $150,000. Effective tax rate was 40 percent.

\(^2\)We have once again intentionally omitted valuation discounts or premiums from this example.

9. Exhibit B illustrates the use of the invested capital pricing multiple. If you look at the multiples for the guideline companies, you will see that they were higher on an invested capital basis. This makes sense, since the result is the value of the companies’ invested capital. The result is that the multiple used for the appraisal subject was also higher (6.90 instead of 6.20).

10. A similar type of analysis of the qualitative differences between the guideline companies and the appraisal subject would have been performed to derive the selected multiple.

11. There should always be a correlation between the multiples that you select, regardless of what earnings base you apply them to. In the example in Exhibit B, the valuation analyst can test the validity of the selection process by subtracting the interest-bearing debt from the value of the invested capital of the appraisal subject. If the appraisal subject's balance sheet reflects debt in the amount of $1.3 million, the value of the equity would have been calculated as follows:

\[
\begin{align*}
\text{Value of invested capital} & \quad 7,500,000 \\
\text{Less: Interest-bearing debt} & \quad 1,300,000
\end{align*}
\]
VI. Useful Summary Measures – Statistical Tools

A. For each type of market multiple, the market multiples derived from the GPCs will vary, with no two GPCs having the same level of market multiples. Hence, for each type of market multiple, our sample of GPCs will display a range, a median, an average, a coefficient of variation and a harmonic mean (assuming we have at least two or more in the sample).

B. See Exhibit 11-1 at the end of this chapter for a brief outline on statistics as well as examples of the calculation of each of the following statistical measures.

1. Using Median and Percentiles
   a. Various percentiles can be shown for each of the pricing multiples, as well as some of the other comparative financial information about the GPCs. For example, the 25th, median, and 75th percentiles could be shown. The 25th percentile is the value below 25% of the values in the group fall. The median is simply the 50th percentile.

2. Using Arithmetic Mean (Averages)
   a. Other summary measures that could be used include simple averages (means) or a composite (or portfolio average) of the companies. The simple average is what its name implies: an average of the values. In computing the composite, all of the companies in the group are actually added together to make one large company and the various ratios are then computed. If the group of companies represented all those in the industry, then this composite would be an industry composite.

3. Using Harmonic Mean
   a. Harmonic mean is the reciprocal of the average of the reciprocals. This can be a useful measure when looking at a set of margins or pricing multiples that are particularly dispersed. However, it is not used very often.

\[
H = \frac{n}{\sum_{i=1}^{n} (1/m_i)}
\]

Where:
- \(H\) = The harmonic mean
- \(n\) = The number of companies for which ratios are computed
- \(m\) = The multiple of a guideline company

4. Advantages/Disadvantages of Various Measures of Central Tendency
a. Using percentiles rather than simple averages or composites has the advantage of providing a range of values and any outliers are less likely to affect all of these statistics. The average and composite measures may weight the outliers more heavily than appropriate.

b. Outliers may indicate an anomalous situation for the industry or the company (for example, one of the companies in the group might have realized a lawsuit settlement in the latest year. Its profit margins are way above what they would normally be). It should be noted, however, that while outliers may result from anomalies, these apparent anomalies should be examined; they may contain important information about trends in the industry.

5. Coefficient of Variation

a. Another approach that can be used, in conjunction with what was discussed earlier, is to compute the relative dispersions (or, size of the range of values) of the valuation measures. A measure of relative dispersion that is commonly used is the coefficient of variation. This statistic measures the dispersion of the data relative to its average value. It is computed by dividing the standard deviation of the data by their mean (average). The higher the coefficient of variation, the greater the dispersion of the data.

b. Because the coefficient of variation is scaled by the mean, it can be used to compare the dispersions of any data sets, whether or not they are similar in order of magnitude. For example, this statistic can be used to compare the dispersion of revenues to net income, even though revenues are much larger than net incomes. This is why it can be used to compare the dispersions of different valuation measures.

c. Its usefulness in the valuation process can be viewed in this way. If the companies in the guideline group are really viewed similarly by the market, then the key valuation indicator(s) used by the market to price their stocks should be also similar. The coefficient of variation can help the valuator to find this (these) key valuation indicator(s).

VII. GPC Step 4 – Selection of the Appropriate Type of Market Multiples to Use

A. Step four of the GPC method is to select the appropriate market multiples to apply to the subject company. This is a more difficult part of the GPC market method because it involves substantial informed judgment.

B. After all of the hard work of analyzing the subject company, choosing appropriate GPCs, developing a set of information that makes comparison of the companies easier, adjusting the subject’s and GPCs’ financial information for important differences, the appraiser must choose the pricing multiples on which to base his or her conclusion of value.
C. Market multiples (i.e., value indicators) are simply market-derived valuation ratios which express the value of the company relative to some other measure; the price-to-earnings ratio is a standard example of this. The point of using valuation ratios rather than outright values is to scale the value by some relevant factor, making comparisons meaningful, irrespective of company size.

D. Choosing the Market Multiple – Industry Practices

1. This is probably the best source of information about which value measures are most important. Usually this can be discerned by reading articles which discuss recent acquisitions. For example, many acquisitions of manufacturers are discussed in terms of P/Es (price-to-earnings ratios) or price to some form of cash flows. In bank acquisitions, market-to-book ratios are very important. In service businesses, prices/sales is the driving ratio. Hospitals are sometimes priced on a revenue per bed basis. It is not unusual for an industry to have more than one key valuation ratio.

E. Choosing Equity vs. Invested Capital Market Multiples

1. Equity multiples are more appropriate when valuing a minority interest and/or when the subject and GPC group have similar capital structures. The application of equity multiples to estimate equity values is:

\[
\text{Equity Value}_{\text{Subject}} = \left( \frac{\text{MVE}}{\text{Benefit}} \right)_{\text{GPC as Adjusted}} \times \text{Benefit}_{\text{Subject as Normalized}}
\]

2. Invested capital multiples are more appropriate when valuing a control interest and/or there is dissimilarity in capital structure between the subject and the GPC. The application of MVIC to estimate equity values is:

\[
\text{Equity Value}_{\text{Subject}} = \left( \frac{\text{MVIC}}{\text{Benefit}} \right)_{\text{GPC as Adjusted}} \times \text{Benefit}_{\text{Subject as Normalized}} - \text{Debt}_{\text{Subject at Market Value}}
\]

3. If capital structures are somewhat similar across companies, then the appraiser might use both invested capital and equity multiples.

F. Choosing the Market Multiple – Close Clustering

1. It is always good analytical practice to calculate the various statistics on the sample of GPC companies and their various types of market multiples (the types of multiples X the two types of capital: equity and invested capital). These statistics include such statistics as range, percentiles, median, average, coefficient of variation and harmonic mean.

2. One method of choosing what type of market multiple to use is to observe the range and clustering of the multiples generated by the selected sample of GPCs. A good statistic to use that measures clustering is the coefficient of variation (standard deviation / mean). The smaller this statistic, the closer the data points are to the mean.
and the smaller the level of dispersion.

3. The inference of closely clustered multiples is that the types of multiples that tend to cluster are the ones investors tend to use to make their buy/sell decisions, and therefore are more reliable indications of value. As the table below demonstrates, types of market multiples from a sample of GPCs can cluster more closely than others.

G. Choosing the Market Multiple – Subject Company Circumstances

1. The appropriate ratios may be dictated by the particular situation of the subject company. For example, if the key valuation ratio for the industry appears to be price-to-earnings (where earnings are net income) and the subject company has not had and is not expected to have positive earnings for the next year or two, valuing it using the standard P/E ratio would result in a nonsensical (negative) value. A better choice might be to use a different definition of earnings or a different valuation measure altogether.

2. Furthermore, if a reading of industry literature does not yield good information on how companies are usually valued, then the owner of the subject company may be an excellent source of guidance.

H. Choosing the Market Multiple – Rules of Thumb

1. While rules of thumb should never be used as the sole way of valuing a business, they frequently embody some good industry knowledge. Most have been developed based on actual transactions. Therefore, they may provide guidance as to the multiples utilized by investors.
Exhibit 11-1

A Brief Explanation of Statistics and
Examples of the Calculation of Statistical Measures
Statistics for Valuation

Introduction
An understanding of statistical theory and its application aids business appraisers in analyzing company, industry, and market data.

Statistics are often used to:
Evaluate company performance over time and against some set of peer data
Evaluate the predictability of market multiples and other valuation variables

Central Tendency
Measurements of central tendency

Mean – Also known as the arithmetic mean, the mean is typically what is meant by the word average. The mean is perhaps the most common measure of central tendency. The mean of a variable is given by (the sum of all its values)/(the number of values).

Median – The median is a popular measure of central tendency. It is the 50th percentile of a distribution. To find the median of a number of values, first order them, and then find the observation in the middle: the median of 5, 2, 7, 9, and 4 is 5. (Note that if there is an even number of values, one takes the average of the middle two: the median of 4, 6, 8, and 10 is 7.) The median is often more appropriate than the mean in skewed distributions, or in situations with large outliers.

Mode – The mode is the most common value in a distribution and is the least often used measure of central tendency.

Central tendency in valuation
Common size or absolute dollar averages in financial trend analysis for the subject company, guideline companies and/or peer group data.
Calculation of performance multiple averages of the subject company.
Calculation of market multiple averages of guideline companies and/or peer group data.

Variation
Measure of variation

Range – The range is the simplest measure of variation to find. It is simply the highest value minus the lowest value. Since the range only uses the largest and smallest values, it is greatly affected by extreme values, that is, it is not resistant to change.

Standard deviation – The most commonly reported measure of variability or spread is the standard deviation.
The standard deviation is also called the root-mean-square deviation, which describes the way it is calculated. First, the deviations from the mean are calculated, then, the deviations are squared. Next, the mean of the deviations is calculated and finally, the square root of the mean is taken to obtain the standard deviation.

What information does the standard deviation convey? When data are approximately normally distributed, approximately 68% of the data lie within one standard deviation of the mean, approximately 95% of the data lie within two standard deviations of the mean, and approximately 99.7% of the data lie within three standard deviations of the mean.

**Coefficient of variance** – The coefficient of variance is the degree to which a set of data points varies. It is often called the relative standard deviation, since it takes into account the mean (average). The larger this number is, the greater the variability in your data. The coefficient of variance is calculated by dividing the standard deviation by the mean and is typically displayed as a percentage. When assessing precision, the lower the coefficient of variance percentage, the better the precision between replicates.

Graphical representations of central tendency and variation

Normal distributions
All three graphs have the same mean, but the standard deviation (or $\sigma$) for the first graph is larger than for the second, and the $\sigma$ for the third is still smaller than for the first.

Skewed distributions – A distribution is skewed if one tail extends out further than the other. A distribution has positive skew (is skewed to the right) if the tail to the right is longer. A distribution has a negative skew (is skewed to the left) if the tail to the left is longer.

Variance in valuation

Wherever measures of central tendency are applied, measurements of variance help develop an impression of how closely concentrated around the expected value the distribution is; it is a measure of the ‘spread’ of a distribution about its average value. For example, if we calculate the mean and median price/book equity ratio, but find there is a large variance, then the “average” price/book equity ratio may be meaningless as a predictor of value.

Correlation

Regression analysis—Regression analysis is a statistical tool for the investigation of relationships between variables. Usually, one seeks to ascertain the causal effect of one variable upon another—the effect of a price increase upon demand, for example.

Correlation coefficient—A correlation coefficient is a number between -1 and 1 which measures the degree to which two variables are linearly related.
If there is perfect linear relationship with positive slope between the two variables, the correlation coefficient is 1; a positive correlation exists when one variable displaying a high value (on the “X” axis) is shown to be related to a high value in the other variable (on the “Y” axis)—and vice versa.

If there is a perfect linear relationship with negative slope between the two variables, the correlation coefficient is -1; a negative correlation exists whenever one variable displaying a high value (on the “X” axis) is shown to be related to a low value on the “Y” axis—and vice versa.

A correlation coefficient of 0 means that there is no linear relationship between the variables.

**Correlation in valuation**

Often used to identify relationships between measurable market data and financial data in order to measure the predictive nature of the relationship between the market data and the financial data. For example, if there is a high correlation between the price/earnings ratio of publicly traded companies and the net income of those companies, then the price/earnings ratio may be a good predictor of value.
Examples of Calculations

Assume that we have two sets of valuation ratios

<table>
<thead>
<tr>
<th></th>
<th>Set 1</th>
<th>Set 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>25th Percentile</td>
<td>14.2</td>
<td>11.6</td>
</tr>
<tr>
<td>Median</td>
<td>14.7</td>
<td>14.8</td>
</tr>
<tr>
<td>Mean</td>
<td>15.0</td>
<td>16.9</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.7</td>
<td>10.8</td>
</tr>
<tr>
<td>Harmonic Mean</td>
<td>14.6</td>
<td>12.4</td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td>0.2</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Note the differences between the two sets of data. Set 2 has a wider range of data and a much larger coefficient of variation. The medians are about the same, but the mean of Set 2 is much higher and the harmonic mean is much lower.

**Calculation of the Mean**

The mean for Set 1 is calculated:

\[
\frac{11.7 + 14.2 + 14.7 + 15.1 + 19.2}{5} = 15.0
\]

**Calculation of the Harmonic Mean**

The harmonic mean is calculated:

\[
\left\{ \frac{1}{11.7} + \frac{1}{14.2} + \frac{1}{14.7} + \frac{1}{15.1} + \frac{1}{19.2} \right\} \cdot \frac{1}{5} = 14.6
\]
Chapter 11. GPC Steps 3-4

Calculation of the Standard Deviation

The standard deviation is calculated as:

$$\sqrt{\frac{(11.7-15.0)^2 + (14.2-15.0)^2 + (14.7-15.0)^2 + (15.1-15.0)^2 + (19.2-15.0)^2}{(5-1)}} = 2.7$$

Calculation of the Coefficient of Variation

The coefficient of variation is simply: $2.7/15.0 = 0.2$

Calculation of Median and Percentile

The median and 25th percentile are calculated using Microsoft’s “Percentile” function. In using this function, the data are first sorted lowest to highest (as they are above). The lowest and highest values are assumed to be the minimum and maximum of the distribution of values.

The data are then divided into the appropriate percentiles. In this case the data can be thought of as being divided into four buckets: 11.7 to 14.2, 14.2 to 14.7, 14.7 to 15.1, and 15.1 to 19.2. The endpoint of the lowest of the four buckets corresponds to the 25th percentile; in this case the value is 14.2. The middle value is the median and is 14.7.

How Statistics Can Lie

“There are three kinds of lies: lies, damned lies, and statistics.” - Benjamin Disraeli (1804-1881)

Fortunately, the science of statistics has improved dramatically since the former prime minister issued this scathing indictment. Whereas it may be possible to fool some of the people all the time with the improper use of statistics; this course is hardly well advised; any reasonable statistician can destroy arguments made through improper use of statistics, thereby impugning your entire valuation.

Types of misuses

Size matters: the inadequate or “no-data” analysis

The data analyzed must be sufficient in terms of quantity to make the statistical analysis meaningful. The mean and median of a “two data point” sample is the same and any analysis of variance is irrelevant.

Statistics are used to provide condensed information on the data set of samples; when the dataset is small, the appraiser is well advised to present the data directly and forthrightly.

Simply because data sets are small does not mean they do not have value in analysis. As business appraisers, as long as we recognize that a small dataset available is typically a haphazard sample of a larger population, we can use it to our (limited) advantage. In short, some data points are better than none, and far better than having a few and not presenting them.
The touchstone is simply to be careful about the conclusions you draw, even from rather robust datasets that may not be derived from representative probability sampling of the universe of interest. To the degree that you observed very low variance in your sample, allow yourself the luxury of some further inquiry as to why that variance might be low – is there a sample bias in the data?

The assumption of representativeness

A common mistake is to assume a higher level of representation in the dataset than is actually resident. For example, we might be tempted to assume that valuation multiples drawn from transactions involving adult health centers in California and New York are representative of the population of adult health centers. Nothing could be further from the truth; adult health centers in California and New York have exceptionally rich reimbursement schemes making them attractive acquisition candidates. This leads to an inherent (upward) bias in your sample. If you are valuing an adult health center in Alabama, the transaction data that may well be misleading to the point of uselessness.

Unless you are with able to exhibit equal-probability-of-selection sampling that underpins the representation of the data set you are using, you have an inherent problem that your data may not be representative of the larger population you wish to study.

The argument that “I used all the data points available” simply isn’t good enough, because in most cases, firm transactions occur based on non-random trigger events. In the simplest example, sales multiples for Internet companies were dramatically higher in the five years preceding 2000 than in later five years. Most of us would not fall prey to the temptation to merge these data and assume these data representative of a hypothetical transaction today, but the same problem exists in virtually every dataset. Exogenous forces, different situations and conditions, and an inherently non-representative sample of data points are the “facts of life” of a business appraiser; in using data, the business appraiser must consider the “facts and circumstances” that underpin that data.

The assumption of homogeneity

Another common mistake is to assume that there is a high level of homogeneity embedded within samples of ostensibly similar objects, such as firms. In some cases, this might be true, but in most cases, it simply is not true. The classic “business appraiser paradigm” is that firms of similar size, earnings and growth in an industry are therefore similar and the variance is attributable to value drivers and management. This paradigm, while useful, tends to lead us towards an assumption of homogeneity that may in fact not exist. For example, not all Chinese restaurants in the local area are the same – some are upscale dining establishments, where others are simply takeout restaurants. They may exhibit similar characteristics in measures of size and performance, but may be driven by different underlying dynamics; the low-end establishments driven by an influx of Chinese immigrants, and high-end establishments driven by wealth effects in the non-Chinese population. To that end, we watched an upscale Chinese restaurant of average performance double in profitability after switching owners; the new owners targeted the immigrant Chinese population with “home cooking”. The business rapidly morphed from an upscale dining establishment to essentially a catering organization providing daily food to the busy Chinese immigrant community.
The best way around the assumption of homogeneity is to perform statistical tests, such as independent sample t-tests or ANOVA (analysis of variance) on your dataset. In most cases however, simple examination of the data will give you a very good idea as to how homogeneous it actually is.

Examination of the variance in your dataset is an exceptionally useful sidebar, and not difficult to do – one doesn’t need to be a statistician to simply look at your data set in the spirit of inquiry, and ask “Why are these different?” Most often, a very cursory examination reveals some interesting points to consider when applying that dataset to extract parameters for use in valuation.

Treatment of unfavorable data and outliers

It is one thing to remove outliers; it’s quite another to remove data that biases your point of view. As an appraiser, we are to be objective observers and analysts, not advocates of our client’s position.

Experts that eliminate data points do so based on very good rationale – examination of the facts and circumstances, which is a core function of an appraiser. What this means is that before you eliminate a data point, you would do well to develop a good understanding of why it should be eliminated. If you eliminate data points, it is good practice to at least footnote this in your report.

In most cases, there are points in a data set that look like they do not conform to the industry data – they are called “outliers.” Outliers are most instructive – they tell you a lot more about the nature of the value multiples that can exist in the industry then do a very tightly grouped set of multiples. You can think of outliers as a point of interest in what otherwise might be a very dull tour – stopping to examine them can give you a great deal of insight that might be most helpful to your valuation. Perhaps more importantly, not examining them may leave you open to severe criticism by someone who later makes even a casual analysis of the outlier.

Sometimes, it is absolutely essential to eliminate outliers, to derive a reasonable analytic representation of the trends in the data sent. The least squared formula for regression will invariably cause the regression line to run very close to an outlier, such that the outlier data point is disproportionately weighting the form of the regression. This requires considerable care, but is most sensible if the outlier is very far away from your target firm in all aspects.

Using a scatterplot before forming any conclusion regarding a relationship is always a good idea. The graph below illustrates that two outliers are driving the coefficient of determination of the regression. Although the regression statistic looks good, it really is not very good at explaining the data.
The whole point of this graph is to show that it is always useful to take a common-sense look at the data and information you will be using.

The well-chosen representative statistic of central tendency

Normally we use some statistic of central tendency—mean (average), median, or mode—to describe the distribution of values. Which one you choose depends highly on the form of the distribution of values in the dataset. In some cases, the mean (arithmetic average) of all samples is used. More useful are typically the median (the middle value in a ranked series) or mode (the most frequent value in a series). If the distribution of a population or its sample is bell-shaped (i.e., normally distributed), then you need not be concerned about the source of the average because the mean, median, and mode will be approximately equal to one another. On the other hand, most business statistics such as market multiples often skew from a normal distribution. (The most common distribution of business statistics is the log-normal distribution.) Reporting the median generally provides a more accurate assessment of the population.

Sometimes, you have distributions of binomials—variables that can take only one state or another. In that case, the mean (average) of the sample might be worthwhile to present, but this is done in the context of what percentage of the population exhibits a particular trait (e.g., subchapter S status).

The naked statistic and measures of variability

An average value without a measure of the variability in a distribution or the degree of significance is a “naked” statistic. Assume you calculate the mean price to earnings ratio and price to revenue ratio for a group of guideline companies. Which one is the better indicator of value? Without additional analysis, you cannot tell.

Measures of variability in your dataset of statistics are critical; typically the variance, standard deviation, or coefficient of variation is used. The problem is that if your distribution varies from a normal (i.e., bell-shaped) curve, these measures are a bit less useful than they would be if you had a normal distribution. Since most business variables do not occur as normal distributions, the central limit theorem is helpful to describe the limits of the central tendency.

The gee-whiz graph
Be cautious of gee-whiz graphs, tables, or pictographs. We often show a picture, table, or graph to illustrate our statistical analysis. In order to create the perception of large, significant differences, just change the magnitude of the scale on the vertical axis and—voila!—the implications of our analysis can be skewed (no pun intended) to our liking. Illustratively, note that the following tables contain the same data. Is the growth rate illustrated equivalently?


**Post-hoc rationalization**

Post-hoc rationalization is the fallacy of arguing from temporal sequence to a causal relation. Simply put, you can’t always assume that if B follows A, then A caused B. Correlation does not imply causality.
We all are tempted to squeeze as much as we can from limited data. The problem with small datasets that we invariably use is that correlations occur that appear very strong, yet they are not borne out when tested against a larger sample. This is the nature of small datasets, yet we are all tempted to rely upon these correlations and make something out of them, which can be very embarrassing.

There exists a bootstrapping technique for testing these correlations statistically within a small dataset. If a particular correlation you observe in a small dataset is absolutely central to your conclusion of value, we recommend that you use a bootstrapping technique to verify your correlation or test your correlation on a larger sample. This recommendation is purely the responsible use of statistics; if you aren’t comfortable doing this alone, a statistician can easily do it for you.

How to statisticulate

The act of misleading people through the use of statistics has been referred to as “statisticulation.” Some of the more common ways to statisticulate include: 1) the use of means when medians are more appropriate; 2) misuse of significant figures, e.g., on average, I sleep 6.35 hours per night (who keeps track of sleep beyond the precision of about the nearest half-hour?); 3) improper use of percentages, e.g., “there’s a 50% chance of rain on Saturday and the same on Sunday, so don’t make any plans for this weekend because there’s a 100% chance of rain.”

The general recommendation here is, “Don’t make hokum out of statistics.” This field is very well understood, highly developed, and there are excellent experts available everywhere.

The semi-attached statistic

The last, but certainly the most important method of abusing or misusing statistics is the semi-attached statistic. Use of semi-attached statistics (or information) is perhaps the principal reason why bad statistics and snake oils have thrived. Subscribers to this philosophy believe that “if you can’t prove what you want to prove, demonstrate something else and pretend they are the same thing.” Somewhere buried in the semi-attached statistic is usually a trace of truth or fact, but the rest is a whole lot of fluff. Thus, it is very difficult to pin a “lie” on a semi-attached statistic.

In his book titled Damned Lies and Statistics, author Joel Best describes four personalities in regard to how people cope with statistics.

The awestruck understand very little about statistics, but that’s of no real concern to them because statistics have magical powers, just like the products they use.

The naïve have a little more understanding of statistics, but are basically accepting of what they are told.

The cynical are very suspicious of statistics, in general, except when it comes to those that support their own beliefs. Overall, they don’t trust in numbers and feel that “you can prove anything with statistics.”
Finally, the critical take a more thoughtful approach to statistics that avoids the extremes of naïve acceptance and cynical rejection. The critical ask important questions such as “Who is the source and how do they know? How were the statistics produced? Where is the measure of variability or degree of significance? Is the statistic being properly interpreted?” Most importantly, they ask, “Does it make sense?”
Chapter 12. GPC Steps 5-6 – Compare and Adjust GPC Multiples

I. GPC Step 5 - Comparative Analysis Between Subject Company and GPCs

A. In step five of the GPC method, the appraiser compares the qualitative and quantitative characteristics of the subject company with the characteristics of the guideline companies. Analytical tools include:

1. Qualitative SWOT analysis (strengths, weaknesses, opportunities, threats); and
2. Financial performance analysis (financial ratios, trends, comparison to industry peer groups, etc.).

B. The key factors for comparison are the assessment of relative risk and relative growth differences so that the analyst can adjust the market multiples to the appropriate level to be applied to the subject company. After these adjustments, the market multiples properly reflect the subject’s risk profile and investment outlook relative to the risk profile and investment outlook of the selected guideline companies.

II. Comparative Qualitative Factors to Consider

A. The valuator’s objective is to identify the relevant qualitative factors which differ from the GPCs and will materially affect the value of the subject company. The appraiser must also identify how these relative differences will impact value.

B. These qualitative differences will most likely relate to such factors as expected growth and the risks attributable to the appraisal subject that are different from those of the guideline companies.

C. Different risk factors considered by the valuation analyst will generally include, but will not be limited to, the following:

1. Economic risk
2. Business risk
3. Operating risk
4. Financial risk
5. Asset risk
6. Product risk
7. Market risk
8. Technological risk
9. Regulatory risk
10. Legal risk
D. There are many other risk factors to be considered as well, but these are some of the more important items that a valuation analyst must think about in the application of not only the market approach, but also the income approach. Each of these risk factors should be analyzed from the point of view of how the appraisal subject differs from the guideline companies. Most of the information about risk will be obtained from sources other than the financial statements.

E. Economic Risk

1. Economic risk is analyzed as part of the economic analysis performed by the valuation analyst. Revenue Ruling 59-60 suggests that consideration be given to "the economic outlook in general and the condition and outlook of the specific industry in particular." The valuation analyst must determine how the subject company will be affected by changes in the economic environment in which it operates. Economic conditions at the valuation date and how they affect the company must also be considered.

2. For example, if you were appraising an automobile dealership, consideration would have to be given to the impact that interest rates have on auto loans. If the economic forecast was that interest rates were expected to go up, one would think that car sales may be affected if people could not afford to borrow at the higher rates. However, the dealership may experience an increase in its service revenues since people may keep their cars for a longer period, requiring more maintenance.

3. To the extent that the guideline companies selected are good "comparables," economic risk will be incorporated in the pricing multiples. The adjustments to be made will more likely compensate for differences between the guideline company and the appraisal subject that are due to factors such as regional or local economic risk. The appraisal subject may operate in an area that is different from that of the guideline companies.

F. Business Risk

1. Business risk involves the analysis of the appraisal subject's business. Once again, we are interested in how the subject company differs from the guideline companies. The valuation analyst analyzes the company in terms of the risk associated with factors such as sales volatility and the volatility of the company's growth. If a company has revenues that fluctuate widely, a greater risk exists than if the company is somewhat stable. Volatile growth is obviously a greater risk as well, when you consider the cash flow needs of a growing company. If growth is volatile, it may be difficult for the company to raise the necessary capital to foster that growth. The banks may be reluctant to lend money to a company that may not be able to repay its debt next year if a reversing trend takes place.

G. Operating Risk

1. The operating risks associated with a business include such factors as the fixed versus variable cost structure of the appraisal subject. The valuation analyst must analyze the cost structure of the appraisal subject to determine how much risk the company is
exposed to as a result of the commitments and costs associated with the business operations. If a company has a high level of fixed costs, that may not bode well in times when revenues decrease. Obviously, if two companies are the same except that one company has higher fixed costs than the other, the company with the higher level of fixed costs would be considered to be more risky and, therefore, worth less.

H. Financial Risk

1. The financial risks associated with a company pertain to the amount of leverage the company uses and the company's ability to cover its debt payments. The valuation analyst must pay particular attention to the capital structure of similar companies to analyze the appraisal subject. Companies that are heavily leveraged can find themselves in trouble when a recession hits. To determine the level of risk of the appraisal subject, different debt structures should be analyzed when one performs the appraisal.

2. Proper capital structure plays an important part in the financial success of a business. Companies that are overcapitalized or undercapitalized are not necessarily "comparable" to companies that have a normal capital structure. A normal capital structure is one that is similar to that of other companies in the same industry. If the appraisal subject is heavily leveraged, the valuation analyst may want to consider using an invested capital approach using EBIT or EBITDA in the pricing multiples.

3. In many instances, smaller companies that are heavily indebted are structured in that manner as a result of the owner of the business choosing to finance his or her excess salary and perks, and therefore, the interest and the liability should be treated as a non-operating item, since they do not affect the business operations of the company.

I. Asset Risk

1. Asset risk relates to the age and condition of the company's assets. Older assets represent a higher degree of risk for a company in terms of higher maintenance costs, a lower level of productivity, and functional and technological differences in available production. Not only do these items increase the level of expenditures for the company, but the future cash flow needs may also be greater due to replacement needs, which further increases the risk of the enterprise.

J. Product Risk

1. Product risk relates to a company that has little diversification in its product line or has a product line that may become extinct with the introduction of a newer product by a different company. An example of this is the effect that the iPod had on the Walkman.

K. Market Risk

1. Market risk relates to how geographically diversified the company is. If the company operates within a local marketplace, it can be greatly affected by changes in that local area. A more diversified market reduces the risk associated with a company.
2. An illustration of market risk is a local restaurant that operates in a community that is dependent on a military base for business. If the government decides to close the military base, what do you think will happen to the restaurant's business?

L. Technological Risk

1. New technology can adversely affect a company if it does not have the ability to keep up with other companies in the appraisal subject's industry.

2. For example, a company that is unable to automate its factory would be at a competitive disadvantage, which increases the risk of the company.

M. Regulatory Risk

1. Regulatory agencies can also adversely affect a business. Environmental regulations are probably one of the best examples of the risks that a company faces. A chemical manufacturing company can be put out of business in a very short time by the Department of Environmental Protection. This increased risk will generally cause a willing buyer to pay less for a business, since he or she must be able to generate a faster return on the investment to compensate for the possible impact of new regulations. Obviously, only those regulations that can be reasonably forecast can be considered in this analysis. Do not forget about possible cleanup costs if a problem is discovered. A valuation analyst may not be able to quantify these costs, but the increased risk will affect market multiples, discount rates, and capitalization rates.

N. Legal Risk

1. The cost of litigation in today's society can mean the end of any successful business. Even if successful, litigation can create such a financial burden on a business that it can be greatly exposed to the risk of being put out of business. Product liability claims, employee discrimination claims, antitrust litigation, and a host of other types of claims will, at times, significantly affect the value of a business enterprise by affecting future margins, capital expenditures, etc., but if these are industry wide, market prices may have already taken these issues into account.

O. Value relative to the GPCs is lowered by differences in qualitative factors that increase risk or decrease the outlook for growth. Value relative to the GPCs is raised by differences that decrease risk or increase the outlook for growth.

III. Comparative Quantitative Financial Performance Factors to Consider

A. The purpose of comparative financial analysis is to compare the financial performance of the GPCs to each other and to the financial performance of the subject company. This process assists the appraiser to identify the fundamental determinants of value which differ significantly from the industry norms and therefore will have either a positive or negative impact on value. There are two basic types of comparative financial analysis:

1. Trend analysis (comparison of the company to itself over time)

2. Peer analysis (comparison to similar companies over time)
B. Objectives of Comparative Financial Analysis

1. As in the analysis of qualitative factors, the key quantitative factors are the assessment of relative risk and relative growth differences. This analysis enables the valuator to adjust market multiples to the appropriate level, reflecting the relative risk profile and investment outlook of the subject compared with the risk profile and investment outlook of the GPCs.

2. It is much better to have a small number of useful pieces of information than to have pages and pages of detail; therefore the valuator must identify those financial concepts that will help him determine comparability and value.

3. The steps in this process include:
   a. Identify key differences between the subject and the guideline group
   b. Identify differences within the GPCs themselves
   c. Discover if any single GPC or subset of GPCs is more comparable to the subject than the group overall
   d. Provide support for the selection of each multiple, whether it is a mean, median, or something other than a central tendency measurement

4. Measures of Financial Performance
   a. Comparative analysis should include the following types of information for both the GPCs and the subject; everything should be on the same basis for easy comparison. The concepts chosen will be a function of the industry in which the company operates, but they should include:
      (i) Size Measures – Size measures include nominal sales, total assets, market capitalization, and total invested capital.
         (a) As discussed extensively in BV202 (The Income Approach), size matters. In general, the larger the enterprise, the lower its cost of capital (i.e., discount rate) and therefore the higher its market capitalization multiples.
      (i) Measures of Historical Growth Rates – One of the most important determinants of value is growth - growth in sales, income, cash flows or dividends. One issue that must be addressed, and often is not, is how this growth is calculated. Oftentimes investors will use past growth rates, year-to-year, or in a compound annual growth rate between two periods, as a guide to future expectations.
         (a) When comparing companies, higher growth rates tend to increase value since they lower the capitalization rate (k - g) and therefore increase the market capitalization multiple. However, volatility of growth rates generates uncertainty regarding future returns and therefore tends to increase investment risk and reduce value.
(ii) Profit Margins – Measured as the common size percentage ratio of profits to sales, this “bottom line” traditionally is defined as net income after tax, though other measures of profitability such as gross profit and operating profit are also important to consider. In addition, measures of profitability differ depending upon whether invested capital or equity is being valued. Both the current period’s margins as well as average margins over a longer period of time (e.g., five years) should be included in the analysis.

Examples of profitability ratios:

<table>
<thead>
<tr>
<th>Profitability for Equity</th>
<th>Profitability for Invested Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit / Sales</td>
<td>Gross Profit / Sales</td>
</tr>
<tr>
<td>Operating Profit / Sales</td>
<td>Operating Profit / Sales</td>
</tr>
<tr>
<td>Pre-tax Income / Sales</td>
<td>EBIT / Sales</td>
</tr>
<tr>
<td>~~~~</td>
<td>EBITDA Cash Flow (pre-tax) /Sales</td>
</tr>
<tr>
<td>NIAT / Sales</td>
<td>NOPAT / Sales</td>
</tr>
<tr>
<td>Gross Cash Flow / Sales</td>
<td>~~~~</td>
</tr>
</tbody>
</table>

(iii) Profit measures such as EBIT or EBITDA can be useful because they tend to reflect the economics of business operations better than net income and gross cash flow. Net income and gross cash flow are measures of returns to equity capital and are influenced by both the company’s tax planning and its choice of capital structure.

(a) When comparing companies, higher profit margins allow more room to adjust to changing market conditions before going into the red. Hence, returns are less risky and market multiples will be higher. However, volatility of profit margins, as with volatility in sales, generates uncertainty regarding future returns and therefore tends to increase investment risk and reduce value. Finally, net profitability is one of the components of the DuPont return on equity, and the higher that ratio, the higher the ROE.

b. Measures of Asset Management and Reinvestment – This directly addresses the need for an enterprise to manage and invest in its asset base. The investment in the productive assets of the enterprise includes not only reinvestment to replace capital consumed but new investment to fund growth.

(i) When comparing companies, higher “asset turnover ratios” indicate more efficient use of productive capital to generate sales activity. This in turn indicates that such efficiency will allow the enterprise to generate more free cash flow (i.e., dividend-paying capacity). Finally, total asset turnover is one of the components of the DuPont return on equity, and the higher that ratio, the higher the ROE.
c. Measures of Financial Leverage, Solvency and Liquidity – These ratios measure the utilization of “financial leverage” or the use of debt in the financial capital structure of the right-hand side of the balance sheet.

(i) The most common measures for financial leverage are the values of outstanding total debt, preferred stock (if it exists), and the market value of common equity. Book equity generally has very little to do with how stock investors view their relative position with a company. The ratio of debt to market value of equity should also be included; this is the true leverage of the company. It should be noted that the debt number shown in this section of the report should be its market value; however, on a practical basis, very few valuators estimate this and simply use the book value of the debt.

(ii) Measures of company solvency and liquidity generally provide a short-term perspective on how able the enterprise is able to meet its debt servicing requirements.

(iii) When comparing companies, higher leverage is good up to the point that the firm becomes over leveraged (i.e., when the solvency and liquidity ratios fall into the danger zone—see the Altman Z score measure of bankruptcy risk as a comprehensive measure of a firm’s financial risk). Higher leverage can be good because it is one of the components of the DuPont return on equity, and the higher that ratio, the higher the ROE. High debt, however, is more risky.

d. Measures of Returns on Investment – These financial ratios measure the productivity of the productive asset base in terms of its ability to provide a return on the financial capital. For equity capital, this productivity is the result of a combination of profitability, asset utilization and financial leverage (three determinants of value).

(i) When comparing companies, higher ROE or ROIC is good. It indicates the firm is better managing profitability, reinvestment and its financial capital.

e. Other Financial Performance Measures – Use of other measures of financial performance will be a function of what is important in the industry in which the subject company operates. For example, retailers are interested in inventory turnover, banks in loan/deposit ratios, and hospitals in revenue per bed. Sometimes ratios from industry surveys may be incorporated.

5. Questions to Ask When Researching and Analyzing GPCs

a. When researching the guideline companies and analyzing their financial performance on a comparative basis with the subject company, the appraiser should consider the following questions:

(i) Which ratios or benchmarks are most relevant for the subject company and its industry? Why?

(ii) Is there uniformity among the ratios within the guideline group?
(iii) Is there a variance between the average ratios within the guideline group and the averages expressed in the industry survey?

(iv) As a result of the financial analysis, can any of the GPCs be discarded?

(v) Are any of the GPCs more similar to the subject company?

(vi) Are there any upward or downward trends in any of the ratios?

(vii) What information from the economic and industry research can explain the financial performance of the GPC ratios?

(viii) Is there a trend in the implied growth rates in the market multiples?

(ix) How does that implied growth rate compare to the growth rate that was used in the income approach?

(x) What are the key differences in risk between the GPCs and the subject?

(xi) What are the key differences in growth prospects between the GPCs and the subject?
Assignment M-7: Comparative Analysis of GDT, Inc. vs. GPCs (15 minutes)

Handout 12-1 is a ranking of certain key financial performance and pricing ratios of the group of selected guideline companies. It was prepared using the adjusted financial information for the GPCs as calculated in Handout 10-2. The performance ratios are compared to those of GDT’s. Also, use the information that you have already reviewed about the GPCs from Handout 9-5 to prepare an analysis of the relative strengths and weaknesses of GDT compared to the guideline companies. There is a worksheet for your use, dividing your analysis into quantitative and qualitative factors. Indicate whether this would increase (+), decrease (-) or keep the multiple neutral (0).

**COMPARATIVE ANALYSIS OF GUIDELINE COMPANIES**

<table>
<thead>
<tr>
<th>Quantitative Comparisons</th>
<th>Comparison</th>
<th>Impact on P/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Qualitative Comparison</th>
<th>Impact on P/E</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

v. 4.3 (12/10) Non-authoritative © 2010 American Society of Appraisers
Assignment M-8: GDT Valuation Multiples (10 minutes)

Based on the information in Handout 12-3, LTM Equity Multiple Worksheet, choose which multiples to use in this valuation (which multiples, not the size of the multiple). For simplicity, we are not using IC multiples in this exercise.
IV. GPC Step 6 – Adjusting the GPC Market Multiples – the Key Step

A. Step six of the GPC method is the adjustment of the GPC multiples before applying them to the subject company to calculate initial indications of value. The adjustment of the market multiples is the key valuation judgment the appraiser must make in the market methods.

B. A sound understanding of the valuation theory underlying the GPC method is absolutely a prerequisite to performing this appraisal methodology in a correct manner. The key concept underlying the GPC is the recognition that market multiples are essentially the inverse of capitalization rates. Hence, embedded within each market multiple is the investment market’s estimate of both a risk-adjusted cost of capital and a present-value-weighted expected growth in the value of the investment (i.e., both k and g).

1. Should the 25th percentile, median, 90th percentile, average, harmonic mean, etc., multiple be chosen? This must be based on comparison of the subject company to the GPCs. Presumably the stronger the subject company relative to the GPCs, the greater the value and, maybe the higher the pricing multiple.

2. Be careful not to double-count. Examples:
   a. Using a lower pricing multiple to account for the small size of the subject company when the multiples have already been adjusted for size
   b. Using a higher multiple to account for high growth of the subject when the multiples have been adjusted for growth
   c. Using a high price/earnings multiple to account for the subject’s higher than average profitability (the advantage of the higher profitability is captured by using an earnings-based pricing multiple)

3. Don’t simply use the average or median. Analysis must accompany any conclusion.

C. Market Multiples Are Capitalization Factors

1. The freely traded market values that we observe in the capital marketplace represent the market’s auction pricing of each GPC’s expected future financial performance. As discussed in Chapter 8, a market multiple or valuation ratio is, in essence, a capitalization multiple—the inverse of a capitalization rate.

2. ASA’s BV Standards Glossary defines capitalization factor as any multiple or divisor used to convert anticipated economic benefits of a single period into value. Therefore, market multiples are capitalization factors and are the inverse of capitalization rates.
Market Multiple = \frac{Market Price}{Operating Performance} = \frac{1}{(k - g)}

Where:
\begin{align*}
k &= \text{Risk and benefit adjusted required rate of return} \\
g &= \text{Present value weighted perpetual growth rate}
\end{align*}

D. Crucial Comparative Issues Are Relative Risk and Relative Growth

1. Since market multiples are the inverse of capitalization rates, then the crucial issues for comparison between the subject company and the GPCs are the assessment of relative risk \((k)\) and relative growth \((g)\) differences. Therefore, the appraiser’s task is to choose the appropriate level of the valuation multiple to apply to the subject company that properly reflects its risk profile and investment outlook relative to the risk profile and investment outlook of the sample of guideline companies.

V. Qualitative and Quantitative Techniques for Adjusting Market Multiples

A. In choosing the appropriate level of the valuation multiple (i.e., adjusting the market multiple) for the subject company, we consider the qualitative and quantitative differences between the guideline companies and the subject company.

1. Qualitative Basis for Market Multiple Adjustments

   a. Generally speaking, if the outlook for the subject company relative to the GPCs is for less risk and/or more growth, we will choose a multiple somewhat higher than the median. If the outlook is for average risk and/or future growth, we will choose a multiple at the median. And, if the outlook is for higher risk and/or lower growth, we will choose a multiple below the median.

   b. Most valuation analysts use informed judgment when making their choice as to the amount of adjustment they apply to the GPC market multiples. This is just another way of saying that their choice is made on a qualitative basis. There is nothing wrong with this methodology, but there are some quantitative techniques that add precision to the direction and amount of market multiple adjustments.

2. Quantitative Models for Market Multiple Adjustments

   a. There are several models that quantify market multiple adjustments. These models involve the following:

      (i) Adjusting the multiples based upon an analysis of the correlation of changes in a financial performance metric and changes in the market multiples,

      (ii) Adjusting the multiples for differences in size or other risk factors, and
(iii) Adjusting the multiples for differences in the outlook for growth.

(a) Observations on a correlation relationship can provide direct methods of quantifying market multiple adjustments. This type of adjustment is especially useful for adjusting book and sales multiples.

(b) On a more theoretical basis, the adjustments for growth and size can have a large impact on value. The idea behind this is to adjust the GPC pricing multiples for differences between (1) size-related risks and growth rates implicit in the GPC multiples, and (2) the size-related risk and growth rate of the subject.

(c) The size and growth adjustments are made only to income statement-based multiples because they are based on the following relationship between capitalization rates and pricing multiples:

\[ \frac{Value}{Benefit} = \frac{1}{k_B - g_B} \]

which implies

\[ \frac{Value}{Benefit} = \frac{1}{k_B - g_B} \] or \[ \frac{Benefit}{Value} = k_B - g_B \]

Where:
- \( k_B \) is the discount rate (or WACC) related to that particular benefit stream, and
- \( g_B \) is the expected perpetual growth rate related to the benefit stream

(d) It should be noted that \( \frac{Value}{Benefit} \) is simply the pricing multiple related to the Benefit.

(e) The size and growth adjustments represent ways to quantify adjustments appraisers have done judgmentally for years. Of course, these adjustments are only appropriate when the appraiser believes there are significant differences among the GPCs and the subject.

3. Adjustments Based Upon Correlation Between Performance and Multiple

a. Correlation Between ROE and Price / Book Value – The analyst may want to explore the possibility that a close correlation exists between the GPCs’ returns on equity and their price / book value of equity (where price equals market capitalization). Theoretically, there should be such a positive correlation, since higher ROE provides equity investors with higher current returns and higher reinvestment for future capital appreciation. Obviously, this relationship assumes the measures of ROE are close to normalized expected future ROE performance.
b. A similar graph could be constructed for invested capital with price / book value of invested capital (where price equals market capitalization) on the Y axis and ROIC (return on invested capital with return defined as EBIT or NOPAT) on the X axis.

c. Correlation between Profit Margin and Price / Sales – The analyst may want to explore the possibility that a close correlation exists between the GPCs’ profit margins (i.e., returns on sales) and their corresponding price/sales. Theoretically, there should be such a positive correlation, since higher profit margins provide equity investors with higher current returns and higher reinvestment for future capital appreciation. Obviously, this relationship assumes the profit margins are close to normalized expected future profitability performance.

d. Theoretically, the price in the price to sales ratio should be an invested capital price (total capitalization plus interest-bearing debt) and return on sales should be an invested capital return (EBIT or NOPAT). In practice, many appraisers also consider this correlation on an equity basis—with the price in the price to sales
ratio defined as total capitalization and an equity return (pretax income or net income).

e. Other Correlations – Correlations between market multiples and other operating performance metrics may also be possible. If close correlations are observed, then the valuation analyst may want to use these relationships as a method of quantifying the corresponding market multiple.

4. Adjusting the Market Multiple for Size Risk
   a. Small size is associated with a number of risk factors, including:
      (i) Lack of management depth
      (ii) Lack of product diversification
      (iii) Lack of geographic or global diversification
      (iv) Reduced access to capital to fund growth
      (v) Limited R&D and marketing resources
   b. A number of studies examine the effect of size on equity returns, including the Duff & Phelps Risk Premium Report and Morningstar’s Stocks, Bonds, Bills, and Inflation Yearbook (SBBI). These studies will be discussed in detail in BV 202.
   c. The discount rate is the place the adjustment is made because we have data quantifying the size effect on returns. There have been studies demonstrating that P/Es vary inversely with firm size; however, the data on firm size and return are readily available and well accepted. The basic equation is:

   \[
   \frac{Benefit}{Value} = k_{GPC} + \left[ k_{size\text{subject}} - k_{sizeGPC} \right] - g_{GPC}
   \]

   d. In this case, the \( k_{size} \) is the appropriate rate of return premium due to size, or size premium. It is important to note that this size premium is based on those appropriate for the buildup method, not the CAPM; that is, they should not be adjusted for beta (this process can be used with the premiums adjusted for beta, but it is much more complicated and will not be discussed here). Furthermore, in order to apply this adjustment we do not need to know either the discount or growth rates of the GPC, we just need to know the size premium differential between the two.
   e. Since the base on which the size premium is computed is the same irrespective of the size of the company, the size premium differential is equal to the total return differential (where total return is only a function of size).
      (i) For example, using SBBI data (which will be covered in detail in BV202), the size differential between a company in the sixth and tenth deciles is equal to the difference in the arithmetic mean returns of 16.37% and 10.11%, or
6.26%. This would be an appropriate amount to substitute for \( k_{\text{size subject}} - k_{\text{size GPC}} \) in the above equation.

f. The size premiums as presented by both Duff & Phelps and Morningstar correspond to cash flows to equity holders, since they are measured by observing total returns in the stock market. Relating this to the equation given above, the Benefit is the cash flow to equity holders (a very close proxy being net income) and the Value is the market value of equity.

(i) For example: Assume the original pricing multiple (MVE/net income) is 15.0, the GPC is in Morningstar’s sixth decile and the subject would be in the tenth. The steps in adjusting the GPC multiple for the size of the subject would be:

(a) Compute the benefit/value ratio (which is just the reciprocal of the pricing multiple): \( 1/15.0 = 6.67\% \).

(b) Add the size differential between the GPC and the subject (as computed above): \( 6.67\% + 6.26\% = 12.93\% \). This is the adjusted benefit/value ratio.

(c) Take the reciprocal to get the new pricing multiple adjusted for size: \( 1/0.1293 = 7.7 \), which is the GPC pricing multiple to be applied to the subject.

(ii) In the most general form, the discount rate and size premiums (as well as the growth rate) in the above equation are functions of both the benefit and the value. If benefit and value are other than net income and market value of equity, respectively, the process becomes a bit more complicated.1

5. Adjustment for Growth

a. We use the same basic equation to adjust for growth. The \( g_B \) for each of the GPCs must be replaced with the \( g_B \) for the subject. This is done in the following manner:

\[
\text{Adjusted \ Multiple} = \frac{1}{\text{Multiple} + \left[ \alpha + \varepsilon \theta \right]}.
\]

which can also be expressed as:

\[
\frac{\text{Benefit}}{\text{Value}} = r_{\text{GPC}} + \alpha + \varepsilon \left[ k_{\text{size subject}} - k_{\text{size GPC}} \right] - g_{\text{GPC}}
\]

where \( \theta \) is the size premium differential, \( \alpha \) is an adjustment made to \( \theta \) when using a multiple other than one based on net income or NOPAT (net operating profit after tax), and \( \varepsilon \) is an adjustment made to \( \theta \) when there is debt in capital structure and a pricing multiple based on MVIC is being used.

---

1 The more generalized approach is discussed by Mattson, Shannon and Drysdale in a September/October 2001 *Valuation Strategies* article entitled “Adjusting Guideline Multiples for Size.” The generalized equation they use is:

\[
\text{Adjusted \ Multiple} = \frac{1}{\text{Multiple} + \left[ \alpha + v \theta \right]}.
\]

where \( \theta \) is the size premium differential, \( \alpha \) is an adjustment made to \( \theta \) when using a multiple other than one based on net income or NOPAT (net operating profit after tax), and \( v \) is an adjustment made to \( \theta \) when there is debt in capital structure and a pricing multiple based on MVIC is being used.
\[
\frac{\text{Benefit}}{\text{Value}} = k_{GPC} - g_{GPC} + \left[ g_{GPC} - g_{Subject} \right]
\]

b. Taking the reciprocal of the benefit/value ratio results in the new pricing multiple. To implement this adjustment, it is not necessary to know the discount rate of the GPC or the subject, only the perpetual growth differential between the subject and GPC needs to be known.

c. For example: Assume the original pricing multiple is 15.0, the perpetual growth of the GPC is 5.00% and that of the subject is 7.00%. The steps in the calculation are as follows:

(i) Compute the benefit/value ratio (which is just the reciprocal of the pricing multiple): \(1/15.0 = 6.67\%\).

(ii) Add the growth differential between the GPC and the subject: \(6.67\% + (5.00\% - 7.00\%) = 4.67\%\). This is the adjusted benefit/value ratio.

(iii) Take the reciprocal to get the new pricing multiple adjusted for growth: \(1/0.0467 = 21.4\), which is the GPC pricing multiple to be applied to the subject.

(iv) See Exhibit 12-1 at the end of this chapter for more detailed information concerning how to compute the present value weighted perpetual growth rate.
Exhibit 12-1

Computing Present Value-Weighted Perpetual Growth
One of the statistics generally given is growth. This is the expected growth (as opposed to the actual, historical growth in earnings per share over the next five (or so) years. This can be obtained from individual equity analysts or some of the consensus reporting services, such as Zacks or as given in Yahoo!Finance.

Three things should be noted about these estimates obtained from most consensus reporting services.

The first is that these growth figures usually represent annual growth in earnings per share for the next three to five years; these are not long-term growth estimates. In some cases, revenue growth rates may be provided.

Second, the analysts from whom these estimates are obtained are from the sell-side; meaning that they tend to be quite optimistic about the prospects for these companies, since they work for firms who want to sell the stock. Also, some of these estimates may be a “consensus” of only one analyst. Smaller companies tend to be followed by fewer analysts.

The last item of note is that not all publicly traded companies will be covered by these services. In such cases and in cases where there is only one analyst following the stock, it might be better to use industry growth estimates, if they are provided. (Of course, the implicit assumption here is that the GPC’s growth is consistent with the industry’s.)

In using these growth estimates, the appraiser assumes that the average annual growth for the next three to five years in net income, EBIT, EBITDA, etc., is the same as that for EPS. These may not be unreasonable assumptions; however, there may be certain cases where they are not appropriate.

Since the typical analysts’ growth estimate applies only for the next three to five years, an estimate must also be made for the subsequent period (years four or six and beyond), so that a blended average annual growth rate for the period from today into perpetuity can be obtained (again, the growth rate in the equations above, g, is the rate into perpetuity and three to five years is only a small part of that).

The blended growth rate, g, that is included in each of the guideline company’s pricing ratios, must satisfy the following:

$$\text{Value} = \frac{CF_1}{k-g} + \frac{CF_1(1+g_1)}{(1+k)^1} + \frac{CF_1(1+g_1)^2}{(1+k)^2} + \ldots + \frac{CF_1(1+g_1)^t}{(1+k)^t} + \frac{CF(1+g_2)^t}{(1+k)^t} + \frac{k-g_2}{(1+k)^t}$$

where $g_1$ is the annual growth rate for the first five years and $g_2$ is the average annual growth rate for each year thereafter, into perpetuity.

This equation assumes two growth rates: one for the next five years and another for everything beyond five years. That is, it is the single growth rate that gives the same value as multiple growth rates. Consequently, not only are the growth rates important, but so is the discount rate.

For example: Assume a discount rate of 20%, a short-term growth rate of 15% (four years) and a long-term growth rate (beyond five years) of 5%. The steps in the calculation are:
Compute the present value of $1/year growing at 15% for the four years (we assume this first $1 has already been grown by 15%) and 5% into perpetuity:

| Year | Rate | Flow | Discount Factor @ 20% | Present Value  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15%</td>
<td>1.00</td>
<td>0.8333</td>
<td>0.83</td>
</tr>
<tr>
<td>2</td>
<td>15%</td>
<td>1.15</td>
<td>0.6944</td>
<td>0.80</td>
</tr>
<tr>
<td>3</td>
<td>15%</td>
<td>1.32</td>
<td>0.5787</td>
<td>0.77</td>
</tr>
<tr>
<td>4</td>
<td>15%</td>
<td>1.52</td>
<td>0.4823</td>
<td>0.73</td>
</tr>
<tr>
<td>5</td>
<td>15%</td>
<td>1.75</td>
<td>0.4019</td>
<td>0.70</td>
</tr>
<tr>
<td>Perpetuity</td>
<td>5%</td>
<td>1.84</td>
<td>0.4019</td>
<td>4.92</td>
</tr>
</tbody>
</table>

**Total Present Value** 8.75

Now solve the following equation for \( g \):

\[
8.75 = \frac{1}{0.20 - g} \quad \text{which implies} \quad g = 0.20 - \frac{1}{8.75} = 8.6\
\]

The following tables show blended growth rates given short-term (analysts) growth and long-term growth at two different discount rates.

<table>
<thead>
<tr>
<th>Analysts' Growth</th>
<th>Using a 20% Discount Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-Term Growth Rate</td>
</tr>
<tr>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>0%</td>
<td>1.57%</td>
</tr>
<tr>
<td>3%</td>
<td>3.00%</td>
</tr>
<tr>
<td>5%</td>
<td>3.89%</td>
</tr>
<tr>
<td>10%</td>
<td>5.90%</td>
</tr>
<tr>
<td>15%</td>
<td>7.64%</td>
</tr>
<tr>
<td>20%</td>
<td>9.15%</td>
</tr>
<tr>
<td>25%</td>
<td>10.45%</td>
</tr>
<tr>
<td>30%</td>
<td>11.58%</td>
</tr>
</tbody>
</table>
Analysts’ Growth | Using a 25% Discount Rate Long-Term Growth Rate
--- | --- | --- | --- | ---
 | 3% | 5% | 7% | 10%
0% | 1.32% | 2.77% | 4.12% | 5.36%
3% | 3.00% | 3.97% | 5.04% | 6.90%
5% | 4.05% | 5.00% | 6.05% | 7.85%
10% | 6.46% | 7.35% | 8.33% | 10.00%
15% | 8.59% | 9.42% | 10.33% | 11.86%
20% | 10.45% | 11.23% | 12.07% | 13.47%
25% | 12.09% | 12.80% | 13.58% | 14.86%
30% | 13.53% | 14.19% | 14.90% | 16.07%

An alternative to this can be employed if two pieces of information are known about the GPC. The first is the pricing multiple and the second is the related discount rate. Using the basic relationship between value and capitalization rate, the implied growth for the GPC is:

\[
g = k - \frac{Benefit}{Value}
\]

For example, assume we know that the MVE/net income for a GPC is 20.0 and the cost of equity (k) is equal to 12.2%, then the implied perpetual growth rate is:

\[
g = 12.2\% - \frac{1}{20.0} = 12.2\% - 5.0\% = 7.2\%
\]

This is a relatively simple calculation for MVE/net income; however, it becomes much more complex when trying to determine growth for other income statement concepts, such as EBIT or revenues, when the discount rates may not be as easy to calculate. (The discount rate for EBIT or revenues is necessarily different than for net income, which is considered to be almost the same thing as net cash flow.)
Handout 12-1

GPC Financial Ratio Ranking Analysis
Handout 12-2

GPC Comparison to GDT
Handout 12-3

LTM Equity Multiple Worksheet
Chapter 13. GPC Steps 7-9 – Apply Multiples, Reconcile and Adjust

I. Step 7 – Apply Adjusted Multiples to Subject Company to Derive Values

A. Step seven of the GPC method is the simple application of the adjusted market multiples to the appropriate financial metrics of the subject company to derive indicated values. The table below illustrates this process:

<table>
<thead>
<tr>
<th>GPC MARKET APPROACH EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of Market Multiples &amp; Derivation of Value Indications (Rounded) (Using trailing 12-month financial metrics)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Selected Types of Market Multiples</th>
<th>MVIC/EBIT</th>
<th>MVE/NI</th>
<th>MVE/BVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideline Co. A</td>
<td>17.9x</td>
<td>29.8</td>
<td>6.0x</td>
</tr>
<tr>
<td>Guideline Co. B</td>
<td>10.5x</td>
<td>16.4</td>
<td>4.3x</td>
</tr>
<tr>
<td>Guideline Co. C</td>
<td>11.3x</td>
<td>18.3</td>
<td>4.9x</td>
</tr>
<tr>
<td>Guideline Co. D</td>
<td>15.0</td>
<td>22.2</td>
<td>3.3x</td>
</tr>
<tr>
<td>Guideline Co. E</td>
<td>12.0</td>
<td>18.0</td>
<td>1.8x</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>13.3x</strong></td>
<td><strong>20.9x</strong></td>
<td><strong>4.1x</strong></td>
</tr>
<tr>
<td>Coefficient of Variation</td>
<td>+/- 23%</td>
<td>+/- 26%</td>
<td>+/- 39%</td>
</tr>
<tr>
<td>Harmonic Mean</td>
<td>12.8x</td>
<td>20.0x</td>
<td>3.4x</td>
</tr>
<tr>
<td>Median</td>
<td>12.0x</td>
<td>18.3x</td>
<td>4.3x</td>
</tr>
<tr>
<td>Range-High Data Point</td>
<td>17.9x</td>
<td>29.8x</td>
<td>6.0x</td>
</tr>
<tr>
<td>Range-Low Data Point</td>
<td>10.5x</td>
<td>16.4x</td>
<td>1.8x</td>
</tr>
<tr>
<td>Selected Market Multiples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>12.0x</td>
<td>18.3x</td>
<td>4.3x</td>
</tr>
<tr>
<td>+/- Adjustments (*)</td>
<td>x 80%</td>
<td>x 80%</td>
<td>x 80%</td>
</tr>
<tr>
<td>Adjusted Multiples</td>
<td>9.6x</td>
<td>14.6x</td>
<td>3.4x</td>
</tr>
<tr>
<td>X Subj. Co. Fincl Metrics</td>
<td>$1,250,000</td>
<td>$510,000</td>
<td>$2,237,500</td>
</tr>
<tr>
<td>EBIT</td>
<td></td>
<td>Net Inc.</td>
<td></td>
</tr>
<tr>
<td>Indicated Values</td>
<td>$12,000,000</td>
<td>$7,459,000</td>
<td>$7,623,000</td>
</tr>
<tr>
<td>-Debt for IC</td>
<td>3,675,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicated Equity Values</td>
<td>$8,325,000</td>
<td>$7,459,000</td>
<td>$7,623,000</td>
</tr>
</tbody>
</table>

(*) A reduction in applied market multiples due to perceived greater risk and more moderate outlook for growth for the subject company.
II. Step 8 - Reconcile the Different Indications of Values

A. If using more than one multiple, the analyst must decide which multiples will be given the most weight. For example, in a service industry, some weight should be given to a price/sales ratio and some might be given to price/operating income, with perhaps very little weight being given to the price/BV ratio. What should those weights be? Hence, step eight of the GPC method is to reconcile the different indications of value derived from the use of more than one adjusted market multiple applied to the subject company. The table below provides an example of such a reconciliation.

<table>
<thead>
<tr>
<th>GPC MARKET APPROACH EXAMPLE</th>
<th>Reconcile Value Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected Market Multiples</td>
<td>MVIC/EBIT</td>
</tr>
<tr>
<td>Median</td>
<td>12.0x</td>
</tr>
<tr>
<td>+/- Adjustments (*)</td>
<td>x 80%</td>
</tr>
<tr>
<td>Adjusted Multiples</td>
<td>9.6x</td>
</tr>
<tr>
<td>X Subj. Co. Fincl Metrics</td>
<td>$1,250,000</td>
</tr>
<tr>
<td>Indicated Values</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>-Debt for IC</td>
<td>3,675,000</td>
</tr>
<tr>
<td>Indicated Equity Values</td>
<td>$8,325,000</td>
</tr>
<tr>
<td>(*) A reduction in applied market multiples due to perceived greater risk and more moderate outlook for growth for the subject company.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example Reconciliation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicated Equity Values</td>
<td>$8,325,000</td>
</tr>
<tr>
<td>x Final Weighting</td>
<td>x 20%</td>
</tr>
<tr>
<td>Reconciled Value = $7,698,000</td>
<td>$1,665,000</td>
</tr>
</tbody>
</table>

B. Reconciliation of differing value indications derived from the same method (or even from different methods/approaches) relies upon the valuator’s judgment regarding:

1. The weighting can be explicit or implicit. The critical factor is that the weighting be the result of informed judgment and clearly explained in the report.

2. The weights are dependent upon the appraiser’s sense of relative confidence in the value indication from each type of market multiple.

3. Confidence in the value indication derived from a particular market multiple depends upon both a theoretical and practical understanding of the key determinants of value for the type of industry/company (e.g., service companies will tend to be valued on revenues, capital intensive enterprises on net income and/or book value, real estate companies on gross cash flow, etc.).
4. The factors considered in selecting multiples are also considered in the reconciliation of values and the choice of weighting method(s).

5. Contrary to common belief, Revenue Ruling 59-60 does not bar a mathematical weighting of valuation results. It bars a blind, arithmetic mean of the results that would be appropriate only by coincidence.

6. If the appraiser implicitly weighs the results and says so in the report, an explicit weighting can be elicited by a good attorney on cross examination.

III. Step 9 – Consider Applying Appropriate Discounts and/or Premiums

A. As will be discussed in BV 204, there are a variety of different types of discounts and premiums which may apply to the subject company.

B. After reconciling the various value indications and arriving at a final single conclusion of value (or range of values), the application of any appropriate premiums or discounts finishes the valuator’s tasks under the GPC method of the market approach.
Chapter 14: The Merger and Acquisition Method

I. Introduction

A. According to ASA’s Business Valuation Standards glossary, the merger and acquisition method to valuation is defined as:

Merger and acquisition method – method within the market approach whereby pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business

B. Statement on Business Valuation Standard 2 (SBVS-2)

1. SBVS-2, II provides the conceptual framework for the use of the merger and acquisition method as follows:

   a. Transactions involving the sale, merger or acquisition of businesses, business ownership interests, and securities can provide objective, empirical data for developing valuation multiples.

   b. The development of valuation multiples from transactions of significant interests in guideline companies should be considered to the extent that sufficient information is available.

   c. Guideline companies are companies that provide a reasonable basis for comparison to the investment characteristics of the company being valued. Ideal guideline companies are in the same industry as the subject company. However, if there is insufficient transaction evidence available in that industry, it may be necessary to select other companies having an underlying similarity to the subject company in terms of relevant investment characteristics such as markets, products, growth, cyclical variability and other salient factors.

2. SBVS-2, III provides guidance on the search for and selection of guideline companies as follows:

   a. A thorough, objective search for transactions of significant interests in guideline companies is required to establish the credibility of the merger and acquisition method. This procedure must include criteria for screening and selecting such companies.

   b. Guideline company empirical data can be found in transactions involving controlling or significant minority interests in publicly traded or closely held companies.

3. SBVS-2, IV provides guidance on analysis of the financial data of the guideline companies as follows:

   a. It is necessary to obtain and analyze the financial and operating data on the guideline companies, as available.
b. Adjustments to the financial data of the subject company and guideline companies should be considered to minimize the difference in accounting treatments when such differences are significant. Unusual or nonrecurring items should be analyzed and adjusted, as appropriate.

4. SBVS-2, V provides guidance concerning use of guideline valuation multiples as follows:
   a. Valuation multiples are derived by relating transaction prices in guideline companies to the appropriate underlying financial, operating or physical data of the respective companies.
   b. Several valuation multiples may be selected for application to the subject company. These multiples may require adjustment for differences in qualitative and quantitative factors between the guideline companies and the subject.
   c. Several indications of value may result. The appraiser must consider the relative importance or weight accorded to each of the indications of value used in arriving at the opinion or conclusion of value.

5. SBVS-2, VI addresses other factors and considerations and states that adjustments may be necessary for factors that have not been considered earlier in the appraisal, such as:
   a. Degree of control
   b. Degree of marketability and liquidity
   c. Timing differences between market transactions and the valuation date
   d. Strategic or investment value issues
   e. Size, depth of management, and diversification of markets, products and services

C. Types of Merger and Acquisition Transactions

1. Public company being acquired by another public company: Prospectus must be filed with the SEC, which would include sufficient data to complete an analysis.

2. Public company being acquired by a private company:
   a. A prospectus must be filed by the public company.
   b. Commonly seen in public company going private filing 13-E3 with the SEC.

3. Private company being acquired by a public company:
   a. If the acquired private company is worth more than 10% of the public company, then the public acquirer must file an 8-K with the SEC. The 8-K will include details of the transaction.
   b. If the 8-K is not available, sufficient detail on the transaction may not be available to sustain an analysis.
4. Private company acquired by another private company (or private buyer):
   a. There is no legal requirement for any information to be made public.
   b. These transactions constitute most of the reported information on small, closely held companies.

D. Why Do We Use Databases?

1. Readily available data, easy to use
2. Moderate cost: generally $300 to $600. One-time retrievals are usually available from several sources over the Internet.
3. Analytical and graphical tools allow easy summarization
4. Most allow exports to Excel and downloads into automated valuation tools

E. Primary Public Company Databases

1. Derived from data reported to the SEC, usually on Form 8-K resulting from a material acquisition
2. Small acquisitions deemed not material are not reported and may be difficult to detect
3. Databases maintained by Bloomberg and Thomson (SDC Platinum, ONE Banker-Deals, Capital IQ) are commonly used by investment bankers, but are expensive and less used by business appraisers
4. Most common, and least expensive, databases used by appraisers are Done Deals, Mid Market Comps, and Mergerstat

<table>
<thead>
<tr>
<th>Database</th>
<th># Transactions</th>
<th>Earliest Data</th>
<th>Typical Value Range</th>
<th>Value Concentration (circa 2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Done Deals</td>
<td>7,500 +</td>
<td>1994</td>
<td>$1 M - $150 M</td>
<td>50% under $15M 25% under $5M</td>
</tr>
<tr>
<td>Mid Market Comps</td>
<td>6,500 +</td>
<td>1994</td>
<td>$1M - $100M</td>
<td>44% under $10M 10% under $1M</td>
</tr>
<tr>
<td>Mergerstat</td>
<td>57,000 +</td>
<td>2001 (back to 1980 available)</td>
<td>$1M up</td>
<td></td>
</tr>
</tbody>
</table>
5. Primary Closely Held Company Databases
   a. Data provided by secondary sources: brokers and other intermediaries
   b. Most common databases used by appraisers are the IBA database, BizComps, and Pratt’s Stats

<table>
<thead>
<tr>
<th>Database</th>
<th># Transactions</th>
<th>Earliest Data</th>
<th>Typical Value Range</th>
<th>Value Concentration (circa 2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBA</td>
<td>30,700 +</td>
<td>1970’s</td>
<td>$1 M or less</td>
<td>88% under $500 K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46% under $100 K</td>
</tr>
<tr>
<td>BizComps</td>
<td>10,000 +</td>
<td>1993</td>
<td>$1M or less</td>
<td>61% under $500K</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39% under $100K</td>
</tr>
<tr>
<td>Pratts Stats</td>
<td>10,000 +</td>
<td>1990</td>
<td>$100K to $1 B</td>
<td>47% under $1M (MVIC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28% under $100K (MVIC)</td>
</tr>
</tbody>
</table>

6. Special Industry or Regional Databases
   a. Goodwill Registry (Health Care Group, Plymouth Meeting, Pa.)
   b. Kagan & Associates (Media, Broadcasting)
   c. Business Brokers
   d. Real Estate Associations (usually land-based properties)
   e. Trade Associations and franchisor databases
   f. Intellectual Property Databases (royalty rates)
   g. Partnership Profiles (Direct Investment Spectrum)
   h. International Association of Merger & Acquisition Professionals
   i. Merger & Acquisitions in Canada (Crosbie & Company Inc.)
   j. Zweig-White (architectural and engineering firms)

II. Database Inconsistencies and Analytical Issues
   A. Inconsistencies and Problems with the Data (Read the instructions when using each database, and analyze each transaction carefully before including it in your analysis)
      1. True comparability of the transaction to subject
2. Merger and acquisition data often mirror “typical” company sales. Additional adjustments to the indicated price may be needed to reflect unusual risks or conditions of the subject business.

3. Addition of synergistic premium is difficult to analyze

4. Single point multiples; financial depth is often sparse. Little data is provided on market conditions or the competitive environment surrounding the sale.

5. Cannot see the trends and other risks in the business when pricing multiples are based on latest annual results:
   a. A business sold after a poor, unusual year, may have a high multiple reported as a ratio of the just completed results.
   b. A business sold after a particularly excellent, but unusual, year may show a low multiple of the just completed results.
   c. Balance sheet issues of capital structure, working capital and variation of assets are often not reported.

B. Varied dates in similar transactions may ignore changes in economic conditions, such as “hot” industries going cool. Pricing multiples change over time in certain industries, but may be stable for long time horizons in other industries.

C. Flaws in data reporting:
   1. Adjusted earnings are often inconsistently calculated by the data source.
   2. Plant, property and equipment estimates may be book value, estimates of market value, or simply book value of what is sold to the buyer.
   3. SIC/NAICS, other coding errors as to business definition exist. Each source carries its own glossary, which should be understood. Larger businesses may have multiple lines or divisions, but are reported in their primary category.
   4. Duplicate transactions are often reported to several databases, sometimes with different results. Company name and nature of business may be reported differently for the same transaction.
   5. N/A doesn’t necessarily mean zero

D. Annualizing revenue and earnings of stub periods (a procedure common to Done Deals) may yield unrealistic computations of annual performance.

E. Assets exchanged may not be well defined.
   1. BizComps and IBA define property exchanged as fixed assets + goodwill (although the IBA price may include inventory, depending on industry norms).
   2. Real estate is commonly not included in the property being transferred.
   3. Excess, or non-operational, assets are typically not included in the sale.
4. Equity and invested capital multiples are available from several databases.

5. Debt may or may not be included in calculations. Be aware of the need to subtract subject debt when interest expense is paid and debt is assumed.

F. Cash-equivalent price may be difficult to determine:
   1. Terms may not be stated, or referenced at above or below market rates. Earn outs and seller financing at non-market rates can skew the reported deal price and the derived multiples.
   2. Non-compete and employment-consulting agreements are noted in Pratt’s Stats, but rarely reported in other databases.
   3. Recalculate your own multiples following any adjustment to the reported price.

G. Most Transactions Are for a Controlling Interest
   1. If a multiple is applied to a control cash flow, a control basis value is assumed.
   2. If applied to a minority cash flow, a control basis should not be assumed.
   3. Do not apply discounts or premiums until the basis is determined.

H. Stock Sale
   1. Deal should be labeled as a “stock sale” or the consideration transferred should be 100% of equity.
   2. If less than 100% of equity was transferred, the deal value should be grossed up to 100%
      a. Example: Deal value for 80% = $6.5 million
         \[100\text{\% value} = 8,125,000, \text{or} \frac{6,500,000}{80\%}\]
   3. Price multiples are derived from stock sales.

I. Asset Sale
   1. More common in smaller deals.
   2. Need to determine precisely which assets were transferred:
      a. Current assets, or at least cash and accounts receivable, are often not transferred in small asset transactions.
      b. Inventory may be transferred but not reflected in the multiples.
   3. Invested capital multiples are usually derived from asset sales.
III. Analytical Procedures

A. Identify transactions in which the target (or acquired company) is similar to the subject using the same or similar criteria as used in the GPC methodology.

B. Obtain adequate data on the publicly reported transactions, which may include additional information from actual 8-K reports, or other SEC filings. Industry research can often yield additional information about the transaction.

C. Obtain adequate data on the closely held, or private, transactions which may entail calling the intermediary who submitted the transaction to seek additional background information and/or making inquiries of the primary buyer and seller.

D. Refine selection of relevant transactions based on additional information and quality of data. Older transactions may be less relevant if substantial economic and industry changes have occurred. Judgment must be exercised here in concluding value.

E. Adjust Numerator for Non-Cash Terms of the Deal
   1. Restricted stock:
      a. Common when acquirer is public company.
      b. Stock may need to be discounted from the trading price on the deal date to account for any time restrictions on trading.
   2. Employment agreements and non-compete agreements:
      a. Common in small deals with closely held companies.
      b. Selling shareholder may receive an employment agreement or consulting agreement, which allows a payout over time in return for some form of consulting. If consulting is not performed, then the payout terms on a present value basis may be considered part of the deal value.
      c. Value implications of non-compete arrangements are difficult to determine if the seller has the desire and capability to compete.
   3. Earnouts:
      a. Contracts, which allow variable pricing, where part of the deal price is contingent on the achievement of specific operational goals such as sales or profit levels, are difficult to quantify value. The likelihood of achieving the targets must be assessed and the present value determined.
   4. Seller’s note:
      a. If the interest rate is not fair market, revalue the note with the going rate at the deal date.

F. Develop Market Multiples
IV. Equity Multiples

A. Define the concept of equity in the transaction – ownership of what assets? Various measures of price/sales and price/earnings might be considered as invested capital multiples, with liabilities to be subtracted and adjustments for working capital. Know what the database defines as property being exchanged.

B. Price/Equity Cash Flow – Often this is difficult to accurately calculate for the acquired company

C. Price/Net Income – Useful when there is a similarity in capital intensity, depreciation methods, and tax rates

D. Price/EBT – Useful when there is a similarity in capital intensity and depreciation methods

E. Price/Discretionary Earnings:
   1. Discretionary earnings, sometimes called seller’s discretionary earnings (SDE) or owner’s discretionary earnings depends on the definition by the database.
   2. The BizComps database defines SDE as EBITDA + the primary owners’ compensation and perks. This is useful for smaller owner-operated businesses. Some databases will refer to this as seller’s discretionary cash flow.
   3. The IBA database and others define SDE as EBIT + the primary owner’s compensation and perks. This definition does not include depreciation and amortization as an add-back, recognizing that continuing businesses will need to replace depreciating assets.
   4. Adjusting for owner’s compensation and perquisites may not be meaningful for larger businesses or if the owner works part time.

F. Price/Sales – Useful when there is a uniform profit margin in the industry or when there is a strong correlation between price/sales and return on sales.

G. Price/Book – Useful when there is a strong correlation between book value of equity and return on equity balance sheet.

V. Invested Capital Multiples

A. MVIC/Invested Capital Net Cash Flow – Desirable, but difficult to calculate

B. MVIC/NOPAT – Best when there is similarity in capital intensity, depreciation methods and tax rates

C. MVIC/EBIT – Best when there is similarity in capital intensity and depreciation methods, eliminates effect of tax rate disparities

D. MVIC/EBITDA – Eliminates disparities in capital intensity and depreciation methods

E. Analytical Tips
1. Analyze the data for high, mean/median and low multiples. Graphical tools available in Excel or the databases are particularly helpful, and can be copied for report narrative. However, simply using the tools without an understanding of the underlying data can be dangerous and leave unanswered questions.

2. Because the databases report multiples of latest year results, appraisers usually calculate indicated value using the subject’s latest year (or latest twelve month) results. This presumes that the latest year performance of the subject company is a proper surrogate for future performance, which can be dangerous! Growth is assumed in the transaction multiple, implying that your subject will grow at typical (or average) rates.

3. Some appraisers combine the IBA and BizComps data because they both represent “asset” transactions. There are differences, however, especially in the levels of Discretionary Earnings considered and if inventory is or is not included in the exchange price. Generally, data from various sources should be analyzed independently.

VI. Closer Examination of Common Data Sources for Small Businesses

A. Primary Public Company Databases (normally, a synopsis of the 8-K information)

1. Done Deals

   a. Includes approximately 7,500 transactions, 80% of which are closely held companies acquired by public companies and reported to the SEC.

   b. Deal size typically ranges from $1 million to $150 million, with about half less than $15 million.

   c. Approximately 50% of the deals are stock sales; 20% are asset sales; 30% are not labeled (1994 and 1995 transactions are not categorized).

   d. Contains up to 15 data points and six valuation multiples.

   e. May represent multiples based on annualized stub period information (e.g., can result in very different multiples than those reported for the same transaction in other databases).
Example of Done Deal Website
2. **Mid Market Comps**
   
a. Includes approximately 6,500 transactions, mostly closely held companies acquired by public companies and reported to the SEC

b. Similar data to Done Deals

c. Deal size ranges from $1 million to over $100 million, with about half less than $10 million and 10% less than $1 million

d. Approximately 54% of the deals are stock sales; 20% are asset sales; 25% are not labeled

e. Contains 38 data points and six valuation multiples

   **Example of Mid Market Comps Data Summary**

<table>
<thead>
<tr>
<th>ANALYSIS OF</th>
<th>LOW</th>
<th>HIGH</th>
<th>MEAN</th>
<th>MEDIAN</th>
<th>STD DEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (Millions)</td>
<td>0.422</td>
<td>49.1</td>
<td>13.488</td>
<td>8.45</td>
<td>15.056</td>
</tr>
<tr>
<td>Seller’s Annualized Revenues</td>
<td>0.597</td>
<td>72.4</td>
<td>17.762</td>
<td>8.867</td>
<td>20.148</td>
</tr>
<tr>
<td>Seller’s Annualized Net Income</td>
<td>-2.3</td>
<td>7.067</td>
<td>1.213</td>
<td>0.574</td>
<td>2.387</td>
</tr>
<tr>
<td>Seller’s Assets</td>
<td>0.121</td>
<td>25.1</td>
<td>5.289</td>
<td>3.4</td>
<td>6.346</td>
</tr>
<tr>
<td>Stockholders’ Equity</td>
<td>-1.5</td>
<td>7.2</td>
<td>1.838</td>
<td>1.5</td>
<td>2.357</td>
</tr>
<tr>
<td>Annualized Cash Flow</td>
<td>-1.2</td>
<td>6.133</td>
<td>1.37</td>
<td>0.762</td>
<td>1.914</td>
</tr>
<tr>
<td>Annualized EBITDA</td>
<td>-1.7</td>
<td>1.2</td>
<td>-0.182</td>
<td>0.046</td>
<td>1.045</td>
</tr>
<tr>
<td>P/E</td>
<td>2.432</td>
<td>24.7</td>
<td>13.085</td>
<td>12.767</td>
<td>6.701</td>
</tr>
<tr>
<td>P/R</td>
<td>0.189</td>
<td>1.558</td>
<td>0.807</td>
<td>0.766</td>
<td>0.347</td>
</tr>
<tr>
<td>P/SE</td>
<td>2.098</td>
<td>24.706</td>
<td>9.204</td>
<td>6.911</td>
<td>7.257</td>
</tr>
<tr>
<td>P/A</td>
<td>0.64</td>
<td>7.766</td>
<td>3.296</td>
<td>2.825</td>
<td>2.019</td>
</tr>
<tr>
<td>P/CF</td>
<td>4.167</td>
<td>266.667</td>
<td>32.38</td>
<td>7.824</td>
<td>70.196</td>
</tr>
<tr>
<td>P/EBITDA</td>
<td>8.667</td>
<td>51.613</td>
<td>18.524</td>
<td>11.227</td>
<td>18.552</td>
</tr>
</tbody>
</table>
**Example of Mid Market Comps Graphs**

![Graph](image)

Regression Line: \( Y = 7.20 + 5.19 \times X \quad \text{R Squared} = 0.68 \)

3. Mergerstat Online Transaction Roster
   a. Owned by FactSet, it contains over 57,000 transactions from 2001 forward, with 7,500 added each year.
   b. On-line transactions date from 2001 to current, with earlier data available as a special request. Search criteria on industry, year and international country of target.
   c. Public and private deals reported internationally.
   d. “Enterprise Value” is defined as “Base Equity Price” plus “Liabilities Assumed” less cash. (“Enterprise value” is an often misinterpreted term.)
   e. In addition to digging through Mergerstat’s SIC codes, selecting acquisitions made by comparable publicly traded guideline companies (Search Yahoo Finance under “competitors”) often yields additional transactions.
   f. No graphical tools, although individual data can be copied into Microsoft templates or downloaded as a special request.
   g. Commonly accessed through various channels, including:
      (i) Alacra
      (ii) FactSet
      (iii)Lexis Nexis
      (iv)Hoovers
   h. Mergerstat is also available through BV Resources (www.BVResources.com)
B. Primary Closely Held Company Databases

1. Institute of Business Appraisers – IBA Market Database

   a. Represents small private company transactions with seven data points (although a new expanded version with more data points is being gathered).

   b. IBA’s methodology is termed “Direct Market Data Method.” Some people say that it is best used with 15 to 20 transactions and inferential statistics. Others are not comfortable using less than 25 transactions because of the limited amount of data. It is difficult to match a subject company with a particular IBA transaction because of the lack of data.

   c. Contains two primary multiples:

      (i) Price/revenue

      (ii) Price/discretionary earnings

      (iii) Note that the IBA earnings measure is:

             EBIT + One Owner’s Compensation and Perks (the primary owner).

   d. Available through IBA and ValuSource. Most commonly requested by e-mail or telephone. Most commonly provided via e-mail in spreadsheet form.

   e. Property exchanged represents fixed assets (or, fixtures and equipment) plus transferable goodwill in an “asset” exchange. Terms of the deal are not reported.

      (i) Inventory may be included if the industry commonly includes inventory in the exchange price. This factor requires industry research and specialized knowledge to understand the pricing multiples.

      (ii) Real estate is excluded.

   f. Application of the multiples results in a calculated exchange price for the subject company’s fixed assets and goodwill (and maybe inventory). Current assets (note the inventory exception, above) and other assets are added, and liabilities subtracted to arrive at an equity value indication.

   g. The next page contains a partial printout of what you get from IBA. Under the data, you can use the market data analyzer to produce various graphs.
**Example of IBA Database Summary**

**SIC CODE:** 2752  Printers

The data on this report may not contain all the IBA Transaction data for this SIC Code. The information below is supplied in response to your request for data to be used in applying the “Market Data Approach” to business appraisal. Because of the nature of sources from which the information is obtained, we are not able to guarantee its accuracy. Neither do we make any representation as to the applicability of the information to any specific appraisal situation.

The following is an explanation of the entries in the data table:

- **Business Type**: Principal line of business.
- **SIC CODE**: Principal Standard Industrial Classification number applicable to the business sold.
- **Annual Gross**: Reported annual sales volume of business sold.
- **Discretionary Earnings**: Reported annual earnings, excluding owner’s compensation and before interest and taxes.
- **Owner’s Comp.**: Reported owner’s compensation.
- **Sale Price**: Total reported consideration; i.e. cash, liabilities assumed, etc. excluding real estate.
- **Price/Gross**: Ratio of total consideration to reported annual gross.
- **Price/Earnings**: Ratio of total consideration to reported annual earnings.
- **Yr/Mo of Sale**: Year and month during which transaction was consummated.

<table>
<thead>
<tr>
<th>Business Type</th>
<th>Annual Gross $000's</th>
<th>Discret. Earnings $000's</th>
<th>Owner's Comp. $000's</th>
<th>Sale Price $000's</th>
<th>Price/ Gross</th>
<th>Price/ Earnings</th>
<th>Geographic</th>
<th>Yr/Mo of Sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing shop</td>
<td>365</td>
<td>108</td>
<td></td>
<td>250</td>
<td>0.68</td>
<td>2.31</td>
<td>Texas</td>
<td>86/04</td>
</tr>
<tr>
<td>Printing Shop</td>
<td>360</td>
<td>40</td>
<td></td>
<td>105</td>
<td>0.29</td>
<td>2.63</td>
<td>MN</td>
<td>95/01</td>
</tr>
<tr>
<td>Printing Shop</td>
<td>359</td>
<td>61</td>
<td></td>
<td>111</td>
<td>0.31</td>
<td>1.82</td>
<td>Wheatridge CO</td>
<td>00/01</td>
</tr>
<tr>
<td>Printing</td>
<td>358</td>
<td>129</td>
<td>96</td>
<td>340</td>
<td>0.95</td>
<td>2.64</td>
<td>NC</td>
<td>95/07</td>
</tr>
<tr>
<td>Printing/Lithography</td>
<td>353</td>
<td>35</td>
<td></td>
<td>65</td>
<td></td>
<td></td>
<td>Calif.</td>
<td>87/09</td>
</tr>
<tr>
<td>Printing Shop</td>
<td>350</td>
<td>90</td>
<td></td>
<td>215</td>
<td>0.61</td>
<td>2.39</td>
<td>FL</td>
<td>93/02</td>
</tr>
<tr>
<td>Quick print</td>
<td>345</td>
<td></td>
<td></td>
<td>265</td>
<td>0.77</td>
<td></td>
<td>WA</td>
<td>91/01</td>
</tr>
<tr>
<td>Printing, commercial</td>
<td>345</td>
<td></td>
<td></td>
<td>390</td>
<td>1.13</td>
<td></td>
<td>NC</td>
<td>91/01</td>
</tr>
<tr>
<td>Quickprint</td>
<td>340</td>
<td>65</td>
<td></td>
<td>185</td>
<td>0.54</td>
<td>2.85</td>
<td>PA</td>
<td>93/01</td>
</tr>
<tr>
<td>Printer</td>
<td>336</td>
<td></td>
<td></td>
<td>250</td>
<td>0.74</td>
<td>2.60</td>
<td>NC</td>
<td>93/01</td>
</tr>
<tr>
<td>Printer-Commercial</td>
<td>336</td>
<td>-21</td>
<td></td>
<td>140</td>
<td>0.42</td>
<td>-6.67</td>
<td>OH</td>
<td>91/08</td>
</tr>
<tr>
<td>Printing</td>
<td>323</td>
<td></td>
<td></td>
<td>60</td>
<td>0.30</td>
<td>1.63</td>
<td>Texas</td>
<td>94/01</td>
</tr>
</tbody>
</table>

Rows were intentionally left out of this data
2. BizComps
   a. Available through BV Resources, this database is similar to the IBA database. It mainly contains transactions of small businesses.
   b. Compiled by Jack Sanders, a practitioner in San Diego, Calif. Jack will provide appraisers with names of data sources (primarily business brokers) upon request for further inquiry and additional information.
   c. Represents buyouts of small private companies; updated frequently
   d. Deals involve smaller businesses; about two thirds of the deals involve targets with less than $500,000 in revenue.
   e. 16 different data points including asking and selling price, inventory, fixed assets included in the price, rent, days on the market, and terms of the deal. The fixed assets amount reported may be book value, broker’s (or the seller’s) estimates, or a calculated value.
f. Contains two primary multiples:

(i) Price/revenue

(ii) Price/discretionary earnings*

g. *Note that the BizComps earnings measure is EBITDA + Owner’s Compensation.

h. Property exchanged represents fixed assets (or, fixtures and equipment) plus transferable goodwill in an “asset” exchange. Terms of the deal are not reported.

(i) Inventory is excluded.

(ii) Real estate is excluded.

i. Application of the multiples results in a calculated exchange price for the subject company’s assets. All current assets and other assets are added, and liabilities subtracted to arrive at an equity value indication.

3. Pratt’s Stats

a. Conceived and designed by Dr. Shannon Pratt in the mid-1990’s. Contains 10,000 transactions, with over 85 data points, compiled primarily from submissions by business brokers and other intermediaries to the transaction. The submitting intermediary is normally referenced in the data, and might be contacted for additional information.

b. By MVIC, only about 47% of the transactions are for smaller businesses valued at $1 million or less, and significantly larger businesses are profiled. A companion database, Public Stats, profiles about 2,000 transactions of public companies that were acquired. Multiples for equity and for invested capital are compiled.

c. The next page contains a sample printout from Pratts Stats.
## Chapter 14. The Merger and Acquisition Method

**BV201: Introduction to Business Valuation**

### Pratt's Stats® Transaction Report

**Seller Details**
- **Target Name:** NA
- **Business Description:** Distributor of Hardware Items to Hardware and Paint Retailers
- **SIC:** 5063
- **NAICS:** 443110 Hardware & Merchant Wholesalers
- **Location:** United States
- **Years in Business:** 40
- **Number of Employees:** 9

**Source Data**
- **Broker Name:** Humphrey, David
- **Broking Firm Name:** Beacon Capital Group

### Income Data
- **Year end:** 2010
- **Consolidated:** Yes
- **Income Statement:** Yes
- **Balance Sheet:** Yes
- **Income Statement Date:** 12/31/2010
- **Balance Date:** 12/31/2010
- **Gross Profit:** $2,841,059
- **Cost of Goods Sold:** $2,841,059
- **Selling & Administrative Expenses:** $492,161
- **Other Operating Expenses:** $492,161
- **Total Operating Expenses:** $1,552,382
- **Operating Profit:** $289,677
- **Interest Expense:** $0
- **Taxes:** $93,900
- **Net Income:** $195,777

### Asset Data
- **Liabilities:** Total Liabilities $334,120
- **Equity:** Total Owner's Equity $392,594

### Additional Transaction Information

- **Terms:** Assumed Loan: 10 months, N/A
- **Term:** 10 months, N/A
- **Ethics:** Employment/Competing Agreement: N/A

### Valuation Multiples

<table>
<thead>
<tr>
<th>Multiples</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discounted Cash Flow</td>
<td>1.47</td>
</tr>
<tr>
<td>Market Profit</td>
<td>1.77</td>
</tr>
<tr>
<td>Market Revenues</td>
<td>1.24</td>
</tr>
<tr>
<td>Book Value</td>
<td>14.79</td>
</tr>
<tr>
<td>Stockholders' Equity</td>
<td>6.34</td>
</tr>
<tr>
<td>Book/Market Value of Invested Capital</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Profitability Ratios

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Profit Margin</td>
<td>1.01</td>
</tr>
<tr>
<td>Operating Profit Margin</td>
<td>3.86</td>
</tr>
<tr>
<td>Gross Profit Margin</td>
<td>9.26</td>
</tr>
<tr>
<td>Return on Assets</td>
<td>1.27</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Leverage Ratios

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Charge Coverage</td>
<td>N/A</td>
</tr>
<tr>
<td>Long-Term Debt to Assets</td>
<td>N/A</td>
</tr>
<tr>
<td>Total Debt to Equity</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Liquidity Ratios

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>N/A</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Activity Ratios

<table>
<thead>
<tr>
<th>Ratios</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Asset Turnover</td>
<td>2.15</td>
</tr>
<tr>
<td>Fixed Asset Turnover</td>
<td>N/A</td>
</tr>
<tr>
<td>Inventory Turnover</td>
<td>2.74</td>
</tr>
</tbody>
</table>

**N/A - Not Available**

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Chapter 15: Rules of Thumb and Other Market Methods

I. Rules of Thumb

A. According to ASA’s Business Valuation Standards Glossary, a rule of thumb is defined as:

Rule of Thumb – a mathematical formula developed from the relationship between price and certain variables based on experience, observation, hearsay or a combination of these; usually industry-specific

B. Background on Rules of Thumb

1. Market participants often develop multiples of operating metrics based on general market or general industry transaction activity over time.

2. These rules are commonly used by business brokers and other intermediaries for a preliminary estimate of transaction value of saleable business segments (such as fixed assets and goodwill) that are going to be sold.

3. Rules of thumb are often industry-specific and represent means, medians or “most common” conditions.

4. According to BVS-V, “rules of thumb may provide insight on the value of a business, business ownership interest, or security. However, value indications derived from use of rules of thumb should not be given substantial weight unless supported by other valuation methods and it can be established that knowledgeable buyers and sellers place substantial reliance on them.”

5. Keep in mind that rules of thumb are not supported by “an amount and verifiability of data known about the similar investment,” as is stated by BVS-V.

C. Disadvantages of Rules of Thumb

1. Based on averages – not every subject company is average.

2. No access to the companies that were transacted

3. No access to the terms of the transactions

D. Typical Rules of Thumb Multiples

1. Multiple of sales (gross income)

2. Multiples of cash flow, usually referred to as seller’s discretionary cash flow (SDCF) or owner’s cash flow (OCF) or seller’s discretionary earnings (SDE) – SDCF is usually calculated as operating income before interest, depreciation and other non-cash charges, one owner’s salary and perquisites, and excluding any non-operational and non-recurring expenses

3. Multiple of some level of assets
E. Sources for Rules of Thumb


F. Example

A rule of thumb for gas stations is 1.5 to 3.5 times owner’s cash flow for the most recent 12 months, which yields the value of equipment, lease, and intangibles. After investigating the operations of XYZ Gas Services Co., you believe that the business deserves a multiple of 3.0 times owner’s cash flow. Given the information below, what is the value of equity for XYZ Gas Services based on the rule of thumb?

<table>
<thead>
<tr>
<th></th>
<th>200A</th>
<th>200B</th>
<th>200C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,000,000</td>
<td>1,500,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Cost of Sales</td>
<td>700,000</td>
<td>1,000,000</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Operating Expense</td>
<td>200,000</td>
<td>300,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Owners’ Cash Flow</td>
<td>150,000</td>
<td>225,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>4,000</td>
<td>6,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>65,000</td>
<td>70,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>69,000</td>
<td>76,000</td>
<td>97,000</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>25,000</td>
<td>30,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Total Assets</td>
<td>94,000</td>
<td>106,000</td>
<td>132,000</td>
</tr>
<tr>
<td>Liabilities</td>
<td>20,000</td>
<td>25,000</td>
<td>32,000</td>
</tr>
<tr>
<td>Equity</td>
<td>74,000</td>
<td>81,000</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Answer: Owners’ Cash Flow $200,000 x 3.0 = $600,000 + Cash ($7,000) + Inventory ($90,000) – Liabilities ($32,000) = $665,000

II. Prior Transactions in the Subject Company’s Stock

A. Must be analyzed for a basis of arm’s-length transactions. The fact that a transaction occurred is more compelling than a simple buy-sell agreement.
1. Buyouts of former shareholders are often not at fair market, or have related consulting agreements that must be considered.

2. If the company merged with a competitor in a control transaction, the deal may have synergistic value.

B. If the transaction resulted based on a buy-sell, shareholder or employee agreement, the terms must be analyzed in the context of the agreement.

1. Control transactions and acquisitions of other companies are more likely to be arm’s-length deals. Time lapses must be accounted for and reconciled.

2. Minority transactions, especially between family members or in the case of retiring or deceased shareholders, should be given close scrutiny.

3. Timeliness is often a problem, given that these transactions may be dated and reflect external and internal circumstances far different than those of the valuation date. Adjustments are often necessary for operational and financial differences between the transaction date and the valuation date.

III. Buy-Sell Agreements

A. Legal agreement between owners, which stipulates the price, and terms under which an owner can sell his ownership interest. It is considered part of the market approach since, for the agreement to be applicable it must be based on arm’s-length negotiated terms.

B. Buy-sell agreements are common in smaller companies which have a relatively small number of shareholders, and are also frequently a component of shareholder and partner agreements. Internal Revenue Code Sect. 2703 discusses elements of a reliable buy-sell.

C. Often the terms of the buy-in or buy-out are not at fair market value since some other motive was the driving force behind the agreement, such as locking in partners to a long-term commitment.

D. If the terms of the agreement were intended to be at fair market, and the formula(s) in the agreement are judged to be legitimate, the agreement may be binding.

E. Many buy-sell agreements are not a valid indication of value. For the agreement to be used, it must have the following characteristics:

1. The price must be fixed and unambiguous within the agreement.

2. The price must apply to the voluntary withdrawal of an owner. If it applies only to the retirement or death of an owner, or an involuntary sale, it is not reliable.

3. The price must be based on an arm’s-length, informed, economic formula that reflects current conditions. If the formula is not updated or is based on book value, then it is usually less reliable.

4. It must be binding. If remaining shareholders can reject the price, then it is not relevant. Many buy-sell agreements allow the company (or acquiring shareholders)
only a right of first refusal, assuming the selling shareholder first obtains a bona fide offer for shares.

5. Appraisers consider buy-sell agreements for relevance to actual market conditions, but usually do not deem these agreements controlling unless dictated by legal requirements.

6. USPAP 2009 Standards Rule 9-4(c) requires the appraiser to analyze “the effect on value, if any, of buy-sell and option agreements, investment letter stock restrictions, restrictive corporate charter or partnership agreement clauses, and similar features or factors that may influence value.”

IV. Bona Fide Offers to Buy

A. A bona fide offer is viewed as a good faith, authentic, genuine offer from a qualified buyer who has the intention and capacity of consummating the offer at the level proposed.

1. May or may not provide an arm’s-length basis, since offers can come from friendly outside buyers or insiders (e.g., family).

2. Most offers from outside buyers reflect whole company (control) situations. In public company situations with buyers wishing to acquire more than 5% of the outstanding shares, an SEC form 13D must be filed.

B. Offers for privately held companies are often not consummated, and may not be reasonable indications of value despite their bona fide status. On the other hand, a rejected, but bona fide, offer may provide insight into a minimum value.

C. Offers often reflect investment (or strategic) value considerations, such as synergies and potential economies of scale.

D. Terms are often variable, and may incorporate employment agreements and agreements not to compete.

E. Timeliness is often a problem, given that offers may be dated and reflect external and internal circumstances different than those of the valuation date.

V. Analysis of Acquisitions Made by the Company

A. Subject companies often make acquisitions of similar companies during periods of expansion.

B. The terms and multiples provide an indication of value reflecting the subject company’s owner/management view of similar property value, but may not be conclusive evidence of current value of the subject company as a whole.

C. Prior acquisitions reflect different economic and industry circumstances.

D. Incorporation of the new divisions or operations may require time to absorb.

E. Economies of scale and synergies are often the result of acquisitions.