**BV201 Course Objectives**

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

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**BV202 Course Objectives**

- The basic theory and application of the income approach and its various methodologies.
- Basic capitalization models and discounting models in the context of earnings and cash flow measurements, as well as equity and invested capital assignments.
- Fundamentals of the asset approach.
**BV203 Course Objectives**

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

**BV204 Course Objectives**

- Tax issues in the valuation of pass-through entities.
- Valuing Early Stage Development Companies and Complex Capital Structures
- Valuation adjustments, including discounts for lack of marketability and lack of control, as well as control premiums.
- Valuation of Intangible Assets (An Introduction).
- Valuation of Preferred Stock and Debt.
The Business Appraisal Profession

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

Role of the Business Appraiser

- Business appraisers generally provide two types of services:
  1. An objective and independent valuation of business interests
  2. 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.)

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.
Services Offered

- Opinions of value
  - Equity value
  - Invested capital value
  - Intangible asset value
  - Other—options, debt
- Consultation regarding values
- Structure terms, sometimes for several classes of investors, such as employee stock ownership plans (ESOPs) or leveraged buyouts

Services Offered

- Fairness opinions
- Solvency opinions
- Assistance in negotiating purchases/sales
- Mediation/arbitration of disputed valuations
- Litigation support in disputed valuations
- Expert testimony
Necessary Skills and Qualifications

- Security Analysis
- Finance
- Accounting
- Economics
- Tax
- Valuation Law
- Strategic Planning
- Research
- Statistics
- Computer
- Oral & Written Communication
- Common Sense

Professional Designations

- ASA/AM
- CFA
- CBA
- ABV
- CBV
- CVA
Chapter 2

Business Valuation Theory

Comparison with Real Estate Appraisals

- 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
- Follows less strictly the three-pronged real estate dictum of cost, market, and income approaches
Three Approaches to Value

Market Approach

- Principle of substitution
- Comparison between subject property and similar properties that have recently sold
- Use of guideline company transaction data
  - Publicly traded companies
  - Acquired/merged companies
  - Analysis of prior transactions in the subject company’s stock
  - 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

Strengths and weaknesses of the market approach

- Direct method of valuation if similar companies can be found
- Relatively easy to get data
- A lot of information and research on the public companies
- Very difficult to find truly similar companies
Asset-Based Approach

- Again, based on the principle of substitution
- In BV, the asset-based, adjusted net asset, or adjusted balance sheet method is our version of the cost approach
  - Balance sheet analysis
  - Usually involves separate valuation of each item on the balance sheet - adjust all tangible and intangible assets and liabilities to their market values

Strengths and weaknesses of asset-based approach

- Useful for holding company
- Useful if company is to be liquidated
- Does not focus on the income the assets produce as a whole
Asset Based Approach

Strengths and weaknesses of asset-based approach

- 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.)
- The more intangible value in a business, the more difficult the cost approach and the more relevant the income approach becomes
- Less applicable in minority interest valuations (because minority shareholders do not control the underlying assets)

Income Approach

- 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.
- Two most common methods
  1. Capitalized methodology - the two essential elements are an estimated income base and a capitalization rate (single period).
  2. Discounted methodology - you need a projected income stream and a discount rate (multiple period).
- The terms discount rate, cost of capital, required rate of return, and yield rate (used in real property appraisal) all mean the same thing
Three Approaches to Value

Income Approach

Strengths and weaknesses of income approach

- Closest to “pure” value theory
- Very difficult to forecast
- Estimates of capitalization or discount rate are difficult to make and will be discussed in detail in BV202

Basic Description of a Business

Definitions of a Business

- Dictionary definitions
  - A commercial or industrial enterprise and the people who constitute it
  - An organization operated with the objective of making a profit from the sale of goods or services
  - An enterprise, commercial entity or firm, in either the private or public sector, concerned with providing products or services to satisfy customer requirements
Definitions of a Business

- ASA Glossary definition
  - A commercial, industrial, service, or investment entity (or a combination thereof) pursuing and economic activity

- Real world view
  - 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

A business consists of four key components:

1. Strategy
2. Systems
3. People
4. Tangible and intangible assets

- Highly successful businesses have the ability to get the most out of the manageable parts – the business strategy, systems and people.
What is a Business?

- Sole proprietorships
- Partnerships
- Limited Liability Company
- Corporations

What is a Business?

Public vs. Private Ownership

- Size
- Management depth/management succession
- Product line diversification
- Geographic diversification
- Market position/market share
- Supplier or customer dependence
What is a Business?

Public vs. Private Ownership

- Lack of access to capital markets
- Private companies managed to minimize taxes, not maximize income
- Public companies typically more growth-oriented, particularly through acquisitions
- Short-term expectations of the public companies versus long-term outlook of private companies
- Patent or brand name importance

Private companies generally compare unfavorably with public companies in these areas, but that’s not always the case.

Financial Structure of a Business?

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>Cash</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>Accrued Expenses</td>
</tr>
<tr>
<td>Inventory</td>
<td>Income Taxes Payable</td>
</tr>
<tr>
<td>Other Assets</td>
<td>Other Current Liabilities</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td>Interest Bearing Debt (includes current portion</td>
</tr>
<tr>
<td>Equipment</td>
<td>and short term notes payable)</td>
</tr>
<tr>
<td>Buildings</td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td></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>

Net Working Capital  

Invested Capital
The assets of a business typically consist of:

- The tangible and intangible assets owned by the company, which include:
  - Operating assets—assets used in the company's operations
  - 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.)
  - 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.)

- Non-booked or unrecorded assets—the intangible or other assets that are not recorded on the company's financial statements
  - Per GAAP, the internally generated assets of the company are expensed and not recorded on the company's balance sheet.
  - Discarded assets that may still have value—e.g., molds, old equipment, scrap, etc.
Types of assets used in the business include:

- Liquid assets—cash, accounts receivable, securities, short term notes, etc.
- Inventory—raw materials, work in process and finished goods
- Other current assets—additional assets that are expected to be used in the normal operating year of the company (the next 12 months)

Types of assets used in the business include:

- Fixed assets—generally considered to be the office and manufacturing facilities used in the business.
- These assets are recorded at their original costs and are then depreciated over their estimated economic or tax lives.
  - 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.
Types of assets used in the business include:

- Other assets—these assets generally include:
  - Additional assets that are not expected to be used in the normal operating year of the company
  - Tangible assets not used in the operations of the business
  - Purchased intangible assets, intellectual property and goodwill
  - Long-term notes receivable

The liabilities of the business typically consist of:

- Current liabilities—the short-term obligations (generally payable in 12 months or less) of the company

- Long-term liabilities—the long-term obligations (generally not payable in the current operating year/the next 12 months) of the company
Liabilities of the company can be interest-bearing and non-interest-bearing obligations.

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

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

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

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

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

- 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.

- In a partnership (or a limited liability company) the partner's (member's) direct investment is referred to as partner's (member's) equity. Any profits retained in the business are combined with previous invested amounts into the equity account.

The ownership equity section of the company’s balance sheet generally consists of:

- In a corporation the ownership investment is referred to as stockholder’s equity. The stockholders’ equity:
  - Is not directly allocated to individual owners in the accounting records
  - Shareholder’s equity consists of:
    - Paid-in capital in the form of preferred or common stock
    - Preferred stocks generally have preferences on dividends and distributions from the company
    - Preferred stocks most often have a specified return on investment
    - Retained earnings—the current year’s net income (less any dividends paid) plus all prior years’ retained earnings
Non-Financial Reporting Perspective on the Components of the Balance Sheet

- Assets listed on the balance sheet from top to bottom in order of liquidity—cash, accounts receivable, inventory, fixed assets and other assets
- Working capital—The difference between the total amount of current assets and current liabilities

Non-Financial Reporting Perspective on the Components of the Balance Sheet

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

Equity capital and debt capital enjoy different rights and risks and therefore generally have very different rates of expected returns.

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

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

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.

**Equity Cash Flow**

<table>
<thead>
<tr>
<th>Revenue</th>
<th>less Cost of sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Operating Income (EBIT)</td>
</tr>
<tr>
<td>less Interest expense</td>
<td>= Pretax income</td>
</tr>
<tr>
<td>less Income Taxes</td>
<td>= Net income</td>
</tr>
<tr>
<td>plus Depreciation &amp; amortization</td>
<td>= Gross cash flow</td>
</tr>
<tr>
<td>less Increase in working capital</td>
<td>less Capital expenditures</td>
</tr>
<tr>
<td>+/- Change in debt principal</td>
<td>= Equity Net Cash Flow</td>
</tr>
</tbody>
</table>

**Invested Capital Cash Flow**

<table>
<thead>
<tr>
<th>Revenue</th>
<th>less Cost of sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>less Operating expense</td>
<td>= Operating Income (EBIT)</td>
</tr>
<tr>
<td>less Taxes on EBIT</td>
<td>= Net operating profit after tax (NOPAT)</td>
</tr>
<tr>
<td>plus Depreciation &amp; amortization</td>
<td>= Gross cash flow</td>
</tr>
<tr>
<td>less Increase in working capital</td>
<td>less Capital expenditures</td>
</tr>
<tr>
<td>=</td>
<td>= Invested Capital Net cash flow</td>
</tr>
</tbody>
</table>
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 equity

**Classroom Assignment 2:** Calculate the net cash flow to invested capital
**Measuring Equity Net Cash Flow**

- Net income $10,000,000
- plus Depreciation & amortization 1,600,000
- = Gross cash flow $11,600,000
- Less Increase in working capital (1,800,000)
- Less Capital expenditures (1,500,000)
- +/- Change in debt principal 400,000
- = Equity Net Cash Flow $8,700,000

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**Measuring Invested Capital Net Cash Flow**

- Net income $10,000,000
- plus Interest Expense (net of taxes) 2,160,000
- plus Depreciation & amortization 1,600,000
- = IC Gross cash flow $13,760,000
- Less Increase in working capital (1,800,000)
- Less Capital expenditures (1,500,000)
- +/- Change in debt principal 0
- = IC Net Cash Flow $10,460,000
Classroom Assignment 3: Review Exhibit 2-2 at the end of this chapter

Basic Concept of Value

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.
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:

- Value to “whom”? (Answering this question defines the scope of the appraisal definition.)
- Value for what purpose, or “why”? (Answering this question defines the function of the appraisal assignment.)
- Value as of “when”? (Answering this question defines the effective date of the appraisal.)

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.

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

- Discounted at the required rate of return (k), which is also referred to as the discount rate.
- The required rate of return will vary depending on the type of buyer.
Value vs. Cost vs. Price

Cost

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

Value vs. Cost vs. Price

Price

- 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.
- Offering price simply represents a number that a seller is asking for an asset.
  - Examples: sticker price on a new auto, store price tag on a garment.
  - The unsophisticated lay person 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.
**Value vs. Cost vs. Price**

**Price**
- 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,
  - 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.
  - Both owners paid the same price, but the underlying value is different.

**Appraiser's Job**
- Goal: To estimate economic value
- Achieve the above goal by rigorously exercising the three approaches available to him/her.
  - In reality, the asset-based approach references a distinct historical market -- the market responsible for the creation of the historical balance sheet.
  - The market approach references actual transactions in either distinct entire company acquisitions or thousands of fractional market transactions in the public stock market.
  - 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), even the appraiser’s estimate of the company-specific risk premium, are all market derived.
Value Determination

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

Standards of Value – 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 to 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.)

Key concepts:

- Presumed ownership change at a specific date
- Hypothetical willing buyer, willing seller
- Fair market value does not contemplate specific individuals as the buyer or seller
- 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
Standards of Value – Fair Market Value

Key concepts:
- In the limited case where the pool of willing buyers for a business consists primarily of special buyers (or strategic buyers), which may 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 in fair market value.
- No compulsion to transact on either party’s part.
- Reasonable knowledge by both parties.
- Cash or cash equivalent price.
- Transaction costs not included.
- Generally assumed to include a covenant not to compete. However, this can be somewhat controversial in some jurisdictions.

Standards of Value - Investment Value

- Is defined as the value to a particular buyer (or small handful of buyers)
- 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
Standards of Value - Investment Value

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

Standards of Value – Fair Value

Fair value has two different contexts:

For legal purposes
- Primarily used in dissenting stockholder actions and shareholder oppression cases.
- The definition varies from jurisdiction to jurisdiction as specified in state statutes and developed in the state’s case law precedents.
- This standard of value is legal community-based, not economically (or market-) based.
For financial reporting purposes

- 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)
- 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.

Market participants are buyers and sellers in the principal or most advantageous market for an asset or liability. Market participants are:

- Unrelated (i.e., independent) to the reporting entity
- Knowledgeable about factors relevant to the asset or liability and the transaction
- Have the financial and legal ability to transact
- Are willing to transact without compulsion
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).

- Level I
  - Quoted prices in active markets for identical assets/liabilities

- Level II
  - Observable prices for similar assets/liabilities
  - Prices for identical assets/liabilities in an inactive market
  - Directly observable inputs for substantially full term of asset/liability
  - Market inputs derived from or corroborated by observable market data

- Level III
  - Unobservable inputs based on the reporting entity's own assumptions about the assumptions a market participant will use

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.

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)
Standards of Value: Fair value for financial reporting purposes

Highest and Best Use is In-Use if:
- Asset has maximum value in combination with other assets as a group (installed or configured)
- Typically non-financial assets

Highest and Best Use is In-Exchange if:
- Asset has maximum value on a stand-alone basis
- Typically financial assets

Standards of Value: Intrinsic value

- 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.
- What the value should be based on analysis of all the fundamental factors inherent in the business or the investment.
- 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).
Premise of Value

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

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.

Two Forms of Liquidation

Orderly Liquidation
The expected gross proceeds from the sale of the asset:
- Held under orderly sales conditions
- Given a reasonable period of time in which to find purchasers
- Considering a complete sale of all assets as is, where is, with the buyer assuming all costs of removal
- With all sales free and clear of all liens and encumbrances
- With the seller not acting under compulsion
- Under current economic conditions, as of a specific date
Two Forms of Liquidation

Forced Liquidation
The expected gross proceeds from the sale of the asset:

- That could be realized at a properly advertised and conducted public auction held under forced sale conditions
- With a sense of immediacy
- Lack of adequate time to find purchasers
- Fire sale values apply
- Under current economic conditions, as of a specific date

Premise of Value

Value in Exchange vs. Value in Use

- **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.
**Premise of Value**

*Value in Exchange vs. Value in Use*

- **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.

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**The Purpose and Intended Use of the Valuation**

- Appraisers should understand and disclose the purpose of the valuation.
- Purpose may determine the standard of value.
- Purpose may affect the choice or presentation of valuation methods.
The Purpose and Intended Use of the Valuation

- No single valuation method is universally applicable to all appraisal purposes.
- The sophistication of the intended user is an important consideration in choosing methods and reporting your conclusions.
- Stating the purpose of the valuation indirectly communicates your independence and objectivity. (You have nothing to hide about why you are doing the appraisal!)

Purpose Affects Standard of Value

- Buying/selling/merging - any of the above standards of value could be used.
- Tax-related valuation - typically based on fair market value.
  - Estate, gift and inheritance taxes
  - S-corporation elections
  - Charitable contributions
  - Ad valorem taxes (property taxes)
  - Transfer pricing
  - Change of ownership
Financial reporting - Most engagements relate to purchase price allocation and impairment of goodwill calculations using the financial reporting standard of fair value.

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

Going public - fair market value

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

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

Fairness opinions
Damage cases - must carefully research case law in each case.

- Antitrust
- Breach of contract
- Condemnation (eminent domain)
- Insurance casualty claims (business interruption or termination)
- Lost profits
- Lost business opportunity
- Commercial reasonableness
- Intellectual property infringement

Buy/sell agreements - value standard is often arbitrary.

Professional Standards

- Professional standards codify the knowledge and techniques necessary for the competent practice of business valuation.

- *Uniform Standards of Professional Appraisal Practice* (USPAP)
  - Background
    - In 1987, nine of the leading U.S. professional appraisal organizations formed The Appraisal Foundation and adopted the first self-regulatory document for appraisers, entitled *Uniform Standards of Professional Appraisal Practice*.
    - Eight of the nine founding organizations are composed entirely of real estate appraisers; the American Society of Appraisers is the only multidiscipline society.
Structure of The Appraisal Foundation

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

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

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

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.

- The AQB has continued to work on voluntary criteria for disciplines other than real property including personal property appraisers.
Professional Standards

Contents of USPAP

- Prefatory material contains, among other things, an ethics rule and a competency rule.
- Standards 1-6 deal with real estate and fixed asset appraisal.
- Standard 3 deals with reviewing an appraisal, originally for real estate. As of 2004, Standard 3 is also applicable to reviewing business appraisals.

Professional Standards

Contents of USPAP

- Standards 7 and 8 deal with personal property appraisals.
- Standards 9 and 10 deal with business appraisals.
- The Appraisal Foundation has also issued statements on standards and advisory opinions, which clarify issues in implementing and adhering to the standards.
Professional Standards

Compliance with USPAP

- FIRREA requires that real estate appraisals used in conjunction with federally related transactions be performed in accordance with USPAP.
- Many other appraisers are also bound to comply with USPAP through affiliations with professional appraisal organizations.
- 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.

ASA’s Business Valuation Standards

- Adopted by the Business Valuation Committee of the American Society of Appraisers and approved by ASA’s board of governors.
- The BVC is the policy-making arm of ASA in the business valuation discipline.

Preamble

Standards
- BVS-I. General Requirements for Developing a Business Valuation
- BVS-II. Financial Statement Adjustments
- BVS-III. Asset-Based Approach to Business Valuation
- BVS-IV. Income Approach to Business Valuation
- BVS-V. Market Approach to Business Valuation
- BVS-VI. Reaching a Conclusion of Value
- BVS-VII. Valuation Discounts and Premiums
- BVS-VIII. Comprehensive, Written Business Valuation Report
- BVS-IX. Intangible Asset Valuation
ASA’s Business Valuation Standards

Glossary

Statements on Business Valuation Standards (SBVS)
- SBVS-1. The Guideline Public Company Method
- SBVS-2. Guideline Transaction Method

Advisory Opinions (AO)
- AO-1. Financial Consultation and Advisory Services

Procedural Guidelines (PG)

These standards must be followed for the valuation of a business, business ownership interests, or securities by all members of the American Society of Appraisers, whether they are Associates, Candidates, AMs, ASAs, or FASAs, and regardless of their discipline affiliation.

Basic Variables Affecting Value

Risk/return analysis:
Generally, the higher the risk associated with an investment, the higher the return an investor will require to make the investment.
Business risk

- 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.
  - **Operational risk**—uncertainty or volatility of operating flows: revenue, earnings and cash flows
  - **Turnover risk**—the decline in return on assets (ROA) due to the underutilization of assets
  - **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
  - **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.)

Going concern business risks

- Going concern—the ability of the company to continue in operations for the foreseeable future.
- Going concern business risks are created by internal and external factors.
- **External risk factors include:**
  - Economic conditions and outlook (interest rates, inflation, etc.).
  - Industry conditions and outlook, including competitive analysis (expected growth).
  - Market rates of return (risk free rate, equity risk premium, industry and company-specified risk).
Internal risk factors

- Business background and current operations.
- Earnings history of the firm (stability vs. volatility).
- Future earnings expectations (high growth vs. low growth).
- Balance sheet - financial strength (how leveraged).
- Qualitative factors such as management depth, customer concentration, security of supply.

Examples of going concern risks:

- A decline in the demand for industry products, which may affect the ability of the company to continue operations.
- A company’s inability to attract new debt or equity capital, which may affect the company’s ability to continue operations.
- When a company can no longer continue operations, then 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.
The Role of IRS Rulings

- IRS revenue rulings provide important guidelines for specific valuation issues.
- The following IRS Revenue Rulings (RR) should be copied and filed as part of your valuation library.
  - Revenue Ruling 59-60 highlights key items to be considered in valuing a business.
  - 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.

Revenue Ruling 59-60

- Nature of the business and history of the enterprise since its inception
- The economic outlook in general and the condition and outlook of the specific industry in particular
- The book value of the stock and the financial condition of the business
- The earning capacity of the company
Revenue Ruling 59-60

- The dividend paying capacity
- Whether or not the enterprise has goodwill or other intangible value
- Sales of the stock and size of the block of stock to be valued
- 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

The Role of IRS Rulings

- There are many other rulings that an appraiser needs to be aware of.
- When tax appraisals are performed, it is the appraiser’s responsibility to be aware of the rules.
- It is recommended that a tax professional be consulted about these rulings.
Key Court Cases

• Appraisers should be aware of court case decisions that pertain to the type of valuation they are performing.

• Helpful aspects of court decisions.
  ▪ Interpret standard of value.
  ▪ Indicate important factors to consider.
  ▪ Suggest approaches to value that are persuasive.

Key Court Cases

• 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.

• 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.
Steps of a Business Appraisal

1. Define the appraisal assignment
2. Gather the data
3. Analyze the data
4. Arrive at a value conclusion
5. Write the report

Chapter 3
BVS-I states the following:

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

- The business, business ownership interest or security to be valued.
- The effective date of the appraisal.
- The standard of value.
- The purpose and the intended use of the valuation.
- 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.

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

Assess the complexity of the project.

- Size of the business, more than one line of business, interrelated entities
- Type and availability of financial information
- Capital structure-degree of leverage, financially distressed, etc.
Pre-Engagement

Assess the complexity of the project.
- Non-operating assets and liabilities
- Minority versus control interest
- Start-up company
- Preliminary assessment of possible appropriate valuation methodologies and obvious difficulties in applying those methods

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

Pre-Engagement

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

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

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

- BVS VIII; Paragraph IIIA
- USPAP Ethics Rule: Conduct
- USPAP Standard 10-3

Pre-Engagement

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

- SEC registrant - Sarbanes-Oxley Act of 2002 describes services that an audit firm may provide to an audit client.
  - Sarbanes-Oxley generally prohibits the performance of appraisal and valuation services related to the audit client's financial reports.
  - However, the regulations expressly state that accounting firms are not prohibited from performing non-financial statement valuation work, specifically including tax-only valuations.
Appraisers working for accounting firms are subject to specific independence rules.

- Non-SEC Registrant (AICPA Code of Conduct, Interpretation 101-3, performance of other services) The general requirements are:
  - All significant matters of judgment are determined or approved by the client.
  - The client is in a position to have an informed judgment on the results of the valuation.
  - The client accepts responsibility for the valuation.

The type of business

- Corporation
  - C-Corp or S-Corp
  - State of incorporation
- Limited Liability Company
  - State of formation
- Partnership/general partnership or limited partnership
  - State of formation
- Sole proprietorship
### What is Being Appraised?

<table>
<thead>
<tr>
<th>The nature of the business interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock - common or preferred</td>
</tr>
<tr>
<td>Assets that make up the business</td>
</tr>
<tr>
<td>Invested capital</td>
</tr>
<tr>
<td>Specific intangible assets</td>
</tr>
<tr>
<td>Options or warrants</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The level of the ownership interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling interest - there can be various levels of control</td>
</tr>
<tr>
<td>Minority interest - generally cannot influence operations</td>
</tr>
</tbody>
</table>

### Effective Date of The Appraisal

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

- Only information that is “known or knowable” as of the specific valuation date should be incorporated into a business valuation.
Effective Date of The Appraisal

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

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

Scope of the Appraisal

In BVS-1, the ASA Business Valuation Standards identify three possible scopes for appraisal work.
- Appraisal
  - 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.
  - An appraisal has the following qualities:
    - Its conclusion of value is expressed as either a single dollar amount or a range.
    - It considers all relevant information as of the appraisal date available to the appraiser at the time of performance of the valuation.
    - The appraiser conducts appropriate procedures to collect and analyze all information expected to be relevant to the valuation.
    - The valuation considers all conceptual approaches deemed to be relevant by the appraiser.
In BVS-1, the ASA Business Valuation Standards identify three possible scopes for appraisal work.

- **Limited appraisal**
  - 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.
  - A limited appraisal has the following qualities:
    - Its conclusion of value is expressed as either a single dollar amount or a range.
    - It is based upon consideration of limited relevant information.
    - The appraiser conducts only limited procedures to collect and analyze the information that such appraiser considers necessary to support the conclusion presented.
    - The valuation is based upon the conceptual approach or approaches deemed by the appraiser to be most appropriate.

- **Calculation**
  - 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.
  - A calculation has the following qualities:
    - Results may be expressed either as a single dollar amount or a range.
    - May be based upon consideration of only limited relevant information.
    - The appraiser performs limited information and analysis procedures.
    - The calculation may be based upon conceptual approaches agreed upon with the client.
Engagement Letters

Should contain an explanation of the assignment in sufficient detail to ensure that there can be no misunderstanding between the appraiser and the client.

- The obligations of each party should be spelled out.
  - The client must provide financial and operating information as well as access to facilities and people.
  - The analyst must perform certain predetermined functions.
- The procedures to be followed if there is a breakdown on either side of the project should be indicated.

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

- Many valuation assignments are subject to change, sometimes several times, particularly in the context of litigation.
- 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.
**Suggested Content of Engagement Letters**

- Name of client retaining the appraiser
- Identification of the company and ownership interest to be valued
- Appraisal date
- Standard of value and definition of the standard of value
- Purpose and intended use of the appraisal
- Scope of the appraisal work

**Contents of Engagement Letter**

Scope of the appraisal report and documentation

- Many situations can be satisfied with relatively simple reports and little or no supportive, documentary evidence.
- However, the end result must effectively meet the client’s requirements.
- The end result must also meet the standards established for reports developed by ASA and in USPAP.
- In any case, there should be a clear understanding at the outset of what will be provided at the conclusion of the project.
Contents of Engagement Letter

Which professional standards are to be followed (USPAP, BVS)

- If applicable, due date
  - Including oral conclusions provided in advance of the written report.
  - It is wise to tie due dates to timely delivery of required information by the client.
  - In the minds of most clients, a late report is a poor quality report.

Fee arrangements

- Not all engagements call for a set fee.
- However, it should be made absolutely clear:
  - Who will be responsible for payment of the fee?
  - Under what terms the fee will be paid?
- Retainer requirements.
- Appraiser's right to disengage if not paid or for other reasons.
### Contents of Engagement Letter

**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.

For potential litigation support engagements:

- Often, valuation assignments are tied to litigation support or may later be subject to dispute.
- It is advisable to address issues such as required notifications, appraiser availability for court appearances and the fact that additional fees will apply.

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**Liability** - the extent to which it is accepted should be defined in the engagement letter or in attached materials.

- In an increasingly litigious world, appraisers should take steps to protect themselves against legal actions flowing from valuation opinions.

It is probably best to attach to the engagement letter:

- 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.)
- Language dealing with indemnification and the requirement to “hold harmless.”
- Any unique terms and conditions governing the assignment.
### Contents of Engagement Letter

- 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.
- Consider additional language relating to assumptions regarding the reliability of company and third-party data.
- Have your engagement letter reviewed by an attorney since it is a binding contract.

### Classroom Assignment 4: Defining the Appraisal Assignment
Classroom Assignment 4 - Defining the Appraisal Assignment

- 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?
Data Gathering

- Economic data
- Industry data
- Subject company data
- Comparative data
- Other

Appendix B to this course contains a write up adapted from *Understanding Business Valuation* that is a simplified version of how to use the information that was gathered. It is intended for those that feel weak in this area of practice.

Economic Data

- All information gathered should be “known or knowable” as of the valuation date.
- Focus should be on current and expected conditions relevant to the industry and subject company.
- Type of business dictates the type of economic research.
  - Example: Retail—personal income
  - Example: Animal feed manufacturers—commodity prices, government programs
- National economy
- Regional or local economy
- International markets
Industry Data

- All information gathered should be “known or knowable” as of the valuation date.
- Industry trends in growth, structure, technology, regulation, etc.
- Industry financial performance
- Competition
- Public companies

Subject Company Data

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

Financial data
- Financials for five fiscal years, or relevant period.
- 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.
Subject Company Data

- Financial data
  - Interim financials
  - Detailed depreciation schedule
  - Budgets or forecasts—may want historical budgets to see how company’s actual performance compared with budget (measure quality of management)
  - Other financial data

- Product and market data
  - Marketing literature—Web site, brochures, price lists, etc.
  - Location(s) of company operations
  - Customer list and supplier list
  - List of patents, copyrights, trademarks and expiration dates
  - Sales forecasts by product line and sales division
  - List of major competitors, their locations, and their relative strengths and weaknesses
  - List of trade associations
  - Survey of geographic market
Subject Company Data

- Personnel
  - Organization chart
  - Brief résumé on key personnel
  - Employment agreements
  - Covenants not to compete
  - Union contracts
  - Compensation schedule for owners, officers and directors
    - include all perks in the schedule.
  - Schedule of life insurance policies on key personnel
  - Pension and profit-sharing plans and employee handbook

Subject Company Data

- Other business records
  - Organizational documents
    - If corporation—articles of incorporation, bylaws, amendments and minutes
    - If partnership—partnership agreement and amendments
    - If LLC—articles of organization and LLC member’s agreement
  - List of stockholders, members or partners and what each owns
  - Any details on prior stock sales
  - Buy/sell agreements, options, etc.
Subject Company Data

- Other business records
  - Shareholder and board minutes
  - Major contracts
    - Supply contracts
    - Distributor agreements
    - Lease agreements
    - Guaranteed sales contracts
  - Copies of previous appraisals and/or appraisals of specific assets
  - Information on contingent liabilities

The Management Interview

- The main purpose is to assess risk and qualitative factors.
- Prepare a list of questions in advance.
- Persons to interview might include:
  - Client and client’s attorney
  - Company managers; president; chief financial officer; managers of sales, production and personnel
  - Company advisers: accountant, attorney, banker
  - Members of company board of directors
  - Customers or suppliers with management permission
Topics To Discuss With Management

- History of the company

- Operations
  - Products and services
  - Seasonal or cyclical sales patterns
  - Supplier base
  - Customer base
  - Facilities
  - Marketing and distribution strategies
  - Manufacturing or distribution capacity
  - Management, employees, key personnel, succession plans
  - Plans for the future, new product development

Topics To Discuss With Management

- Environment
  - Economic and industry factors affecting company
  - Competition
  - Regulatory issues
  - Legal proceedings

- Financial condition and performance
  - Reasons for identified trends
  - Capital expenditures
  - Company’s present and future use of debt
  - Details of past transactions in company stock
  - Contingent liabilities

- Other information of which the appraiser may not be aware
Economic Data Sources

General economy

- Internet sources: U.S. Bureau of Census and Department of Commerce - free sites
- Government publications, including the *Federal Reserve Bulletin*, *Survey of Current Business*, and *Economic Report of the President*

Economic Data Sources

Sources for regional economic data

- Federal Reserve’s bi-annual Beige Book report, available from their website
- Bureau of Labor Statistics has historical economic and demographic data by region, state, and MSAs (or “Metropolitan Statistical Area”)
- 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
- Local or regional chambers of commerce
Industry Data Sources

- General business periodicals/publications
  - Available in both electronic and print formats. Check the Guide to Business Periodicals (for print sources), which is available at most libraries.
  - Business Week and Forbes produce special issues each January that cover many industries.
- Standard & Poor’s (S&P’s)—Most libraries carry S&P’s Value Line Investment Survey, Industry Reports, and Industry Surveys.
- 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.

Industry Data Sources

- Trade associations
  - 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 - [free site].
  - 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 member of trade organization for free or at reduced fee.
Industry Data Sources

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

- SEC Form 10–Ks for publicly traded companies
- Brokerage reports
  - These are available from individual brokerage firms, but distribution policies vary.
  - They are also available through Dialog on the Investext database. Some business-oriented libraries also offer access to Investext.
Industry Data Sources

- Industry financial ratios
  - 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.
  - Internet-based sources include
    - Risk Management Associates’ (RMA) Annual Statement Studies
    - Integra Information
    - BizMiner

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

Third party providers of industry research

- Valuation Resources — The Web site lists online resources on more than 70 specific industries. The site is free—some links are not.

- Industry Research — The Web site provides industry summary reports and offers custom research and report writing. Fee based.

- First Research — The Web site offers summary information on various industries, as well as industry-specific bibliographies for further research. Fee based.

Guideline Company Data

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

- Standard Industrial Classification Manual
- NAICS Manual
- Disclosure Compact/Securities and Exchange Commission (SEC) CD-ROM
Guideline Company Data

Places to find lists of potential guideline companies

- Electronic sources
  - Disclosure—CD-ROM or online through *Dialog* - Fee based.
  - S&P’s *CompuStat*—CD-ROM Fee based.
  - 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.
  - Mergent’s—CD-ROM or online through *Dialog*. Fee based.
  - Hoovers—Basic information and search capabilities are free; detailed data available by subscription.
  - Edgar—now offers the ability to search by SIC Code. Free.

Guideline Company Data

Print sources

- *Standard & Poor’s Corporation Records*: Index of Companies by SIC code—lists public companies by SIC code
- *Directory of Companies Required to File Annual Reports with the SEC*
- Mergent’s manuals
- *Value Line Investment Survey* (http://www.valueline.com)
- *Standard & Poor’s Register Indexes*—list public and private companies by SIC code
Guideline Company Data

Where to get financial information and further description

- Primary data—Form 10K and annual reports—these original source documents provide the best descriptions and most reliable financial data.
  - Directly from the company—often available at the company’s Web site.
  - 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
    - SEC filings are available at several Internet sites, some at no charge and some for a fee.
    - While data are generally reliable, realize that non-SEC sites used to access SEC data should be considered secondary data.
    - 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.
  - Document retrieval companies such as Disclosure Info Center or Mergent’s Docutronics

Guideline Company Data

- Secondary data
  - Disclosure—online through Dialog or CompuServe
  - S&P’s CompuStat—CD-ROM
  - 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
  - Mergent’s manuals—print only—selected data are available on CD-ROM or online through Dialog
  - Media General Financial Services. Fee based.
  - Value Line Investment Survey—print—selected data are available on diskette and online through CompuServe
  - Other online public company data providers, such as Hoovers. Fee based.
Places to find lists of suspect companies (also contains some secondary financial data)

- **Electronic sources**
  - 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]
  - DoneDeals database—available online [fee based]
  - Mergerstat database [fee based]

- **Print sources**
  - Merger & Acquisition Sourcebook
  - Mergerstat Review
  - Mergers & Acquisitions magazine
  - The Merger Yearbook

- **Small companies**
  - BIZCOMPS; available through BV Resources [fee based]
  - Institute of Business Appraisers; Free to members with certain limitations.
  - Pratt’s Stats; available through BV Resources [fee based]
Data on Acquired Companies

Where to get original source financial data

- Publicly traded companies
  - SEC Forms
    - 10-K: Annual Statement
    - 10-Q: Quarterly Statement
    - 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.

- Private companies
  - Call acquired or acquiring company directly
  - Form 8-K, 10-K, or 10-Q of acquirer, if public or if the company has publicly traded debt.
  - Business brokers

Homework Assignment 1: Review Exhibit 4-2, History Section of GDT, Inc.
The economic and related political environments in which a business operates can be viewed from three perspectives:

- The global environment
- The national environment
- The regional and local environment

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

Economic globalization creates both new opportunities and challenges for firms.
Opportunities include:

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

Challenges emanate from:

- Foreign competitors entering a firm’s domestic markets,
- Domestic competitors reducing their costs through global sourcing, moving production offshore or gaining economies of scale by expanding into new markets, thus
- Forcing firms to become more streamlined and efficient while simultaneously extending the geographic reach of their operations.
Global-Specific Risks

- 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.

Global-Specific Risks

- 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.
- 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.
Implications of Globalization on Valuation

- Globalization increases the complexity of risk analysis.
- Valuation opportunities beyond US borders.
- Need for appraisers to understand non-US conventions in financial reporting, taxation, regulation, and culture on the valuation subject.

Global effects aside, macroeconomic factors that affect business value are generally driven at the national level. These macroeconomic factors include:

- General economic conditions:
  - GDP
  - Consumer spending
  - Government spending
  - Business investments and inventories
  - Trade deficit
National Economic Factors

- Inflation
- Interest rates
- Unemployment
- Consumer spending and confidence
- Equity and debt markets
- Construction activity
- Manufacturing activity
- Economic growth
- Equity market activity and trends
- Alternative market activity and trends

National Economic Factors

- Regulatory environment
  - Taxation
  - Industry regulation
  - Employment laws
  - Trade barriers/protection
Regional and Local Economic Factors

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

Typical regional and local economic factor impacts:

- Labor pool or lack thereof
- Facility availability and cost
- Distribution infrastructure
- Local regulatory environment
  - Land use
  - Business regulations
  - Labor laws
  - Taxes and fees

Chapter 6
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 understanding the testing lab industry would involve identifying the segments it serves.

For example, major segments (sub-areas) would include medical diagnostic labs, concrete core sampling labs, metallurgical structural testing labs, software testing labs, etc. Each of the sub-industry segments is characterized by different value drivers and influencers.

Understanding the industry and the microeconomic and macroeconomic 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.

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.

One structure for analyzing an industry was outlined by Michael Porter.
Rivalry Among Existing Firms

Threat of New Entrants

Bargaining Power of Suppliers

Bargaining Power of Customer

Threat of Substitute Products or Services

The threat of New Entrants is affected by barriers to entry, which 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.
Industry Analysis: 
Porter’s Five Forces

Barriers to entry include:
- Economies of scale
- Product differentiation
- Capital requirements
- Switching costs to customers
- Access to distribution channels
- Other cost advantages
- Government policies
- Incumbent’s defense of market share
- Industry growth rate

Bargaining Power of Suppliers  \[\Rightarrow\] Rivalry Among Existing Firms  \[\Leftarrow\] Bargaining Power of Customer

Threat of New Entrants

Threat of Substitute Products or Services

Suppose 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. 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.
Industry Analysis:
Porter’s Five Forces

Rivalry Among Existing Firms

Threat of New Entrants

Bargaining Power of Supplier

Threat of Substitute Products or Services

Bargaining Power of Customers

Customers are powerful if:
- Customers are concentrated
- Customers possess a significant proportion of output
- Customers possess a credible backward integration threat

Customers are weak if:
- Suppliers threaten forward integration
- Significant customer switching costs
- Customer is fragmented (many, different)
- Suppliers supply critical portions of Customer’s input

Bargaining Power of Supplier

Rivalry Among Existing Firms

Bargaining Power of Customers

Threat of Substitute Products or Services
Industry Analysis: Porter’s Five Forces

Rivalry Among Existing Firms

Threat of New Entrants

Bargaining Power of Suppliers

Market conditions affecting impact of supplier bargaining power:
• Supplier integration
• Availability of substitute products
• Importance of supplier's input to customer
• Supplier's product differentiation
• Importance of industry to suppliers
• Supplier's threat of forward integration
• Customer's threat of backward integration

Threat of Substitute Products or Services

Bargaining Power of Customers

Suppliers are strong if:
• Credible forward integration threat by suppliers
• Suppliers concentrated
• Significant cost to switch suppliers
• Customers weak

Threat of New Entrants

Bargaining Power of Customers
Industry Analysis: Porter's Five Forces

Rivalry Among Existing Firms

Threat of New Entrants

Bargaining Power of Suppliers

Suppliers are weak if:
- Many competitive suppliers
- Purchase commodity products
- Credible backward integration threat by customers
- Concentrated purchasers
- Customers powerful

Threat of Substitute Products or Services

Bargaining Power of Customers

Factors that affect competitive rivalry:
- Number of competitors (concentration)
- Relative size of competitors (balance)
- Industry growth rate
- Fixed costs vs. variable costs
- Product differentiation
- Capacity augmented in large increments
- Customer's switching costs
- Diversity of competitors
- Exit barriers
- Strategic stakes

Threat of New Entrants

Rivalry Among Existing Firms

Bargaining Power of Customers

Threat of Substitute Products or Services
Industry Analysis: Porter’s Five Forces

Competitive responses to rivalry:
• Change prices
• Improve product differentiation
• Creatively use channels of distribution
• Exploit relationships with suppliers

Flows:
- Threat of New Entrants
- Rivalry Among Existing Firms
- Bargaining Power of Customers
- Threat of Substitute Products or Services

Intensity of rivalry influenced by:
• Number and relative strengths of competitors
• Industry growth – bigger pie or bigger slice
• Relative proportion of fixed costs to total costs
• Storage costs
• Switching costs
• High exit barriers
• Diversity amongst rivals
• Industry shakeout

Strengths:
- Bargaining Power of Suppliers
- Rivalry Among Existing Firms
- Threat of Substitute Products or Services

Weaknesses:
- Threat of New Entrants
- Bargaining Power of Customers
Generic strategies for effectively competing in light of the five forces:

- Overall cost leadership
- Differentiation from competitors
- Focus on a particular customer group, segment of the product line or geographic area

Overall Cost Leadership

- Overall cost leadership is a strategy requiring management to pursue a course of action that:
  - Aggressively constructs facilities that are of a scale to have maximum efficiency
  - Focuses on cost reductions gained through experience
  - Includes tight control on costs and overhead
  - Eliminates marginal customer accounts
  - Minimizes costs in areas like service, sales teams, advertising, and research and development
Porter’s Five Forces and Generic Strategies

Overall Cost Leadership Strategy

- Commonly required skills and resources include:
  - Continual capital investments and access to capital to fund the investments
  - An engineering team with skills in process engineering
  - High level of labor supervision
  - Designing products for manufacturing simplicity and ease
  - Use of a low-cost distribution system or network

Overall Cost Leadership

- The strategy requires development of many organizational characteristics including:
  - The ability to maintain tight cost controls
  - An information infrastructure capable of providing frequent, detailed cost control reports
  - A highly structured organization and defined responsibilities
  - Compensation incentives based on meeting quantitative goals
Porter’s Five Forces and Generic Strategies

Overall Cost Leadership

- Risks related to a cost efficiencies strategy include:
  - Technological advances making the prior capital investments obsolete
  - 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
  - The extreme focus on cost, blinding management from spotting the need for product or marketing changes
  - 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

Porter’s Five Forces and Generic Strategies

Differentiation from competitors strategy requires management to create something that is perceived industry-wide as being “unique.”

- Uniqueness related to product innovation can be created via many approaches such as:
  - Developing a design or brand image
  - Technology leadership
  - Product features provided
  - Level of or type of customer service provided
  - A strong dealer network
Differentiation from Competitors Strategy

- Highly successful product innovators generally differentiate themselves by using more than one approach. The differentiation strategy's commonly required skills and resources include:
  - Possessing high-quality marketing skills
  - Strong product-engineering capabilities
  - A creative flair
  - A highly competent basic research team
  - A reputation for technological or quality leadership
  - Known tradition in the industry or a unique combination of skills drawn from related industries
  - A high level of cooperation from the channel of distribution

- In addition, the strategy requires the development of many organizational characteristics including:
  - Incentives based on subjective measures instead of definitive quantitative goals
  - A high level of cooperation and coordination between the research and development, product development, and marketing departments
  - Facilities and amenities capable of attracting scientists, engineers, creative individuals, or a highly skilled labor force
Differentiation from Competitors

- The risks associated with the strategy of differentiation include:
  - 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.
  - Buyers' needs change, and they are no longer attracted to the company because of its differentiating characteristics.
  - 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.

Focus on a particular buyer 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.

Competitors are assumed to be marketing to a more diverse market, geographic market or with a broader product line.
Porter’s Five Forces and Generic Strategies

- A focus strategy requires a combination of the same skills, resources and organizational characteristics that are required for the product innovation strategy.

- Each of these strategies often needs a very different style of leadership and usually evolve into their own unique corporate culture.

- 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.

Porter’s Five Forces and Generic Strategies

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

- 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.

- The differences in the products or services desired by the target market and those desired by the marketplace as a whole narrows or are eliminated.

- Competitors identify a submarket within the company’s target market and effectively out-focus the company.
Porter’s Five Forces and Generic Strategies

- Correlation of the five forces and the generic strategies.
- The generic strategies each have attributes that can serve to defend against competitive forces.

<table>
<thead>
<tr>
<th></th>
<th>Cost Leadership</th>
<th>Differentiation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry Barriers</strong></td>
<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>
</tr>
<tr>
<td><strong>Buyer Power</strong></td>
<td>Ability to offer lower price to powerful buyers.</td>
<td>Large buyers have less power to negotiate because of few close alternatives.</td>
<td>Large buyers have less power to negotiate because of few alternatives.</td>
</tr>
<tr>
<td><strong>Supplier Power</strong></td>
<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 volume, but a differentiation-focused firm is better able to pass on supplier price increases.</td>
</tr>
<tr>
<td><strong>Threat of Substitutes</strong></td>
<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>
</tr>
<tr>
<td><strong>Rivalry</strong></td>
<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>
</tr>
</tbody>
</table>
Chapter 7

Applying the Business Appraiser’s Analysis to the Company

The analysis performed is intended to help the business appraiser understand how the identified factors affect:

- The company’s financial performance, and
- The company’s value (i.e., “k or g” the denominator in the value formula)
The four basic types of company analysis are:

1. General economic and political analysis
2. Industry analysis
3. Operational analysis
4. Financial analysis

- Identify trends and what caused them.
- Identify unusual items and why they happened.
- 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.)
Financial Performance Analysis

- Compare the company to an industry norm or peer group. (Analyze and explain similarities and differences.)
- Provide a basis for comparing the subject company with guideline companies in the market approach.
- Provide a basis for developing financial projections or assessing company projections in the income approach.

Trend Analysis

- 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.
- The goal is to identify positive and negative trends, review past growth patterns, and assess what is “normal” for the subject company.
Trend Analysis

- The number of periods in the spread
  - 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.
  - For a cyclical company, capturing a full business or economic cycle may be appropriate.
  - 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.

Income Statement Trends

- Review level and trend in revenue and key expense items.
- Review level and trend in profitability: EBITDA, EBIT, pre-tax, net income.
- Identify reclassifications, new items, nonrecurring items, non-operating items.
Balance Sheet Trends

- Note significant classes of assets and liabilities.
- Review level and trend in working capital (current assets less current liabilities)—with and without interest-bearing debt.
- Review level and trend in fixed assets.
- Review level and trend in interest-bearing debt and equity.

Statement of Cash Flows Trends

- 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.
- Cash flows are classified into three categories:
  - 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
  - Cash flow from investing activities (CFI)—cash used/received from acquisition or disposal of plant, equipment and other investments
  - 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.)
Changes in Balance Sheet Accounts as shown on the Cash Flow Statement:

- An increase in an asset account is a negative cash flow and decreases cash on hand (e.g., buying a building).
- A decrease in an asset account is a positive cash flow and increases cash on hand (e.g., collecting a receivable).
- An increase in a liability account is a positive cash flow and increases cash on hand (e.g., borrowing money from a bank).
- A decrease in a liability account is a negative cash flow and decreases cash on hand (e.g., paying off a loan).

Usefulness of Analyzing Trends of a Business

- Assess liquidity—review of trends in cash generation, receivables collection, and timing of cash flows versus accrual income
- Assess financial strength—trends in cash flow from operations, ability to finance capital expenditures and debt service from operating cash flow
- Assess financial decisions—review of fixed asset purchases/disposals and investment trends
Cautions and Potential Pitfalls

- 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).
- 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.
- Leasing fixed assets rather than buying them will result in different CFO. Lease expense is in CFO; purchased assets are in CFI.

Common-Size Analysis

- 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.
- Very useful in comparing companies, particularly companies of different size.
- Identifies relative trends (expense relative to sales, current assets relative to total assets).
- Helps in making projections or evaluating budgets.

- For firms with significant currency conversion issues, a fourth category is required: Effect of Exchange Rate Changes
Important points about ratio analysis

- 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.
- 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.
- 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.

Liquidity Ratios

- Measure the ability of a company to meet its short-term financial obligations as they become due

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

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

\[
\text{Working capital turnover} = \frac{\text{Sales}}{\text{Working Capital}}
\]
Activity or Turnover Ratio

- Measure how effectively a company employs its assets
  - 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.
  - 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.

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.

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:

- With the denominator expressed as an average of the beginning and ending balance sheet account amount (this is theoretically more correct), or
- 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).
Activity Ratios

\[
\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Inventory}}
\]

\[
\text{Accounts Receivable Turnover} = \frac{\text{Sales}}{\text{Accounts Receivable}}
\]

\[
\text{Average Collection Period} = \frac{\text{Accounts Receivable}}{\text{Sales per Day}}
\]

\[
\text{Fixed Asset Turnover} = \frac{\text{Sales}}{\text{Fixed Assets}}
\]

\[
\text{Working Capital Turnover} = \frac{\text{Sales}}{\text{Working Capital}}
\]

\[
\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Assets}}
\]

Leverage/Coverage Ratios

- Measures the ability of the company to cover its debt obligations
- The extent to which debt is used in a company’s capital structure (financial risk)
- The company’s long-term ability to meet payments to creditors
- Measures financial risk, particularly when contrasted with peer group risk and/or guideline company risk
• Directly addresses the utilization of “financial leverage” or the use of debt in the capital structure.
• 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).
• 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.

Leverage/Coverage Ratios

- 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 = \( \frac{\text{Total Assets}}{\text{Total Equity}} \)
Profitability Ratios

- Measure how effectively the company manages expenses and profits.
- Directly addresses the ability of the enterprise to control its operating costs relative to the to its revenue stream.
- Profitability is usually measured as a “profit margin” (the percentage ratio of profits to sales).

Profitability Ratios

- 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.
- 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.
**Profitability Ratios**

\[
\begin{align*}
\text{Gross Profit Margin} &= \frac{\text{Gross Profit}}{\text{Sales}} \\
\text{Operating Profit Margin} &= \frac{\text{Operating Income}}{\text{Sales}} \\
\text{Net Profit Margin} &= \frac{\text{Net Income}}{\text{Sales}} \\
\text{After Tax Return on Total Assets}^* &= \frac{\text{Net Income}}{\text{Total Assets}} \\
\text{After Tax Return on Equity}^* &= \frac{\text{Net Income Available to Stockholders}}{\text{Stockholder’s Equity}}
\end{align*}
\]

**Return on Equity**

- Return on equity (net income/equity) is a very important summary statistic about the performance of a business.
- The DuPont Formula breaks ROE into its components, including profitability, turnover and leverage.

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

- 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:
  1. current cash distributions and
  2. growth in the value of the investment.
- The “capital appreciation” of the investment is directly dependent upon the expected growth in future returns.

Growth Rates

- 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:
CAGR

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

OR

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

Where:

- \( n \) = number of data points, and
- \( n - 1 \) = number of compounding periods.

Equity vs. Invested Capital

- 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.
- Instead of total return on equity, use return on invested capital.
- Instead of pretax or net income margins on equity, use EBITDA, EBIT or NOPAT margins on invested capital.
### Comparison of 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>

### Comparative Financial Analysis

- To compare the subject company to industry ratios, be sure there is consistency in how the ratios are calculated and compared to a third party source of industry financial analysis.
- Compare the subject company with industry averages and/or identified guideline companies.
Industry Average Financial Data

- Risk Management Association (RMA) Annual Statement Studies.
- Other print sources such as Troy’s Almanac of Business and Industrial Financial Ratios and Financial Statement Studies of the Small Business.
- Online providers of data such as Integra and Bizminer.
- Performance analysis reports (PARs) and other analyses prepared by trade associations.

Industry Average Financial Data

- Industry data prepared by trade publications
- Guideline publicly traded or transaction data
  - This is the most important comparison for the market approach.
  - Analyze the performance of the subject company compared to the performance of chosen guideline companies.
- Analysis used to consider adjustments to the market multiples (market approach) or discount rate (income approach) applied to the subject company.
Adjustments depend on the valuation approach and whether a minority or controlling interest is being valued.

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

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

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.)

4. **Discretionary Items** - To adjust for discretionary expenses of the business—more applicable in control valuations than minority
### Current Year $ | Adjustment $ | As Adjusted $
---|---|---

#### Assets

<table>
<thead>
<tr>
<th>Current Assets</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Equivalents</td>
<td>740,000</td>
<td>740,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>2,135,409</td>
<td>2,135,409</td>
</tr>
<tr>
<td>Inventory</td>
<td>1,205,366</td>
<td>200,300</td>
</tr>
<tr>
<td>Prepaid Expenses</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>3,927,775</td>
<td>200,300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed Assets</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land &amp; Building</td>
<td>302,865</td>
<td>(49,760)</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures</td>
<td>155,347</td>
<td>(113,120)</td>
</tr>
<tr>
<td>Automobiles</td>
<td>478,912</td>
<td>(391,981)</td>
</tr>
<tr>
<td>Machinery &amp; Equipment</td>
<td>759,888</td>
<td>(341,622)</td>
</tr>
<tr>
<td><strong>Total Fixed Assets (at cost)</strong></td>
<td>1,697,012</td>
<td>(898,483)</td>
</tr>
<tr>
<td>Accumulated Deprec.</td>
<td>(1,298,325)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Fixed Assets (net)</strong></td>
<td>398,687</td>
<td>399,842</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Assets</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate (non-operating)</td>
<td>(90,879)</td>
<td>(43,121)</td>
</tr>
<tr>
<td>Goodwill (net)</td>
<td>95,383</td>
<td>(95,383)</td>
</tr>
<tr>
<td>Organization Costs (net)</td>
<td>257</td>
<td>(257)</td>
</tr>
<tr>
<td>Investments</td>
<td>150,000</td>
<td>(100,000)</td>
</tr>
<tr>
<td><strong>Total Other Assets</strong></td>
<td>245,640</td>
<td>24,360</td>
</tr>
</tbody>
</table>

| **Total Assets** | 4,662,981 | 667,623 | 5,330,604 |

#### Liabilities & Equity

<table>
<thead>
<tr>
<th>Current Liabilities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts Payable</td>
<td>1,935,230</td>
<td>1,935,230</td>
</tr>
<tr>
<td>Notes Payable</td>
<td>50,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Accrued Expenses Payable</td>
<td>107,872</td>
<td>107,872</td>
</tr>
<tr>
<td>Income Taxes Payable</td>
<td>0</td>
<td>267,049</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>2,093,102</td>
<td>267,049</td>
</tr>
</tbody>
</table>

| Long Term Debt | 350,000 | 350,000 |
| **Total Liabilities** | 2,443,102 | 267,049 | 2,710,151 |

<table>
<thead>
<tr>
<th>Equity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>Additional Paid in Capital</td>
<td>500,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>1,717,379</td>
<td>49,574</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td>2,219,879</td>
<td>49,574</td>
</tr>
</tbody>
</table>

| **Total Liabilities & Equity** | 4,662,981 | 667,623 | 5,330,604 |

---

### Company Risk Factors

- **Company risk factors** are organized into external and internal risk factors.
- **External risk factors** are the risks that have been studied in the previous two chapters:
  - Changes in the macroeconomic environment
  - Changes in the political environment
  - Changes in the microeconomic environment
Company Risk Factors

Internal risk factors are the factors that the company’s management has the most ability to influence or control. Examples of these risks include:

- New personnel
- New or revamped information systems
- Rapid growth
- New technology
- New business models, products or services
- Corporate restructuring
- Expanded foreign operations
- New accounting pronouncements
- Acquisitions
- Internal controls
- Employee communications

Analytical Framework

DuPont formula

- 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.
- 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.
- The three financial factors monitored via the DuPont formula are:
  - Profitability
  - Turnover
  - Leverage
The three financial factors summarize the effects of operational and financial management decisions on the financial return performance of the company.

1. The company's profitability is used to monitor the effects of management decisions related to the efficiency of operations.
2. The company’s turnover is used to monitor how effectively management is using its asset investments in the company.
3. The company’s leverage is used to monitor how effectively management is controlling its financial capital structure.

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.

- The structure of the formula is as follows:
\[
\text{Return on Equity} = \text{Profitability} \times \text{Asset Turnover} \times \text{Leverage}
\]
**Classic DuPont Formula**

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

**Invested Capital Emphasis**

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

SWOT analysis (strengths, weaknesses, opportunities and threats)
- One of the more common ways to assess the qualitative factors of a company is based on the SWOT analysis.

<table>
<thead>
<tr>
<th>SWOT</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths (internal)</td>
<td>Weaknesses (internal)</td>
<td></td>
</tr>
<tr>
<td>What do you do better than your competitors?</td>
<td>What do the competitors do better than you do?</td>
<td></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>
<td></td>
</tr>
<tr>
<td>Opportunities (external)</td>
<td>Threats (external)</td>
<td></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>
<td></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>
<td></td>
</tr>
</tbody>
</table>
Application of SWOT

- Analysis/audit - where are we now?
- Preparation for strategic plan
- Problem-solving tool
- Decision-making tool
- Resource allocation tool
- Counseling a client—personnel
- Current situation appraisal tool (to determine whether corrections are needed)

The benefits of using a SWOT analysis are that it provides:
- A framework for identifying and analyzing strengths, weaknesses, opportunities and threats
- An impetus to analyze a situation and develop suitable strategies and tactics
- A basis for assessing core capabilities and competences
- The evidence for, and cultural key to, change

Analytical Frameworks: SWOT Analysis

Strengths: The company’s core competencies and resources
- What does the company do well?
- How strong is the company in the market, or what is its market position or share?
- Does the company have a clear communicable vision or direction?
- Does the company have a positive corporate culture that makes for a work environment that will attract the employees desired?
- What are the company’s definable resources (tangible and intangible)?
Weaknesses: The company's liabilities in the competitive marketplace

- What systems could be improved at the company?
- What does the competition do better?
- What does the company do poorly?
- Does the company have the financial resources to purchase needed equipment, technology or facilities?
- Does the company have the financial resources to withstand a downturn or unforeseen negative circumstances?
- Can the company support its growth rate?

Opportunities: With the company's customers and in the marketplace

- What changes are taking place in the market that open up opportunities? Is the company positioned to take advantage of the opportunities?
- Is the company entering new markets?
- Can the company upgrade its technology to lower costs?
- Can the company expand its geographic coverage?
- Can the company improve its use of the Internet for marketing or customer relations?
Analytical Frameworks: SWOT Analysis

Threats: What your competitors are doing and other potential challenges

- What obstacles do you face?
- What are your competitors doing?
- Are regulatory requirements or customer demands forcing a change in your products or services?
- Is technology threatening your market position?
- Is there pressure on your profit margins?

Company Specific Value Drivers

- Every company has specific operational and financial value drivers.
- Generally, these value drivers are related to the industry and to the company’s critical success factors.
- 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.
Company Specific Value Drivers

- Financial value drivers are the individual items that drive return on equity and invested capital, operating and net free cash flows.
- Operating value drivers are the operational procedures that allow the company to successfully provide the customer with the level of service or product that:
  - Meets the customer-related critical success factor demands or needs
  - Is set at a price point such that it provides the company with a sufficient return on equity and is acceptable to the paying customer

Homework Assignment 2: 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.
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.
## The Real Estate Grid

<table>
<thead>
<tr>
<th>Property</th>
<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>
<td>Subject</td>
</tr>
<tr>
<td>Acreage</td>
<td>1</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>
<td>Quiet street</td>
</tr>
<tr>
<td>Bedrooms</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Baths</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Interior</td>
<td>New condition</td>
<td>Good 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>
<td>Same</td>
</tr>
</tbody>
</table>

## Principle of Substitution

- 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:

- Publicly traded companies
- Acquired/merged companies
- Other market approach methods include:
  - Analysis of prior transactions in the subject company’s stock
  - The use of industry-based rules of thumb
  - Buy-sell agreements
  - Bona fide offers to buy the subject company
- Previous acquisitions

Strengths of the market approach (real and perceived) include:

- Relatively easy to get data
- Easy to understand and apply
- Includes all assets (tangible and intangible)
- Does not rely on forecasts (usually)
- Users tend to think they are objective and reliable
- Incorporates current market conditions—reflecting investor growth and risk expectations
Weaknesses of the market approach (real and perceived) include:

- Requires comparable/guideline companies
- Cannot be used for a variety of individual assets
- Hidden assumptions, e.g., growth
- 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

Basic Principles of the Market Approach

- Comparability

Revenue Ruling 59-60 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.*
Similarity From an Investor’s Point of View

- Past growth of sales and earnings
- Rate of return on invested capital
- Stability of past earnings
- Dividend rate and record
- Quality of management
- Nature and prospects of the industry
- Competitive position and individual prospects of the company
- Basic nature of the activity
- General types of goods or services produced
- Relative amounts of labor and capital employed
- Extent of materials conversion

Similarity From an Investor’s Point of View

- Amount of investment in plant and equipment
- Amount of investment in inventory
- Level of technology employed
- Level of skill required to perform the operation
- Size
- Financial position
- Liquidity
- Years in business
- Financial market environment
Similarity From an Investor’s Point of View

- Quality of earnings
- Marketability of shares
- Operating efficiency
- Geographical diversification
- Similarity of business model

9 Basic Steps of the Market Process

1. Choose guideline companies.
2. Normalize financial statements.
3. Calculate various market multiples.
4. Select the appropriate valuation multiples.
5. Compare the subject to the guidelines.
6. Adjust the level of selected valuation multiples.
7. Apply the adjusted valuation multiple.
8. Reconcile the different values.
9. Consider the necessity of applying discounts and premiums. (BV204)
ASA Standards
Addressing the Market Approach

- Business Valuation Standard V (BVS-V) - Market Approach to Business Valuation
- Statement on Business Valuation Standard 1 (SBVS-1) - The Guideline Company Valuation Method
- Statement on Business Valuation Standard 2 (SBVS-2) - The Merger and Acquisition Method

BVS-V: Addresses the market approach in general

- Contains definition of market approach
- Guideline public company or prior transactions
BVS-V, III: What Is a Reasonable Basis for Comparison?

- The business, business ownership interest, or security used for comparison must serve as a reasonable basis for such comparison.
- Factors to be considered in judging whether a reasonable basis for comparison exists include:
  - A sufficient similarity of qualitative and quantitative investment characteristics
  - The amount and verifiability of data known about the similar investment
  - Whether or not the price of the similar investment was obtained in an arm’s-length transaction or a forced or distress sale

BVS-V, IV: Selection of Valuation Ratios

Care should be exercised with respect to issues such as:

- The selection of the underlying data used to compute the valuation ratios
- The selection of the time periods and/or the averaging methods used for the underlying data
- The computation of the valuation ratios
- The timing of the price data used in the valuation ratios
- How the valuation ratio or ratios were selected and applied to the subject's underlying data
Rules of thumb may provide insight on the value of a business, business ownership interest, or security. Value indications derived from the use of rules of thumb should not be given substantial weight unless:

- They are supported by other valuation methods.
- It can be established that knowledgeable buyers and sellers place substantial reliance on them.

Homework Assignment 3: Read Exhibit 8-1, Estate of Joyce C. Hall and be prepared to discuss.
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.
Essential Characteristics of The GPCM

- Share prices of similar, actively traded publicly owned companies are applied to the subject company through valuation multiples.
- Normally it is possible to select transactions on the date of value, or close to the date of value, assuring timeliness of the evidence.
- Much operating data are available because publicly traded companies must file very complete operating reports with market regulators.

GPC Selection Process
Understand the Business of the Subject

- Industry
- Multiple lines of business?
- Nature of the market
- Geographic operations—local, regional, national, global
- Financial performance: SGLPTL (remember the DuPont ROE = P x T x L)
- Qualitative characteristics:
  - Reputation and maturity of the company
  - Management depth and experience
  - Labor force availability, experience, turnover, etc.
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 know who their public competitors are.
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.
Online Databases: Free (or almost free) Search Sites

Securities Exchange Commission
- (www.sec.gov/edgar/searchedgar/webusers.htm)

EDGAROnline
- (edgar-online.com)

10K Wizard
- (www.10kwizard.com)
Industry Research

- Source of publicly traded companies
- Trade journals and published industry reports are excellent tools for locating potential guideline companies
- Industry experts
- Business brokers
- Financial analysts

Get the Business Description

- After the possible GPCs are identified by the initial set of criteria, we review a short description of the potential GPC to examine the corporate description.
- An alternative is to go directly to the company's Form 10-K.
- 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.
- 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.
Using Search Engines To Find Out More Information

Size Criteria

- 10 times smaller
- 10 times larger
- More or less
- Facts and circumstances must dictate
Active Trading

- Fair Market Value
- Some percentage of outstanding stock trades over the six months to a year prior to valuation
- May want to exclude insiders

Penny Stocks

- Eliminates speculators
- $1, $3 $5 per share
The primary data sources for guideline public company information are the following (each is filed with the SEC on a period basis):

- The 10K provides narrative on company’s operations, competition, customer base, industry, employment force, as well as the financial statements for the prior two years.
- 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.
- The 8K is filed with the SEC to mark significant events in the company such as a change in key personnel, major acquisitions, divestitures, etc.

Use spreadsheets
Many services will download data into your spreadsheet
Requires flexibility as sometimes you will need to calculate information
- E.g. latest twelve months
Calculating Latest Twelve Month Data

- Assume 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 31, 2009  Annual Revenues
  - December 31, 2008  Quarterly Revenues
  = December 31, 2009  LTM Revenues

Assignment M-1: Selection of potential Guideline Public Companies (GPC)
Assignment M-1: Selection of potential Guideline Public Companies (GPC)

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

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Solution M-1

Handout 9-1
Guideline Public Company Search

In order to locate potential guideline public companies, the following search criteria was conducted in 10-K Wizard:

1. The Company had to be located in the United States.
2. The Company’s SIC Code had to be 4212 or 4213.

The search yielded 24 companies. One was a repeat and two couldn't be located in Yahoo Finance. Therefore, we yielded 21 companies to analyze.
Assignment M-2: Selection of the Guideline Public Companies

The initial 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

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.
<table>
<thead>
<tr>
<th>Company</th>
<th>Reason for Elimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Systems Holdings Inc.</td>
<td>No Trading Information Available</td>
</tr>
<tr>
<td>Asche Transportation Services, Inc.</td>
<td>No Trading Information Available</td>
</tr>
<tr>
<td>Continental American Transportation Inc</td>
<td>Couldn’t Locate Company on Yahoo</td>
</tr>
<tr>
<td>Covenant Transportation Group, Inc.</td>
<td>Different Line of Business - Operates temperature controlled truckloads.</td>
</tr>
<tr>
<td>Frozen Food Express Industries, Inc.</td>
<td>Different Line of Business - Operates temperature controlled truckloads.</td>
</tr>
<tr>
<td>General Environmental Management, Inc.</td>
<td>Different Line of Business - Integrated environmental service company</td>
</tr>
<tr>
<td>High Point Transport, Inc.</td>
<td>Couldn’t Locate Company on Yahoo</td>
</tr>
<tr>
<td>Internet, Inc.</td>
<td>Different Line of Business - Temperature controlled truckloads.</td>
</tr>
<tr>
<td>Landstar System, Inc.</td>
<td>No Trading Information Available</td>
</tr>
<tr>
<td>Marten Transport, Ltd.</td>
<td>No Financial Information Available</td>
</tr>
<tr>
<td>OTR Express, Inc.</td>
<td>Different Line of Business - Hauls bulk liquids and has real estate business.</td>
</tr>
<tr>
<td>P A M Transportation Services, Inc.</td>
<td>Different Line of Business - Offers special nuts used in aerospace and military applications.</td>
</tr>
<tr>
<td>Patriot Transportation Holding Inc.</td>
<td>Different Line of Business - Integrated environmental service company</td>
</tr>
<tr>
<td>Precision Aerospace Components, Inc.</td>
<td>Different Line of Business - Truckload transportation of chemicals.</td>
</tr>
<tr>
<td>Pure Earth Inc.</td>
<td>Couldn’t Locate Company on Yahoo</td>
</tr>
<tr>
<td>Quality Distribution, Inc.</td>
<td>Different Line of Business - Moving Company</td>
</tr>
<tr>
<td>Sirva Inc.</td>
<td>Different Line of Business - In addition to truckload, offers marine transportation.</td>
</tr>
<tr>
<td>Smart Move, Inc.</td>
<td>No Trading Information Available</td>
</tr>
<tr>
<td>Trailer Bridge Inc.</td>
<td>Different Line of Business - Operates temperature controlled truckloads.</td>
</tr>
<tr>
<td>TRISMA, Inc.</td>
<td>Different Line of Business - Operates temperature controlled truckloads.</td>
</tr>
<tr>
<td>Universal Truckload Services Inc</td>
<td>No Trading Information Available</td>
</tr>
<tr>
<td>US 1 Industries, Inc.</td>
<td></td>
</tr>
<tr>
<td>XRG Inc.</td>
<td></td>
</tr>
</tbody>
</table>

BV201: Introduction to Business Valuation

**Solution M-2 & M-3**

**Assignment M-4: Selection of the Guideline Public Companies**
Assignment M-4: Selection of the Guideline Public Companies

Using the information in Handout 9-4, which potential GPCs did you eliminate? Why?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Solution M-4

Handout 9-4

Trading Activity Analysis
Average Monthly Trading

<table>
<thead>
<tr>
<th>Month</th>
<th>ASFS</th>
<th>CCLN</th>
<th>CMCM</th>
<th>CTAB</th>
<th>DTHD</th>
<th>EHTM</th>
<th>EXHT</th>
<th>GCPL</th>
<th>JASE</th>
<th>JHAT</th>
<th>KNTX</th>
<th>LDAS</th>
<th>SAAX</th>
<th>SNEAK</th>
<th>VWEH</th>
<th>VYCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008</td>
<td>1,220,000</td>
<td>320,000</td>
<td>1,800,000</td>
<td>2,000,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 2008</td>
<td>702,000</td>
<td>222,000</td>
<td>402,000</td>
<td>402,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 2008</td>
<td>829,000</td>
<td>379,000</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 2008</td>
<td>702,000</td>
<td>246,000</td>
<td>2,250,000</td>
<td>2,250,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2008</td>
<td>757,000</td>
<td>365,000</td>
<td>1,050,000</td>
<td>1,050,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June 2008</td>
<td>1,094,000</td>
<td>378,000</td>
<td>1,375,000</td>
<td>1,375,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July 2008</td>
<td>1,322,000</td>
<td>500,000</td>
<td>1,800,000</td>
<td>1,800,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 2008</td>
<td>829,000</td>
<td>379,000</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
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<td>1,900,000</td>
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</tr>
<tr>
<td>September 2008</td>
<td>829,000</td>
<td>379,000</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 2008</td>
<td>1,094,000</td>
<td>378,000</td>
<td>1,375,000</td>
<td>1,375,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
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<tr>
<td>November 2008</td>
<td>1,322,000</td>
<td>500,000</td>
<td>1,800,000</td>
<td>1,800,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
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</tr>
<tr>
<td>December 2008</td>
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<td>379,000</td>
<td>1,350,000</td>
<td>1,350,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>3,982,000</td>
<td>1,082,000</td>
<td>102,000</td>
<td>77,000</td>
<td>1,900,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Monthly Trading</td>
<td>856,000</td>
<td>300,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td>1,085,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outstanding Shares</td>
<td>25,000,000</td>
<td>7,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td>45,000,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Shares Traded</td>
<td>3.54%</td>
<td>0.56%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td>2.80%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eliminate</th>
<th>Eliminate</th>
</tr>
</thead>
</table>

308
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?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Chapter 10

GPC Step 2 - Normalization

- Before performing your search for GPCs, you should have already normalized the subject company’s financial statements.
- This step requires to consider whether there are any normalization adjustments required for the GPCs.
- The adjustments would include:
  - GAAP - Accounting Translation Adjustments (Comparability)
  - Extraordinary/Nonrecurring Adjustments (Predictability)
  - Nonessential Operating or Excess Asset Adjustments (Core Operations)
These adjustments are made to the historical financial statements to make them more comparable to the subject:

- LIFO-FIFO
- Accelerated versus straight-line depreciation
- Cash versus accrual
- Revenue recognition (construction companies)
- Tax issues (S-corp)
- Differences in accounting from country to country, etc.

Inventory Accounting

- Differences in inventory accounting (LIFO to FIFO) are common.
- The following is an example.
An Example

**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>
<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>

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.)
If asked to adjust YE 200E inventory from LIFO to FIFO, the calculation would be:

\[
\text{Ending 200E LIFO inventory} \quad 48,529 \\
\text{Plus: YE 200E LIFO reserve} \quad 49,400 \\
= \text{Ending 200E FIFO inventory} \quad 97,929
\]

If asked to calculate the adjustment to retained earnings (tax affected), the calculation would be:

\[
\text{YE 200E LIFO reserve} \quad 49,400 \\
\text{Times: } (1 - 40\%) \quad 60\% \\
= \text{Tax-affected adjustment to retained earnings} \quad 29,640
\]
An Example

If asked to calculate the impact on 200E net income of an adjustment from LIFO to FIFO, the calculation would be:

Change in LIFO reserve during 200E 2,200
Times: (1 – 40%) \(\text{60\%}\)
= 200E net income adjustment 1,320

Assignment M-6:
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?
Care should be exercised with respect to issues such as:

- Selection of the underlying data used to compute the valuation ratios
- Selection of the time periods and/or the averaging methods used for the underlying data
- Computation of the valuation ratios
- Timing of the price data used in the valuation ratios
- How the valuation ratio or ratios were selected and applied to the subject's underlying data

**Calculation of Multiples**

Price/Benefit which is MVE/Benefit or MVIC/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.)
Market value of common equity (MVE) is defined as the number of shares multiplied by the company’s closing stock price.

- Stock price should be based on an active market for the shares
- In determining how active the market is for the GPC, one should consider:
  1. The numbers of shares traded
  2. The number of trades per day
  3. The number of total shareholders and institutional shareholders

**Equity Multiples**

**Invested Capital Multiples**

- Price to net earnings
- Price to pretax earnings
- Price to cash flow
- Price to operating income
- Price to book value
- Price to dividend-paying capacity or dividend yield

- MVIC to revenues
- MVIC to EBIT
- MVIC to EBITDA
- MVIC to NOPAT
- MVIC to tangible book value and debt
**Price/Net Earnings**

- Relatively high income compared to its depreciation and amortization, or
- When depreciation represents actual or economic physical wear and tear, and
- The subject company has relatively normal tax rates

---

**Price/Pre-Tax Earnings**

- Relatively high income compared to its depreciation and amortization, or
- When depreciation represents actual physical wear and tear, and
- It has relatively abnormal tax rates
Price/Cash Flow

- Relatively low income compared to its depreciation and amortization, or
- When depreciation represents low physical, functional or economic obsolescence

Price (MVIC)/Sales

- When the subject company is homogeneous" to the guideline companies in terms of operating expenses
**Price/Dividends or Dividend Paying Capacity**

- Best when the subject company actually pays dividends
- Useful when the company has the ability to pay dividends and still has adequate ability to finance its operations and growth
- Minority interest - actual dividends are more important than the dividend paying capacity, since the minority interest cannot force dividends to be paid
- Actual dividends paid are frequently disguised as excess compensation
- This is a commonly used methodology for minority interests

**Price/Book Value**

- May be appropriate when the subject company is in an industry that has a meaningful relationship between book value and the earnings that would normally be produced
- The appraiser can use the return on equity to assist in the adjustment of the price/book value ratio to fit the relative quality circumstances of the subject company
Invested Capital Methods (also referred to as "debt-free")

Invested Capital = Non-working capital debt + Equity

If the appraisal subject's capital structure is significantly different from those of the publicly-traded guideline companies, consider using a debt free method, i.e., subject very leveraged or all equity

"The Business"

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities &amp; Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Working Capital</td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td></td>
</tr>
<tr>
<td>Other Long-Term Assets</td>
<td>Stockholders' Equity</td>
</tr>
<tr>
<td>Intangible Assets (Identifiable and Goodwill)</td>
<td>Interest-Bearing Debt</td>
</tr>
</tbody>
</table>


Valuing Invested Capital as Opposed to Equity

**Price** = Market value of the publicly-traded guideline companies' equity (price per share times the number of shares outstanding) plus market value of the interest paying debt

**Interest expense** is added back to the earnings (or cash flow) used in the denominator of the various multiples

**Value of invested capital** minus the fair market value of the subject company's debt equals value of the equity

---

Invested Capital Multiples

Market value of invested capital (MVIC) is defined as the sum of the market value of common equity, preferred equity, and interest-bearing debt.

- In calculating MVIC, some appraisers deduct cash and securities and others subtract “excess” cash (adding the cash back to the value of operations).
### Time Period for Financial Operating Metrics

- Latest 12 months (LTM)
- Last fiscal year (LFY)
- Projected next fiscal year
- Historical averages or weighted averages
- Complete business cycle

### Market Approach Example

<table>
<thead>
<tr>
<th>GUIDELINE COMPANIES</th>
<th>PRICE/EARNINGS RATIO</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>
</tbody>
</table>

Median Multiple 8.50 48.20% 3.90
Selected Multiple 6.20 44.00% 2.50
# Market Approach Example

<table>
<thead>
<tr>
<th></th>
<th>Price/Earnings</th>
<th>Price/Sales</th>
<th>Price/Book Val.</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-tax earnings</td>
<td>$ 959,446</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross sales</td>
<td></td>
<td>$13,983,541</td>
<td></td>
</tr>
<tr>
<td>Book value (without non-operating items)</td>
<td></td>
<td>$2,415,822</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 Asset</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>

This example omits discounts and premiums.

# Invested Capital 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.
  
  \[
  \text{Price/earnings} = \text{Multiple} \\
  \frac{47.50}{5.46} = 8.70
  \]

- Market value of equity = $47.50 \times 1,000,000 sh.
  - Assumes 1 million shares outstanding
ABC’s balance sheet reflects interest-bearing debt of $5 million

- MVIC = $47.5 million + $5.0 million
- $52.5 million / 1 million shares = $52.50/sh.

- Earnings per share = $5.46
- Net income after taxes was $5,460,000
- Assume interest expense $500,000

---

**Invested Capital**

<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 <em>40%</em></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>

MVIC to DFNI = $52.50/$5.76 = 9.11
## Invested Capital

### MVIC/DFNI

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aftertax earnings</td>
<td>$ 959,446</td>
</tr>
<tr>
<td>Add: Interest (net of taxes)¹</td>
<td>$ 90,000</td>
</tr>
<tr>
<td>Debt-free net income</td>
<td>$1,049,446</td>
</tr>
<tr>
<td>Multiple</td>
<td>x 6.90</td>
</tr>
<tr>
<td>Value of operating invested capital²</td>
<td>$ 7,241,177</td>
</tr>
<tr>
<td>Net nonoperating assets</td>
<td>+ 250,000</td>
</tr>
<tr>
<td>Total value of invested capital</td>
<td>$ 7,491,177</td>
</tr>
<tr>
<td>Rounded</td>
<td>$ 7,500,000</td>
</tr>
</tbody>
</table>

¹Interest expense for the year was $150,000. Effective tax rate was 40 percent.
²We have once again intentionally omitted valuation discounts or premiums from this example.
### Invested Capital to Equity

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of invested capital</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>Less: Interest-bearing debt</td>
<td>$1,300,000</td>
</tr>
<tr>
<td>Value of equity</td>
<td>$6,200,000</td>
</tr>
</tbody>
</table>

### Useful Statistical Measures and Tools

- **Medians and percentiles**
  - Less influenced by outliers

- **Averages/composites**
  - Averages may weight outliers too heavily

- **Harmonic mean or the reciprocal of the average of the multiples**
  - Useful when multiples are particularly dispersed, but seldom used

- **Coefficient of variation**
  - Measures the dispersion of the multiples
  - Computed by dividing the standard deviation of the data by the mean
Choosing the Multiple - 
*Equity vs. Invested Capital Multiples*

Equity multiple 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:

\[
\text{Equity Value}_{\text{subject}} = \left( \frac{\text{MVE}_{\text{subject}}}{\text{Benefit}} \right)_{\text{GPC as adjusted}} \times \text{Benefit}_{\text{subject}}
\]

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:

\[
\text{Equity Value}_{\text{subject}} = \left( \frac{\text{MVIC}}{\text{Benefit}} \right)_{\text{GPC as adjusted}} \times \text{Benefit}_{\text{subject as Normalized}} - \text{Debt}_{\text{Subject as Market Value}}
\]

If capital structures are somewhat similar across companies then the appraiser might use both invested capital and equity multiples.

---

**Chapter 12**
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:

- Qualitative SWOT analysis (strengths, weaknesses, opportunities, threats); and
- Financial performance analysis (financial ratios, trends, comparison to industry peer groups, etc.).

---

**Qualitative Risk Factors**

- Economic risk
- Business risk
- Operating risks
- Financial risks
- Asset risks
- Product risks
- Market risks
- Technological risks
- Regulatory risks
- Legal risks
Revenue Ruling 59-60 . . . “the economic outlook in general and the condition and outlook of the specific industry in particular.”

Economic Risk

Business Risk

Analyze the company in terms of the risk associated with factors such as sales volatility and the volatility of the company's growth
Include such factors as the fixed versus variable cost structure of the appraisal subject.

The amount of leverage that the company uses, as well as the company's ability to cover its debt payments.
Asset Risk

Relates to the age and condition of the company's assets

Product Risk

Relates to a company that has little diversification in its product line or a product line that may become extinct.
Market Risk

How geographically diversified is the company?

Technological Risk

Does the company have the ability to keep up with other companies in the appraisal subject's industry?
Regulatory Risk

Regulatory agencies can also adversely affect a business.

Legal Risk

The cost of a litigation in today's society can be the end of any successful business.
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)

The key factors for comparison are the assessment of relative risk and relative growth differences.
Steps in the Comparative Financial Analysis

- Identify key differences between the subject and the guideline group.
- Identify differences within the GPCs themselves.
- Discover if any single GPC or subset of GPCs is more comparable to the subject than the group overall.
- Provide support for the selection of each multiple, whether it is a mean, median, or something other than a central tendency measurement.

Measures of Financial Performance

The concepts chosen will be a function of the industry in which the company operates, but they should include:

- Size measures
- Measures of historical growth rates
- Profit margins
- Measures of asset management and reinvestment
- Measures of financial leverage, solvency, and liquidity
- Measures of returns on investment
- Other financial measures
Questions to Ask

- Which ratios or benchmarks are most relevant for the subject and the industry?
- Is there uniformity among the ratios within the guideline group?
- Is there a variance between the average ratios within the guideline group and the averages expressed in the industry survey?
- As a result of the financial analysis, can any of the GPCs be discarded?

Questions to Ask

- Are any of the GPCs more similar to the subject company?
- Are there any upward or downward trends in any of the ratios?
- What information from the economic and industry research can explain the financial performance of the GPC ratios?
Questions to Ask

• Is there a trend in the implied growth rate compared with the growth rate that was used in the income approach?

• What are the key differences in risk between the GPCs and the subject?

• What are the key differences in growth prospects between the GPCs and the subject?

Assignment M-7: Comparative Analysis Exercise
Assignment M-7: Comparative Analysis of GDT, Inc. vs. GPCs

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>
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<tr>
<td>Profitability</td>
<td></td>
<td></td>
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<tr>
<td>Turnover</td>
<td></td>
<td></td>
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<tr>
<td>Leverage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Comparative Analysis of Guideline Companies

<table>
<thead>
<tr>
<th>Qualitative Comparison</th>
<th>Impact on P/E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

### Assignment M-8: Use 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.

---

Should the 25th percentile, median, 90th percentile, average, harmonic mean, etc., multiple be chosen?

- 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.
GPC Step 6: Adjusting the GPC Multiples

Be careful not to double-count.

Examples:

- Using a lower pricing multiple to account for the small size of the subject company when the multiples have already been adjusted for size
- Using a higher multiple to account for high growth of the subject when the multiples have been adjusted for growth
- 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)

*Don’t simply use the average or median. Analysis must accompany any conclusion.*

---

Market Multiples Are the Inverse of CAP Rates

\[
\text{Market Multiple} = \frac{\text{Market Price}}{\text{Operating Performance}} - \frac{1}{(k - g)}
\]

Where:

- \( k \) = Risk and benefit adjusted required rate of return
- \( g \) = Present value weighted perpetual growth rate
Generally speaking, if the outlook for our 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.

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.
Quantitative Models for Market Multiple Adjustments

• Some analysts have generated valuation models that indicate both the direction and quantify the amount of market multiple adjustment. These techniques involve the following analyses:
  • Adjusting the multiples based upon an analysis of the correlation of changes in a financial performance metric and changes in the market multiples
  • Adjusting the multiples for differences in size or other risk factors
  • Adjusting the multiples for differences in the outlook for growth

Adjusting Guideline Company Multiples

Adjustments can be made for size and/or growth.

• These two factors can have a large impact on value.
• The idea behind this is to adjust the size-related risk premium and growth rate implicit in each GPC multiple to the level appropriate for the subject.
• In other words, we try to remove those factors that we can more easily quantify and whose impact on value is potentially substantial from the pricing multiples, leaving those other factors that the GPCs and the subject share.
Adjusting Guideline Company Multiples

Size and growth adjustments are made only to the income statement-based pricing multiples and are based on the following relationship between the capitalization rates and pricing multiples:

\[ \text{Value} = \frac{\text{Benefit}}{K_g - g_g} \]  

which implies

\[ \frac{\text{Value}}{\text{Benefit}} = \frac{1}{K_g - g_g} \quad \text{or} \quad \frac{\text{Benefit}}{\text{Value}} = K_g - g_g \]

Adjustments Based Upon Correlation Between Performance and Multiple

Correlation Between ROE and Price / Book Value

Theoretically, there should be a positive correlation, since higher ROE provides equity investors with higher current returns and higher reinvestment for future capital appreciation.

Assumes the measures of ROE are close to “normalized” expected future ROE performance.
**Adjustments Based Upon Correlation Between Performance and Multiple**

**Correlation Between Profit Margin and 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.

Assumes the profit margins are close to “normalized” expected future profitability performance.

[Diagram showing the correlation between Price/Sales and Return on Sales]

---

**Size Adjustment Process**

The discount rate is the place the adjustment is made because we have data quantifying the size affect on returns.
The \( k_{\text{size}} \) is the appropriate rate of return premium due to size, or “size premium.” It is important to note that this size premium should not be adjusted for beta. For example, using the SBBI Yearbook data, 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 \([k_{\text{subject}} - k_{\text{GPC}}]\) in the above equation.

### A Sample From SBBI

<table>
<thead>
<tr>
<th>Decile</th>
<th>Average Market Capitalization of Companies in Decile</th>
<th>Realized Return in Excess of Riskless Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$52,484,030,278</td>
<td>6.07</td>
</tr>
<tr>
<td>2</td>
<td>$11,128,152,115</td>
<td>8.00</td>
</tr>
<tr>
<td>3</td>
<td>$5,509,993,656</td>
<td>8.62</td>
</tr>
<tr>
<td>4</td>
<td>$3,185,908,155</td>
<td>9.09</td>
</tr>
<tr>
<td>5</td>
<td>$2,185,164,720</td>
<td>9.69</td>
</tr>
<tr>
<td>6</td>
<td>$1,636,955,954</td>
<td>10.11</td>
</tr>
<tr>
<td>7</td>
<td>$1,069,037,375</td>
<td>10.40</td>
</tr>
<tr>
<td>8</td>
<td>$817,567,381</td>
<td>11.38</td>
</tr>
<tr>
<td>9</td>
<td>$387,789,742</td>
<td>12.26</td>
</tr>
<tr>
<td>10</td>
<td>$123,903,126</td>
<td>16.37</td>
</tr>
</tbody>
</table>
**Size Adjustment Example**

Assume the original P/E multiple = 15.0
Assume the GPC is in SBBI’s 6th decile
Assume the subject is in SBBI’s 10th decile (based on another approach to value)

To adjust the P/E multiple for size:
- Compute the inverse of the multiple: $1/15.0 = 6.67\%$.
- Add the size differential between the GPC and the subject: $6.67\% + 6.26\% = 12.93\%$.
- Take the reciprocal to get the new pricing multiple adjusted for size: $1/0.1293 = 7.7$.

**Adjustment 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:

$$ \frac{Benefit}{Value} = k_{GPC} - g_{GPC} + \left[g_{GPC} - g_{Subject}\right] $$
Example of Growth Adjustment

Assume the P/E multiple is 15.0.
Assume the perpetual growth of the GPC = 5.00%.
Assume the perpetual growth of the Subject = 7.00%.

• The steps in the calculation are as follows:
  • Compute the inverse of multiple): \(1/15.0 = 6.67\%\).
  • Add the growth differential between the GPC and the subject: \(6.67\% + (5.00\% - 7.00\%) = 4.67\%\).
  • Take the reciprocal to get the new pricing multiple adjusted for growth: \(1/0.0467 = 21.4\).
Reconciliation

- Reconciliation of differing value indications derived from the same method (or even from different methods/approaches) relies upon the valuator’s judgment.

- The weighting of value indications can be explicit or implicit. The critical factor is that the weighting be the result of informed judgment and clearly explained in the report.
### GPC Market Approach Example

Reconcile Value Indications

<table>
<thead>
<tr>
<th>Selected Market Multiples</th>
<th>MVIC/EBIT</th>
<th>MVE/NI</th>
<th>MVE/BE</th>
</tr>
</thead>
<tbody>
<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></td>
<td>EBIT</td>
<td>Net Inc.</td>
<td>BE</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.

#### Example Reconciliation

<table>
<thead>
<tr>
<th>Indicated Equity Values</th>
<th>$8,325,000</th>
<th>$7,459,000</th>
<th>$7,623,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>x Final Weighting</td>
<td>x 20%</td>
<td>x 40%</td>
<td>x 40%</td>
</tr>
<tr>
<td>Reconciled Value = $7,698,000</td>
<td>$1,665,000</td>
<td>$2,984,000</td>
<td>$3,049,000</td>
</tr>
</tbody>
</table>

### Weighting Differing Indications of Value

Weights are dependent upon the appraiser’s sense of relative confidence in the value indication from each type of market multiple.

- 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.

Factors influencing the appraiser’s level of confidence include—industry practice, dispersion/clustering of GPC multiples, etc.
Weighting Differing Indications of Value

- 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.

- 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.
**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. (from International Glossary of Business Valuation Terms)

**SBVS 2, II: Conceptual Framework for the M & A Method**

- Transactions involving the sale, merger or acquisition of businesses provide objective data for developing valuation multiples.
- The development of valuation multiples from merger and acquisition transactions should be considered to the extent that sufficient information is available.
Ideal guideline companies are in the same industry. However, if there is insufficient transaction evidence available in that industry, it may be necessary to select other companies having an underlying similarity in terms of relevant investment characteristics such as markets, products, growth, cyclical variability, and other salient factors.

Types of M&A Transactions

- Public company being acquired by another public company. Prospectus must be filed with the SEC, which would include sufficient data to complete an analysis.
- Public company being acquired by a private company:
  - A prospectus must be filed by the public company.
  - Commonly seen in public company going private filing 13-E3 with the SEC.
Types of M&A Transactions

Private company being acquired by a public company:
- 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.
- If the 8-K is not available, sufficient detail on the transaction may not be available to sustain an analysis.

Private company acquired by another private company (or private buyer):
- There is no legal requirement for any information to be made public.
- These transactions constitute most of the reported information on small, closely held companies.

Why Do We Use Databases?

- Ease
- Moderate cost
- Analytical tools
- Easy downloading of data
  ... But beware of simplistic use that misunderstands the underlying transactions
Key M & A Databases

Public Company Databases
- Done Deals
- Mid Market Comps
- Mergerstat
- Pratt’s Public Stats
- Thomson M&A Database

Private Company Databases
- Institute of Business Appraisers
- BizComps
- Pratt’s Stats

Special Industry / Regional Databases

<table>
<thead>
<tr>
<th>Database</th>
<th># Transactions</th>
<th>Earliest Data</th>
<th>Typical Value Range</th>
<th>Value Concentration</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>
### Key M & A Databases

<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 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 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) 28% under $100K (MVIC)</td>
</tr>
</tbody>
</table>

### Common Inconsistencies and Mistakes

- Comparability to subject
- Synergistic effects difficult to analyze
- Single point multiples, little financial depth
No financial depth; cannot see trends

- A business sold after a poor, unusual year, may have a high multiple reported as a ratio of the just completed results.
- A business sold after a particularly excellent, but unusual, year may show a low multiple of the just completed results.
- Balance sheet issues of capital structure, working capital, and variation of assets are often not reported.

Older data may have different internal and external factors influencing value.

- Various dates in similar transactions may pick up changes in economic conditions, such as “hot” industries going cool.
Flaws in data reporting

- Adjusted earnings are often inconsistently calculated by the data source.
- Plant, property and equipment estimates may be book value, estimates of market value, or simply book value of what is sold to the buyer.
- SIC/NAICS and other coding errors as to business definition exist.
- Each source carries its own glossary, which should be understood.
- 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.
- “N/A” doesn’t necessarily mean zero.

Annualizing stub periods

- A procedure common in Done Deals
- May yield unrealistic computations of annual performance
What property was exchanged?

- Assets exchanged may not be well defined
- BizComps and IBA define property exchanged as fixed assets + goodwill (IBA may include inventory)
- Real estate is commonly not included in the property being transferred
- Excess, or non-operational assets are typically not included in the sale
- Equity and Invested capital multiples are available from several databases
- Debt may or may not be included in calculations

Common Inconsistencies and Mistakes

- Cash-equivalent exchange price –
- Terms may not be stated, or referenced at above or below market rates.
- Non-compete and employment/consulting agreements are noted in Pratt’s Stats, but rarely reported in other databases.
- The nature of the consideration—cash, buyer notes, acquirer stock (common, preferred, convertibles, warrants), and/or earnouts—should be carefully analyzed and converted to cash-equivalent values. For example:
  - Low rate buyer notes must be discounted at a market rate of interest for the risk assumed by the seller.
  - Earnouts must be discounted for the timing and probability of their receipt.
  - Restricted stock (with a lock-in period) must be discounted for illiquidity.
- Frequently, there is simply not enough information to calculate the cash equivalent price.
Stock Sale vs. Asset Sale

Stock Sale

- Deal should be labeled as a "stock sale" or the consideration transferred should be 100% of equity.
- If less than 100% of equity was transferred, the deal value should be grossed up to 100%.

  Example:  Deal value for 80% = $6.5 million
             100% value = $8,125,000, or $6,500,000/80%

- Price multiples are derived from stock sales.

Asset Sale

- More common in smaller deals.
- Need to determine precisely which assets were transferred.
  - Current assets, or at least cash and accounts receivable, are often not transferred in small asset transactions.
  - Inventory may be transferred but not reflected in the multiples.
- Invested capital multiples are usually derived from asset sales.

Analysis Procedures

- Identify transactions in which the target is similar to subject, use criteria similar to GPC.
- Obtain adequate data on the publicly reported transactions from SEC filings.
- Obtain adequate data on the private transactions. This may entail calling the intermediary to obtain additional information.
- Refining the initial selection based on additional information and quality of data.
  - Remove duplicates and transactions with data problems.
  - Adjust if necessary.
- Develop multiples.
  - Equity
  - Invested capital
- Analyze and select multiples.
Chapter 15

Rules of Thumb and Alternative Methodologies

Rules of thumb do not provide “an amount and verifiability of data known about the similar investment.”

- Most useful as a sanity check, or correlation of value indications from other methods
- Based on general industry transactions metrics

Disadvantages of rules of thumb

- Based on averages—not every subject company is average
- No access to the companies that were transacted
- No access to the terms of the transactions
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 on the next slide, what is the value of equity for XYZ Gas Services based on the rule of thumb?
Owners’ Cash Flow $200,000 \times 3.0 = $600,000

+ Cash 7,000
+ Inventory 90,000
– Liabilities (32,000)

= Equity $665,000

Prior Transactions in the Subject Company Stock

Must be analyzed for a basis of arm’s length transactions. An actual transaction is more compelling than a simple buy-sell agreement.

- Buyouts of former shareholders may not be at fair market value, or have related consulting agreements that must be considered.
- If the company merged with a competitor in a control transaction, the deal may include synergies.
Prior Transactions in the Subject Company Stock

If the transaction was based on a buy-sell, shareholder, or employee agreement, the terms must be analyzed in the context of the agreement.

- Control transactions and acquisitions of other companies are more likely to be arm’s-length deals. Time lapses must be accounted for and reconciled.
- Minority transactions, especially between family members or in the case of retiring or deceased shareholders, should be given close scrutiny.

Prior Transactions in the Subject Company Stock

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.
Buy-Sell Agreements

- 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, must be based on arms’ length negotiated terms.

- Common in smaller companies with a relatively small number of shareholders; also common as a component of a shareholder or partners’ agreements. Section 2703 of the Internal Revenue Code discusses elements of a reliable buy-sell agreement.

Buy-Sell Agreements

- 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.

- 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.
Buy-Sell Agreements

For the agreement to be used (sometimes), it must have the following characteristics:

- The price must be fixed and unambiguous within the agreement.
- 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.
- 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, for example, most recent year’s book value, then it is likely less reliable.
- 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.

Buy-Sell Agreements

- Appraisers consider buy-sell agreements for relevance to actual market conditions, but usually do not deem these agreements controlling unless dictated by legal requirements.
- USPAP 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.”
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.

- May or may not provide an arm's-length basis, since offers can come from friendly outside buyers or insiders (e.g., family).
- 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.
- 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.

Offers often reflect investment (or strategic) value considerations, such as synergies and potential economies of scale.

Terms are often variable, and may incorporate employment agreements and agreements not to compete.

Timeliness is often a problem, given that offers may be dated and reflect external and internal circumstances different than those of the valuation date.
Company Acquisitions

- Subject companies often make acquisitions of similar companies during periods of expansion.
- The terms and multiples provide an indication of value reflecting 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.

Company Acquisitions

- Prior acquisitions reflect different economic and industry circumstances.
- Incorporation of the new divisions or operations may require time to absorb.
- Economies of scale and synergies are often the result of acquisitions.