ASA BV 204: Advanced Topics in Business Valuation

ASA
Providing Value Worldwide

About this Course

- These course materials are not authoritative. They are intended to be used as a foundation for lectures and discussions, in conjunction with observations by the instructor(s) and students.
- The valuation process and approaches presented in this course are:
  - Not the only process and approaches used by competent appraisers
  - Not the only way that individual valuation methods could or should be done
  - Not to be taken as a “cookbook” process or approach that may be applied to any appraisal situation
- Appraisals must be based on full knowledge of the facts and circumstances of the subject company, its industry, the economic environment, and the purpose of the analysis. A particular valuation process or approach that is relevant for one company at a particular point in time may not be appropriate for another company or a different point in time.

Purpose of this Course

- This is a capstone course which applies the general valuation theory and principles learned in BV201, BV202, and BV203. The purpose of this course is to provide students with an introduction to a variety of advanced applications of their valuation knowledge.
- It is assumed that students have successfully completed those courses and have a strong grasp of general valuation principles.
- While the lecture materials are extensive, the instructor(s) will only be summarizing it. The objective of BV204 is to assist students to develop their situational awareness of the when and why to apply information provided considering the lecture materials.
- Ask questions if the discussion covers unfamiliar material. It is unlikely that you are the only one who has questions. More than the lecture courses, this course offers you the opportunity to learn from the experience of other practitioners; your instructors AND your fellow students. Students come from different practices and have varying experiences and viewpoints. It is possible that your viewpoint will enhance the understanding of another student.

Overview of this Course – Day 1

- This course is presented in nine sections, each briefly described below:

Section	Hours/Qs	VAB6 Ch.	Principal Topics
0. Introductions	0.5 hours	–	
1. Pass-Through Entities	2 hours 10 questions	31	• The economic and tax differences between pass-through entities and C corporations • Tax Court cases that changed the landscape of pass-through entity valuation • Valuation models used to quantify the value differential between pass-through entities and C corporations
2. ESOP Valuation	2 hours 10 Questions	39	• Introduction to ESOPs • Various ESOP-specific engagement issues • Valuation impact of various ESOP-specific characteristics
3. Non-U.S. Cost of Capital	2 hours 10 questions	–	• Defining and evaluating various non-U.S. country specific risks • An overview of several quantification methods for non-U.S. cost of capital including advantages and disadvantages of each
4. Valuation of Debt	2 hours 10 questions	26	• Overview of security characteristics affecting value • Fundamentals of credit analysis • Adjusting a market-derived yield for company-specific issues

Overview of this Course – Day 2

Section	Hours/Qs	VAB6 Ch.	Principal Topics
5. Value Allocation in a Complex Capital Structure	3 hours 20 questions	30	• Fair value considerations • Valuation methods for early-stage companies • Relevant features of equity securities • Primary equity allocation methods
6. Fairness Opinions	2 hours 10 questions	47	• Corporate directors' duties • Foundational issues of fairness opinions • Underlying financial analyses • Unique fairness-related issues
7. Solvency Opinions	2 hours 10 questions	48	• Underlying bankruptcy and fraudulent conveyance issues • Foundational issues of solvency opinions • Relevant financial analyses • Unique solvency-related issues
8. Litigation Services	1.5 hours 8 Questions	49, 50	• Role of Experts in valuation-related disputes • Admissibility of the valuation expert's testimony • Litigation process • Damages and methods of quantification

Overview of this Course – Day 3

Section	Hours/Qs	VAB6 Ch.	Principal Topics
9. Intangible Assets	1.5 hours 6 questions	25	• Business valuation and intangible assets • Types of intangible assets • Reasons to value intangible assets • Intangible asset valuation
10. Writing the Business Valuation Report	1.5 hours 6 questions	22, 23	• Uniform standards of professional appraisal practice • Business valuation reporting standards • Guidelines for effective report writing • Common errors and shortcomings in business valuation reports
11. Advance. & Accreditation	1 hour No questions	–	• Prerequisites for advancement • Guidelines for submitting appraisal reports • Review of common report flaws
12. Exam Review	Remaining time	–	

Ancillary Readings

- A collection of ancillary materials are provided to students in advance of the course.
- These are not required readings. Rather, they are intended to serve as supplemental to the material to be presented in the classroom.
- However, advanced review of certain of these materials may be helpful for a student who is particularly unfamiliar with any one or more of the topics to be covered in this course.

Exam

- On the fourth day of the course, students will take a three-hour multiple-choice exam, consisting of 100 questions, each worth one point.
- All exam questions are taken from material covered in the course slides.
- A passing grade is 75% or above.
- At the end of class on the third day, the instructor(s) will conduct an exam review session that will highlight important areas of the course materials you need to understand for the exam.
- In addition, the instructor(s) are also available to answer questions on a one-on-one basis before or after class and at class breaks.

SECTION 1

Valuation of Pass-Through Entities

Topics to be Covered

- Introduction
- Why the Controversy?
- Case Law History
- Properly Matching Economic Income with the Discount Rate
- Investor-Level Taxes and the Discount Rate
- Academic Research
- Models for Valuation of Pass-Through Entities
- Summary

Introduction

- One of the most controversial business valuation issues of recent years has been the valuation of interests in pass-through entities (PTEs).
  - This includes Subchapter S corporations (S corps), limited liability companies (LLCs), partnerships, and sole proprietorships.
- The controversy is primarily driven by the differences in taxation.
- Subchapter C corporations (C corps) are subject to two levels of taxes:
  - First, income taxes are paid by the corporation (corporate-level taxes) on any taxable income.
  - Second, income taxes are paid by shareholders (investor-level taxes) on any dividends received or when they sell the corporation stock for a gain.
- Pass-through entities generally pay one level of tax, at the investor level.

Why the Controversy?

- Traditional valuation methods focus on income after corporate level taxes, while ignoring investor-level taxes.
- However, for pass-through entities, corporate-level federal taxes are zero, but investor-level taxes are significant.
- When valuing an otherwise identical C corp and S corp, this could yield a greater value for the pass-through entity.

Traditional Corporate Valuation Model for Identical C and S Corps

	C Corp	S Corp
Income before corporate tax	$100	$100
Corporate income tax	27%	0%
Available earnings	$73	$100
Value using 15% capitalization rate	**$487**	**$667**

Why the Controversy? (cont.)

- The greater value for the S corp in the prior figure is a result of ignoring investor-level taxes.
- In effect, the traditional valuation methods assume that investor-level taxes do not impact the value of a company.
- This prompts two key questions:
  1. Do investor-level taxes impact the value of S corps and other pass-through entities?
  2. If so, how do we properly account for the impact to value of pass-through entities?

Case Law History

- Beginning in 1999, the US Tax Court and other courts have addressed the controversial issue of valuing PTEs, with positions that have evolved over time.
  - In the preponderance of Tax Court cases—particularly the earliest ones—the courts have generally rejected the reduction of PTE cash flows for investor-level taxes.
  - However, in many recent tax cases, including *Jones*, the judges have clearly left the idea of tax affecting open, seemingly inviting experts to present a viable argument for the treatment.
  - Courts such as the Delaware Court of Chancery, as well as most business appraisers, have concluded that investor-level taxes do impact value.

Significant Cases Related to PTE Valuations

Case	Case Type	Year	State/ Jurisdiction	Court	Summary
Gross v. Commissioner	Estate Tax	1999	Federal	U.S. Tax Court	Rejected tax affecting
Wall v. Commissioner	Gift Tax	2001	Federal	U.S. Tax Court	Rejected tax affecting
Heck v. Commissioner	Estate Tax	2002	Federal	U.S. Tax Court	Rejected tax affecting
Adams v. Commissioner	Estate Tax	2002	Federal	U.S. Tax Court	Rejected tax affecting
Dallas v. Commissioner	Gift Tax	2006	Federal	U.S. Tax Court	Rejected tax affecting
Delaware Open MRI Radiology Associates, PA v. Howard B. Kessler	Dissenting Shareholder	2006	Delaware	Court of Chancery	Accepted tax affecting
Vicario v. Vicario	Marital Dissolution	2006	Rhode Island	Supreme Court	Rejected tax affecting
Gallagher v. Commissioner	Estate Tax	2011	Federal	U.S. Tax Court	Rejected tax affecting
Bernier v. Bernier (II)	Marital Dissolution	2012	Massachusetts	Family Court	Accepted tax affecting
Hamelin v. Hamelin	Marital Dissolution	2013	Minnesota	State Court	Did not reject tax affecting
Giustina v. Commissioner (I)	Estate Tax	2011	Federal	U.S. Tax Court	Rejected tax affecting
Giustina v. Commissioner (II)	Estate Tax	2014	Federal	U.S. Court of Appeals 9th Circuit	Acknowledged tax affecting was unsettled matter of law
Bank of America, N.A. v. Veluchamy	Bankruptcy	2014	Federal/Illinois	Bankruptcy Court	Accepted rationale but rejected execution of tax affecting
Wright v. Philips	Judicial Dissolution	2017	Delaware	Court of Chancery	Accepted tax affecting
Aaron Jones v. Commissioner	Gift Tax	2019	Federal	U.S. Tax Court	Accepted tax affecting
Kress v. United States	Gift Tax	2019	Federal/ Wisconsin	U.S. District Court	Passively accepted tax affecting
R.D. Clark & Sons, Inc. v. Clark	Judicial Dissolution	2019	Connecticut	Appellate Court of CT	Rejected tax affecting

Significant Cases Related to PTE Valuations (cont.)

- Because ignoring investor-level taxes results in a significant overvaluation of PTEs, the early cases such as *Gross* stimulated the development of numerous alternative models used in the valuation of PTEs.
- These models are outlined later in this section of the course.

Properly Matching Income and Discount Rate

- It is widely accepted that the proper matching of the expected economic income and the discount rate is critical.
  - E.g., if the economic income is measured prior to taxes, a proper value can only be achieved if the discount rate considers a pretax rate of return.
- Mismatching of economic income and the discount rate will inevitably result in a flawed estimate of value.
- The remaining question is thus whether the cost of equity capital, as derived by valuation analysts using stock market data, represents a pre-investor-level tax or after-investor-level tax required rate of return.

Investor-Level Taxes and the Discount Rate

- Modern finance theory has long understood that the impact of all taxes (corporate and investor level) is considered relevant to value.
  - Merton Miller (1977) argued that if personal tax on income from common stocks is less than that on income from bonds, then the before-tax return on taxable bonds must be high enough to offset this tax handicap.
- This can be seen in the yield difference between fully taxable corporate bonds and similar tax-exempt bonds.

Market Yields on Taxable and Tax-Exempt Bonds Issued in 2020

	Taxable Bonds	Tax-Exempt Bonds
Yield on Investment (median)*	2.67%	1.66%

Investor-Level Taxes and the Discount Rate (cont.)

- Using the data from bonds issued in 2020, we can also illustrate how equilibrium is set by the market for the two alternative investments.
- The taxable bonds obviously provide a higher gross income, but investors must pay income taxes on that income.

Implied Taxes on Tax Exempt Bonds Issued in 2020

	Taxable Bonds	Tax Exempt Bonds
Initial investment	$1,000	$1,000
Observed market yield*	2.67%	1.66%
Annual income	$26.66	$16.60
Implied investor-level tax rate	37.73%	0.00%
Investor-level taxes	$10.06	$0.00
After tax cash flows	$16.60	$16.60
After tax return on investment	1.16%	1.66%

Not surprisingly, the maximum federal marginal tax rate for individuals was 37% in 2020.

Academic Research

- A wealth of published research, demonstrates that investor-level taxes affect share value. This research shows the following:
  - Value is impacted by dividend taxes.
  - Value is impacted by capital gains taxes.
  - Investor rates of return reflect investor-level taxes.

Ex-Dividend Date Stock Price Changes

- When a company declares a dividend, only owners who hold the stock before the ex-dividend date will receive the dividend.
- Ex-dividend studies look at how much stock prices change on ex-dividend dates.
- If stock prices (and returns) consider investor-level taxes on dividends, then the price should not drop dollar for dollar but by an amount equal to the dividend after-investor-level taxes.
- Elton and Gruber determined that the amount of the drop in price was, on average, approximately 36% less than the face value of the cash dividend.

Stock Prices and Investor Capital Gains Taxes

- Lang and Shackelford examined a legislative change that enabled them to observe the stock price impact of the 1997 reduction in the long-term capital gains tax rate from 28% to 20% (an almost 30% reduction).
  - They compared firms that paid significant dividends with firms that provided returns only from capital gains.
  - Presumably, the latter group benefited more from the tax rate change.
  - Found that returns of non-dividend-paying firms were 6.8% greater than the returns of other firms during the week when the reduction in capital gains tax rate was agreed to.
- This confirmed their premise that the decrease in capital gains taxes positively affected share prices.

Investor-Level Taxes and the Equity Discount Rate

- Myron Scholes, et al., asked:
  1. Do our widely used cost of capital measures, derived from publicly traded stock data, reflect the required rate of return after investor-level taxes?
  2. By extension, should our cost of capital measures be applied to earnings or cash flows measured after investor-level taxes are subtracted?
- Based on their analyses and models, the authors demonstrated that the optimal organization form (C corp vs. PTE) will vary due to numerous factors and that “changes in relative tax rates over time alter which organizational form is preferred.”

Investor-Level Taxes and the Discount Rate (cont.)

- In 2005, Dhaliwal, et al., used data for all publicly traded U.S. firms from 1980 to 2001 to study the impact of shareholder-level dividend taxes on corporate cost of capital.
- This study made two important conclusions:
  - First, dividend taxes do impact firm returns on investment and cost of capital.
  - Second, the magnitude of the impact is linked to the level of institutional ownership. As ownership of tax-exempt institutions (such as pension plans) increases, the impact of dividend taxes on stock prices decreases.
- Subsequently, Dhaliwal, et al., found that lowering taxes on dividends and capital gains reduced corporate cost of capital, confirming prior research that investor-level taxes directly impact firm value.

Models for Valuation of Pass-Through Entities

- Several valuation analysts have developed models to quantify the impact on value of pass-through status (e.g., Grabowski, Mercer, Treharne, Van Vleet, and Fannon & Sellers).
  - The models share a common approach of measuring the benefit from avoiding double taxation of dividends and capital gains while reflecting the impact of investor-level taxes.
  - The models produces similar results, given the same inputs.
- At their core, the models compare after-tax income available after distribution in a C corp to that of a PTE. The models capture the difference in value by comparing the impact of statutory taxes.
- Before the 2017 TCJA, the difference was stark.

S Corporation Economic Adjustment Model

- Assumptions of the SEAM:*
  - The S corporation organizational form of the subject company will continue in perpetuity
  - Investors are indifferent between cash investment returns and unrealized capital gains
  - Investors in C corporations recognize capital gains taxes when incurred
  - Buyers are willing to pay sellers for the S corporation income tax benefits
  - Beneficial aspects of current income tax law regarding S corporations relevant to C corporations will continue in perpetuity
  - The subject S corporation will continue to be a profitable enterprise in perpetuity.

*Daniel R. VanVleet, "The S Corporation Economic Adjustment Model," *Business Valuation Review,* September 2004, pp. 167–180.

S Corporation Economic Adjustment Model (cont.)

- The basic SEAM equation is as follows:

$$SEA = NEB_S - NEB_C$$

  - Where:
    - NEB_S = Net economic benefits to S corporation shareholders
    - NEB_C = Net economic benefits to C corporation shareholders

S Corporation Economic Adjustment Model (cont.)

- The total net economic benefit to the C corporation shareholder is calculated as:

$$NEB_C = \underbrace{\left[I_p \times (1 - t_c) \times D_p \times (1 - t_d)\right]}_{\text{Net Dividend Tax Benefit}} + \underbrace{\left[I_p \times (1 - t_c) \times \left(1 - D_p\right) \times \left(1 - t_{cg}\right)\right]}_{\text{Net Capital Appreciation}}$$

  - Where:
    - I_p = Income prior to federal and state income tax
    - T_c = C corporation income tax rate
    - D_p = Dividend payout ratio of the corporation
    - T_d = Tax rate on dividends
    - T_{cg} = Tax rate on capital gains

S Corporation Economic Adjustment Model (cont.)

- The total net economic benefit to the S corporation shareholder is calculated as:

$$NEB_S = I_p \times (1 - t_i)$$

  - Where:
    - I_p = Income prior to federal and state income tax
    - t_i = Individual ordinary income tax rate

S Corporation Economic Adjustment Model (cont.)

Assumptions:

C Corp Tax Rate	21.0%
C Corp Dividend Tax Rate	23.8%
Capital Gains Tax Rate	23.8%
S Corp (Personal) Tax Rate	37.0%
Dividend Payout Ratio	50.0%

Calculations

SEA = $NEB_S - NEB_C$	$2,802
$NEB_S = I_P \times (1 - t_i)$	$63,000
NEBc = Net cash from dividends + Net capital appreciation	$60,198
Net cash from dividends = $I_p \times (1 - t_c) \times D_p \times (1 - t_d)$	$30,099
Net capital appreciation = $I_p \times (1 - t_c) \times (1 - D_p) \times (1 - t_{cg})$	$30,099

Difference in Net Economic Benefit	**4.65%**

S Corporation Economic Adjustment Model (cont.)

	C Corp.	S Corp.
Income Before Corporate Income Taxes	$100,000	$100,000
Corporate Income Taxes @ 21.0%	$21,000	$0
Net Income	$79,000	$100,000
Dividends		
Distributions to S Corporation Shareholders	NM	$50,000
Income Tax Due by S Corporation Shareholders @ 37.0%	NM	$37,000
Net Cash Flow Benefit to S Corporation Shareholders NM 15,000	NM	$13,000
Dividends to C Corporation Shareholders	$39,500	NM
Dividend Tax Due by C corporation Shareholders @ 23.8%	$9,401	NM
Net Cash Flow Benefit to C Corporation Shareholders	$30,099	NM
Capital Appreciation		
Net Income	$79,000	$100,000
Dividends and Distributions	$39,500	$50,000
Retained Earnings (i.e., Net Capital Appreciation)	$39,500	$50,000
Effect of Increase in Income Tax Basis of Shares	NM	-$50,000
Taxable Capital Appreciation	$39,500	$0
Capital Gains Tax Liability @ 23.8%	$9,401	$0
Net Capital Appreciation Benefit to Shareholders	$30,099	$50,000
Net Economic Benefit to Shareholders		
Net Cash Flow Benefit to Shareholders	$30,099	$13,000
Net Capital Appreciation Benefit to Shareholders	$30,099	$50,000
Total Net Economic Benefit to Shareholders	$60,198	$63,000

S Corporation Economic Adjustment Model (cont.)

- The SEAM yields an adjustment to equity, not invested capital.
- Dividend and capital gains tax rate changes will change the SEAM.
  - If the two tax rates remain equal but their amount changes, the model will also change.
- SEAM is applicable to noncontrolling ownership interests.

Delaware Open MRI Radiology

- A 2006 opinion by the Delaware Court of Chancery provides a helpful framework to compare after-tax income of a C corp versus PTE investor.
- Using a 40% tax rate for corporations and individuals and a 15% dividend tax rate, the court calculated an 18% premium for the PTE status.

Delaware MRI Comparison

	Public C Corp	S Corp
Income before corporate tax	$100	$100
Corporate income tax	40%	0%
Available earnings	$60	$100
Taxes at personal level	15%	40%
Available after taxes at personal level	$51	$60
S corporation *premium*		18%

Source: Delaware Open MRI Radiology v. Kessler, 898 A.2d 290 (Del. Ch. 2006).

Delaware Open MRI Radiology (cont.)

- The court acknowledged that tax affecting the pass-through company's income at a full 40% corporate rate would underestimate value, as there is a benefit that should be recognized in avoiding the dividend tax.
- However, the court also understood that not taxing the company's earnings would result in too high a value for the company.
- In order to resolve this discrepancy, the court solved for the tax rate to be applied to the pass-through company's income, under the assumption that both entity types pay dividends.
- The following figure shows the assumptions used in the court's analysis.

Delaware Open MRI Radiology (cont.)

Delaware MRI Comparison

	Public C Corp	S Corp	S Corp (Adjusted)
Income before corporate tax	$100	$100	$100
Corporate income tax	40%	0%	29%
Available earnings	$60	$100	$71
Taxes at personal level	15%	40%	15%
Available after taxes at personal level	$51	$60	$60
S corporation *premium*		18%	18%

The court solved for the entity-level income tax that resulted in the same $60 after personal taxes

Note: Tax rates reflect the pre-TCJA rates existing at the valuation dates relevant to the dispute.

Delaware Open MRI Radiology (cont.)

- The court concluded that a 29% tax rate was appropriate to calculate the value of the company.
  - Note that the court was determining the fair value of a noncontrolling ownership interest.
- As previously stated, the appraisers' models make a similar comparison.
- However, the change in tax rates from the TCJA muddied the conversation significantly.
  - TCJA reduced corporate tax rates to 21%, kept dividend, capital gains, and personal rates largely unchanged, and introduced a temporary cut in taxes for some pass-through businesses through the QBI Deduction.

The Fannon & Sellers Model

- The Fannon/Sellers model takes a different approach, asserting:
  - There is a mismatch in using public market data to derive the cost of capital for a pass-through entity
  - Publicly traded stock prices inherently consider taxes on distributions and capital gains.
- Therefore, the rates of return derived from those stock prices also consider that second level of taxes.
- Because tax rates have changed over time, the rate of return considers the average tax rate during the historical period.
- This factor lessens the impact of any particular change in tax policy, like the 2017 TCJA, on the modeled value implications.

The Fannon & Sellers Model (cont.)

- In applying the Fannon/Sellers model, the authors recommend:
  1. Deduct the individual-level taxes that owners pay from the earnings stream using current tax rates, producing an after-tax cash flow to investors.
  2. Reduce the cost of equity capital so that the returns are after individual taxes, allowing for matching after-tax cash flows and cost of capital.
- The authors claim that an advantage of this method is that a company-specific after-tax cost of capital is determined.
- In the following example, historical cost of capital measures are first adjusted to reflect post-investor-level tax rates.
- Next, this rate is applied to earnings adjusted for investor-level taxes.

The Fannon & Sellers Model (cont.)

- As shown, the impact of taxes affects the cost of capital less for companies with a high cost of capital—meaning the impact on value is not proportional.
- Note that in the example the tax adjustment of 1.3% is the same for all pass-through entities.
- The impact of this adjustment depends on:
  1. The cost of equity capital as estimated by the analyst, and
  2. When using the weighted average cost of capital (WACC), the weights of the debt and equity components.

The Fannon & Sellers Model (cont.)

Example Using Fannon-Sellers Model

Company Risk Profile	Lower	Medium	Higher
Company-specific cost of equity capital (risk based)	12%	15%	18%
Less: Adjustment to cost of capital for taxes on dividends	1.3%	1.3%	1.3%
Adjusted after-tax cost of equity capital	10.7%	13.7%	16.7%
Subchapter S Corporate Earnings	$100	$100	$100
Investor-level taxes on pass-through income (35%)	35	35	35
After-tax earnings to investors	$65	$65	$65
Indicated value of after-tax income to investors	$607	$474	$389
Value using unadjusted cost of capital	$542	$433	$361
Value premium from cost of capital adjustment	12.15%	9.49%	7.78%

Summary

- Since 1999, the issue of valuing PTEs has caused significant confusion.
- The key issue has been whether investor-level taxes impact firm value, and if so, how to measure that impact.
- A wealth of empirical research supports the understanding that investor-level taxes do impact value.
- A variety of models have been developed to consider the impact of investor-level taxes.
- They all have the effect of better matching economic income to an appropriate discount rate while simultaneously capturing the tax impact of being a pass-through entity.

SECTION 1

Review Questions

Practice Question 1

Q The primary characteristic of a pass-through entity is?

A. A small business with few stockholders

B. Income taxes are assessed at the stockholder level

C. Dividends are taxed at the stockholder level

D. Subject to two levels of taxation

Practice Question 2

Q Which is true about US Tax Court cases pertaining to pass-thru entities?

A. In early cases, the Court found that tax-affecting a pass-thru entity's income was appropriate

B. In recent cases, experts both the IRS and taxpayers have tax-affected income

C. The Court appears open to well-reasoned expert testimony

D. All of the above

Practice Question 3

Q The argument for tax-affecting a pass-thru entity's pre-tax income is?

A. Public market valuation multiples are derived from entities taxed at the corporate level

B. Prevailing models result in discount rates applicable to after-tax cash flows

C. Sound valuation theory requires a proper matching of income levels and capitalization rates/multiples

D. All of the above

Practice Question 4

Q The SEAM method is best described as:

A. A model for estimating the C corporation equivalent tax rate for a pass-thru entity

B. A comparison of the net economic benefit available to a C corporation stockholder and an S Corp stockholder

C. A model that adjusts an after-tax discount rate to a pre-tax level

D. A model that adjusts public market multiples to a pass-thru basis

Practice Question 5

Q The tax advantages of an S corporation relative to a similar C corporation will be greater when?

A. Personal dividend tax rates are higher

B. Personal dividend tax rates are lower

C. Personal income tax rates are higher

D. Corporate tax rates are lower

SECTION 2

Valuations for Employee Stock Ownership Plans

Topics to be Covered

- Introduction
- General ESOP Framework
- Valuation for ESOP Purposes
- Valuation Approaches and Methods
- Legislative and Regulatory Issues in ESOPs
- Finance Issues in Leveraged ESOPs
- Fiduciary Issues in ESOPs
- Valuation Issues in ESOPs
- Summary

Introduction

- An ESOP is a tax-qualified, defined contribution, employee benefit plan designed to invest primarily in the stock of its sponsor company.
- There are approximately 6,600 ESOPs in the U.S. covering more than 14 million participants.*
- Approximately 3,000 ESOPs are organized as Subchapter S corporations (S corps) and many ESOPs have 100% ownership positions in the sponsor companies.*
- ESOP transactions can be complex because they incorporate knowledge from various professional disciplines.

* National Center for Employee Ownership research.

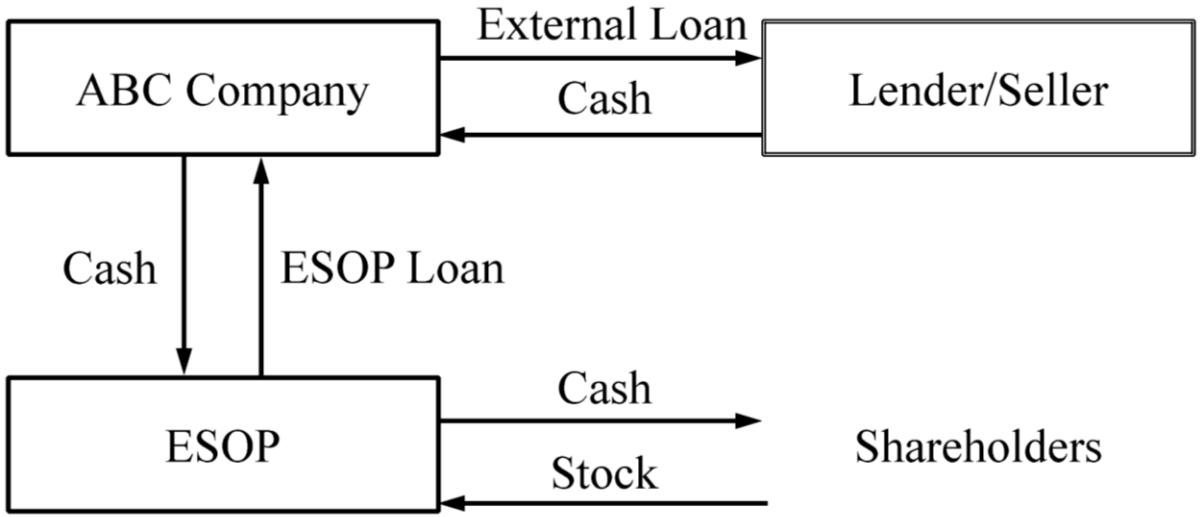
General Framework – Non-leveraged ESOPs

- The non-leveraged ESOP does not use debt to purchase employer securities.
- Rather, the non-leveraged ESOP typically uses tax-deductible stock or cash contributions, or a 401(k)-plan rollover to purchase employer securities.
- Such stock is attained gradually each year based on the company's annual contribution amount, and the ESOP's percentage ownership of the company increases with each contribution.
- Thus, debt financing is not necessary.

General Framework – Leveraged ESOPs

- Congress's stated purpose in establishing ESOPs was:
  - "*to serve as an incentive for corporations to structure their financing in such a way the employee can gain an ownership stake in the company for which they work*."
- The typical leveraged ESOP transaction is accomplished through a series of steps as illustrated on the following page.
  - ABC Company borrows money from a lender and/or the seller.
  - ABC Company then loans those proceeds to the newly created ESOP.
  - The ESOP then purchases stock from existing shareholders using the cash proceeds of the ESOP loan.

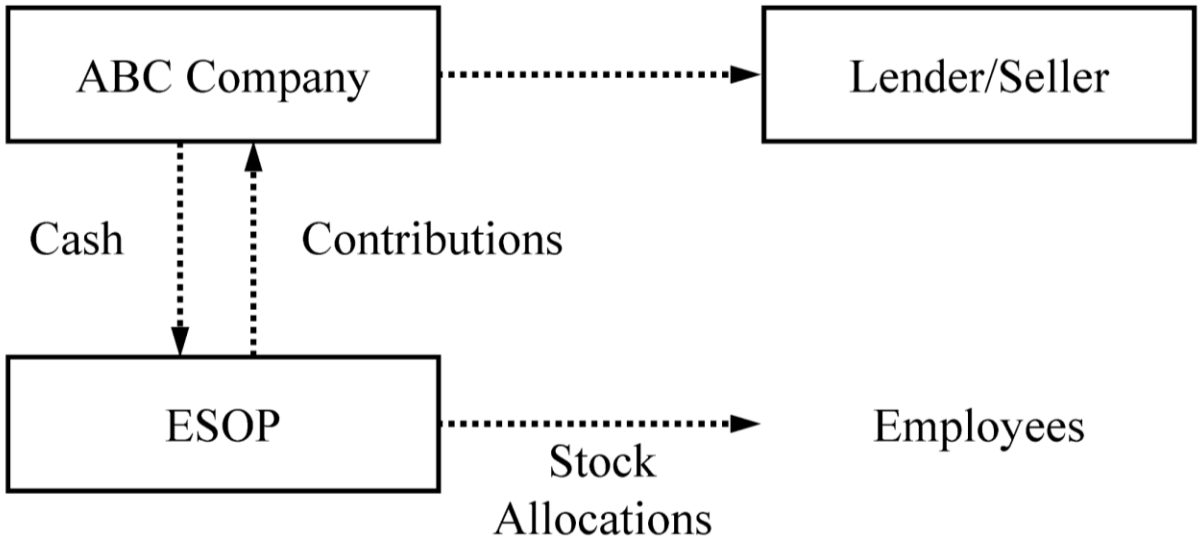
General Framework – Leveraged ESOPs (cont.)



General Framework – Leveraged ESOPs (cont.)

- The exhibit on the following page illustrates the effects of the leveraged ESOP transaction on an annual basis:
  - ABC Company makes tax-deductible employer contributions to the ESOP.
  - The ESOP uses its cash from these employer contributions to make payments on the ESOP loan.
  - ABC Company can use the cash to make payments on the external loan.
  - As the ESOP loan is paid back, employer securities are allocated to ESOP participant accounts.

General Framework – Leveraged ESOPs (cont.)



Leveraged ESOP Transaction Benefits

- Advantages to the company may include:
  - The ability to deduct principal payments on the ESOP loan for tax purposes.
  - For an S corp that is 100% ESOP-owned, the company's earnings are exempt from federal (and most states) income taxes.
  - The company may experience productivity gains due to employee ownership, and ESOP may be helpful in attracting and retaining employees.
- Advantages to the selling shareholder may include:
  - The ability to defer the recognition of capital gain (C corps only).
  - May allow the seller remain involved in the operations of the firm, retaining institutional knowledge.

Leveraged ESOP Transaction Benefits (cont.)

- Advantages to the employees may include:
  - The ability to share in the equity growth of the company.
  - Greater job security, higher compensation and job satisfaction, and tax deferral.
- Advantages to the lenders may include:
  - Reduced credit risk.
  - Tax savings increase after-tax cash flow and the company's ability to meet its debt obligations.
  - Enhanced credit through a pledge of the sellers' qualified replacement property.

Valuation for ESOP Purposes

- Valuations of company stock are required:
  - At the initial feasibility stage.
  - At least annually thereafter.
  - Whenever there is a transaction between the plan and a party in interest.
  - If the ESOP sells all or a portion of its stock position.
- The legal and regulatory environment surrounding ESOPs bring added complexities to the valuation process.

Adequate Consideration

- ERISA requires that an ESOP acquire stock for no more than "adequate consideration."
  - Defined as the fair market value of the asset as determined in good faith by the trustee/fiduciary.
  - ERISA does not define "fair market value."
- In a 1988 proposed regulation, the DOL defined fair market value consistent with Treasury regulations:
  - The price at which an asset 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, and both parties are able, as well as willing, to trade and are well informed about the asset and the market for such asset.

1988 DOL Proposed Regulation

- In addition to defining FMV, the Proposed Regulation addressed:
  - "Relevant factors" – largely consistent with Revenue Ruling 59-60.
  - Marketability – considering the ESOP's "put" rights.
  - Control – Whether or not the seller would be able to obtain a control premium from an unrelated third party.
- Although never finalized or issued, the Proposed Regulation is influential to ESOP trustees and appraisers of ESOP stock.
- More recently, various process agreements between ESOP trustees and the DOL have provided added guidance as to what factors the DOL would like to see assessed in ESOP transactions and valuations.

Independence, and the Appraiser's Role

- The proposed regulation requires the ESOP advisor:
  - Be independent of all parties to the ESOP transaction.
  - Meet qualification requirements similar to those for charitable donations.
- The appraiser advises the ESOP fiduciary, who is formally responsible for determining the ESOP stock value.
- An ESOP fiduciary owes a particularly high duty of care to the plan and its participants.
- ESOP appraisers are well-advised to avoid taking actions that cause them to be acting in the role of a fiduciary.

Reporting Requirements

- The Proposed Regulation also requires the valuation report to contain:
  - A summary of appraisers' qualifications.
  - The asset's value, the methods used, and the value rationale.
  - A description of the asset being valued.
  - The factors taken into account in making the valuation.
  - The purpose for which that valuation was made.
  - The relevance or significance accorded to the valuation methods.
  - The effective date of the valuation.
  - The signature of the appraiser and the date signed.

Fiduciary Process Agreements

- Without final regulations, the DOL has followed a policy of "enforcement through litigation."
- As part of litigation settlements, the DOL has entered into Fiduciary Process Agreements (FPAs) with six different ESOP fiduciaries.
- Each applies only to the specific named fiduciary, and only to ESOP stock purchase transactions (not ESOP updates).
- Nonetheless, the FPAs represent the DOL's only formal guidance regarding ESOP valuation issues.
- The individual FPAs differ slightly but are quite consistent overall.

Fiduciary Process Agreement - Topics

- Selection of the financial advisor (appraiser):
  - Qualifications and conflicts.
- Oversight of the financial advisor:
  - Items that must be documented in the valuation report.
  - The trustee's required documentation regarding the valuation advisor.
- Fiduciary review process:
  - The trustee must read, understand, and question the valuation report.
- Issues of control:
  - The trustee may only approve a transaction where the ESOP intends to purchase a controlling interest if, in fact, the ESOP obtains sufficient control.

Valuation Approaches and Methods

- Any valuation approaches may be used to value ESOP shares.
- The asset approach is used less often than the other two approaches.
- ESOP-Specific Adjustments:
  - It may be appropriate to normalize the employee benefit expense if the contribution expense is in excess of "normal" retirement plan benefits.
- Control:
  - Evaluating the degree to which an ESOP valuation should reflect control is an evolving controversy in ESOP valuations.
  - Many take the position that the ESOP should be able to pay whatever a hypothetical third-party buyer would pay for the stock being purchased.

Valuation Approaches and Methods (cont.)

- Discount for Lack of Marketability
  - ESOP stock benefits from a "put right" — the obligation of the employer to provide liquidity to participants receiving distributions from the ESOP.
  - The Proposed Regulation requires consideration of:
    - The extent to which the put is enforceable.
    - The company's ability to meet its obligation.
  - The FPAs require the trustee to review the valuation report's treatment of marketability discounts.
  - Most ESOP valuation practitioners interpret the ESOP put right as substantially mitigating any marketability discount that would otherwise apply.
  - Such discounts depend on various company-specific attributes and are generally between 0% and 15%.

Legislative and Regulatory Issues in ESOPs

- A general understanding of the legislative and regulatory issues that impact ESOPs is vital for the ESOP appraiser.
- IRC § 1042 Rollover:
  - If certain requirements are met, no gain will be recognized by the selling shareholder upon the sale of C corp stock to an ESOP.
- IRC § 409(1) Employer Securities:
  - The ESOP may purchase only:
    - The highest voting common stock, or
    - A security that is convertible into the highest voting common stock.

Finance Issues in Leveraged ESOPs

- An ESOP is a unique benefit plan in that it can borrow funds.
- Financial advisors rendering opinions in ESOP transactions require an understanding of typical terms and conditions of leveraged transactions.
- Leverage in an ESOP company can be unique:
  - Accounting provisions that can result in negative equity.
  - Cash flow can be enhanced by tax advantages.
  - The debt is secured by the purchased stock, providing loan collateral.

Repurchase Liability

- The obligation to repurchase departing participant's shares creates a potential economic obligation known as the "repurchase liability."
- ESOP shares are either "redeemed" or "recycled."
- Does the repurchase liability affect the fair market value of ESOP stock?
  - This has been a long-debated issue—without a definitive answer.
  - Some argue it should impact the discount for marketability.
  - Others deduct the future repurchases from net cash flow.
- It is important for the ESOP appraiser to understand the extent to which the company has planned for, managed, and intends to fund its ESOP repurchase liability.

Fiduciary Issues in ESOPs

- Like any other trust, every ESOP has a fiduciary.
- The financial advisor (appraiser) is not a fiduciary to the ESOP.
  - The appraiser is retained by directly by the ESOP fiduciary (trustee) even though the appraiser's fees are typically paid by the company.
- General fiduciary duties that apply to ESOP fiduciaries are outlined in ERISA, and require that the fiduciary:
  - Act solely in the interests of plan participants and beneficiaries;
  - For the exclusive purpose of providing benefits to plan participants;
  - With the care, skill, prudence, and diligence of a "prudent" person;
  - In accordance with the plan and trust agreement; and
  - In accordance with the law.

Valuation Issues in ESOPs

- ESOP valuations are subject to enhanced scrutiny with lawsuits commonly filed by the DOL and/or ESOP participants.
- These cases typically allege that the ESOP paid more than fair market value for company stock and seek to recover alleged losses to the plan.
- Losses in these cases are often calculated by attacking the valuation prepared by the trustee's financial advisor.
- Thus, it is imperative that ESOP valuation advisors be aware of red flag valuation issues that may be scrutinized by DOL or private plaintiffs.

Valuation Issues in ESOPs – Diligence

- Plaintiffs' often assert that the ESOP trustee undertook insufficient diligence and that the diligence practices used by private equity buyers should apply to ESOP stock transactions.
- Appraisal reports are under heightened scrutiny:
  - Are valuation approaches and methodologies appropriate for the purpose?
  - Are there obvious omissions, inconsistencies, typos?
  - Did the trustee read, understand, analyze, and probe the report?
- Despite plaintiffs' desire to see robust price negotiations (even in bargain price situations), ERISA's only requirement is that the ESOP cannot pay more than fair market value.

Valuation Issues in ESOPs – Control Price

- The DOL and other plaintiffs often allege that the ESOP did not acquire sufficient control to justify paying a control price.
- The 1988 Proposed Regulation stated that control depends on whether:
  1. The seller could command a control price from an unrelated third party.
  2. Control in both form and substance will pass to the purchaser.
  3. Control will not be dissipated within a short time following the transaction.
- The DOL's threshold has since evolved into examining whether the ESOP has achieved "unfettered" control.
- The valuation advisor needs to fully analyze the elements of control keeping in mind the DOL's (unique) perspectives.

Valuation Issues in ESOPs – Forecasts

- Company forecasts are often scrutinized in ESOP-related litigation.
- Plaintiffs often allege that forecasts are overstated, particularly when:
  - Prepared by individuals with a perceived conflict of interest.
  - Prepared specifically for a sale transaction.
  - Inconsistent with past performance.
- The view is that appraisers often too readily accept management forecasts with sufficient scrutiny and adjustment.
- It may be incumbent on the valuation advisor to adjust the forecast cash flows or request a revised forecast, rather than simply modifying the discount rate to reflect the risk of not achieving forecast results.

Valuation Issues in ESOPs – Warrants

- Financing warrants are commonly used to help companies attain affordable financing for ESOP transactions.
- They are commonly used in non-ESOP transactions as well.
- The DOL does not accept that warrants are a financing tool issued to creditors in exchange for reduced interest rates on debt.
- The DOL perceives warrants to represent:
  - A transfer of ownership dilutive to the ESOP.
  - A deduction to the transaction equity value (purchase consideration).
- The trustee may request that the financial advisor provide an analysis of the warrant holder's overall expected rate of return.

Summary

- Valuation theory and practice is constantly evolving.
- This is especially true in the ESOP arena given the complexities of ERISA and the highly regulated ESOP environment.
- These issues require the appraiser to:
  - Follow best practices.
  - Keep abreast of the continuing evolution.
  - Clearly document and support the key inputs, methodology, and assumptions utilized in the ESOP valuation.

SECTION 2

Review Questions

Practice Question 1

Q Which of the following best describes an ESOP?

A. A defined benefit plan that invests in employer securities

B. A qualified plan that invests in a diversified securities portfolio

C. A defined contribution plan that invests in employer securities

D. An Employee Stock Option Plan

Practice Question 2

Q ESOP appraisals generally follow principles including?

A. Standard of fair market value
B. Revenue Ruling 59-60
C. DOL proposed regulations
D. Fiduciary process agreements
E. All of the above

Practice Question 3

Q The appraiser's client for an ESOP valuation is?

A. The ESOP trustee

B. The company's board of directors

C. The selling stockholder

D. The Department of Labor

Practice Question 4

Q How does the "put right" typically impact the value of stock held by the ESOP?

A. No impact on value under the fair market value standard

B. Increases value by decreasing the discount rate

C. Decreases value by increasing the discount for lack of marketability

D. Increases value by decreasing the discount for lack of marketability

Practice Question 5

Q Which of the following statements is true?

A. The DOL's 1988 proposed regulations regarding "adequate consideration" were issued as final regulations in 1990

B. ESOP financial advisors (appraisers) are considered to be "fiduciaries" are thereby subject to DOL oversight

C. The DOL's 2010 proposed regulations regarding "appraisers as fiduciaries" were issued as final regulations in 2011

D. The DOL's 1988 proposed regulations regarding "adequate consideration" have yet to be finalized or issued

SECTION 3

International Cost of Capital

Topics to be Covered

- Introduction to Country-Specific Risks
- Types of Country-Specific Risks
- Impact of Currency on the Discount Rate
- Framework for Cross-Border Valuation
- Commonly Used International Cost of Capital Models
- Strengths and Weaknesses of the Models
- Applicability of Size and other Risk Premia

Acknowledgements

- This section relies heavily on information presented in the following:
  - Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital: Applications and Examples* 5th ed. (Wiley, 2014), Chapter 39 – Global Cost of Capital Models.
  - James Harrington and Carla Nunes, *International Cost of Capital: Understanding and Quantifying Country Risk.* Available at https://www.kroll.com/-/media/assets/pdfs/news/international-coc-understanding-and-quantifying-country-risk.pdf.
  - James P. Harrington, Carla S. Nunes, Anas Aboulamer, Roger J. Grabowski, *Valuation Handbook — International Guide to Cost of Capital,* 2021 Summary Edition (CFA Institute Research Foundation Books, October 2021). Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3958962.
  - James Harrington and Roger Grabowski, *Cost of Capital Symposium Global Cost of Capital Models*, May 2020.

Introduction to Country-Specific Risks

- Developing cost of capital estimates for a business entity operating outside of a developed market can be challenging.
- Foreign country cash flows should bear an additional risk premium if the foreign market is segmented, and highly correlated with domestic markets.
  - A segmented market is one that is not fully integrated with world markets.
  - If there is positive correlation across markets, it is more difficult to diversity away country risk.
- This section addresses the additional premium for country-specific risks and methods by which it may be quantified.

Types of Country-Specific Risks

- Financial Risks
  - Money-centric risks such as currency risk (i.e., the risk that exchange rates will unexpectedly change).
- Economic Risks
  - General economic risks include volatility associated with expected inflation, etc.
  - Economic policy risks include the quality and consistency of economic management by different levels of government.
  - Economic structure risks include the extent to which a government is at risk of becoming insolvent.
- Political Risks
  - Stem from the instability or actions of government via legislation, institutions, interaction with other states, institutions, or private stakeholders.

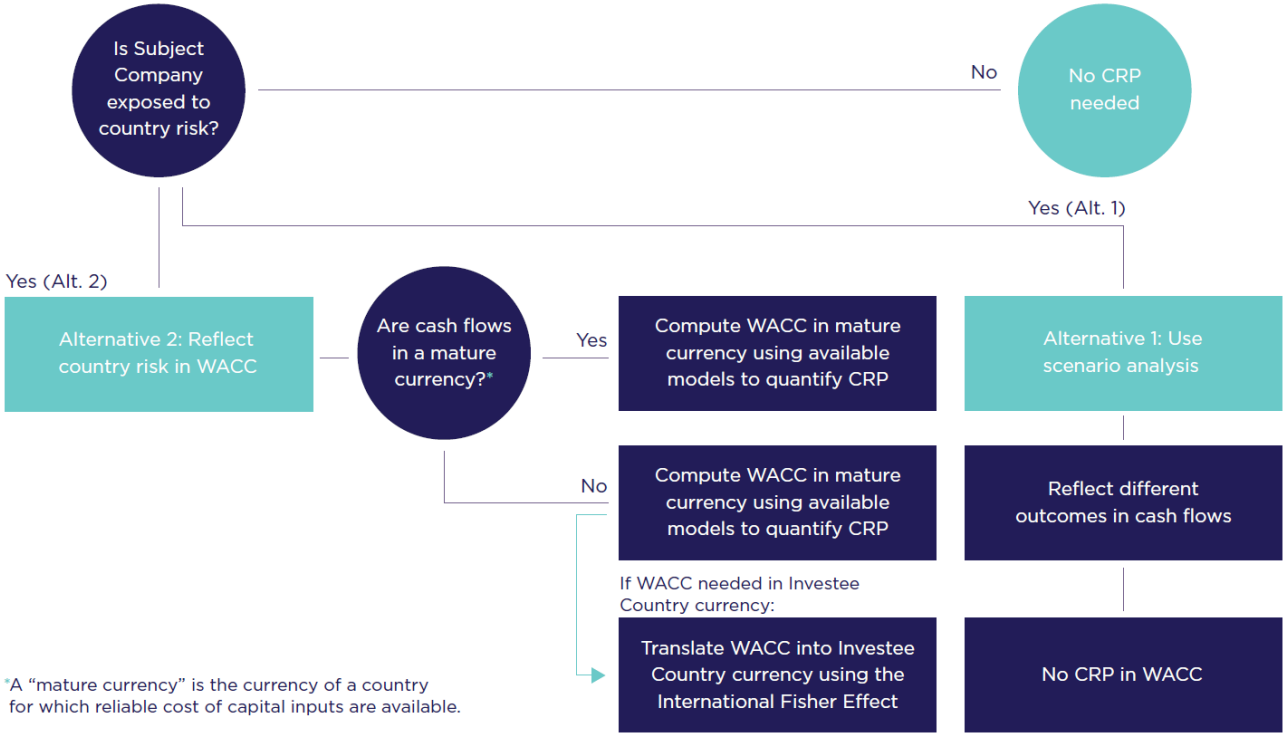
Types of Country-Specific Risks (cont.)

- Country-specific risks have less to do with company location than with where the cash flows are derived.
- For instance, does a company headquartered and incorporated in Venezuela, but operating solely in the United States, require an additional risk premium?
- Alternatively, does a company headquartered and incorporated in the U.S., but operating principally in east Asian countries, require an additional risk premium?

Impact of Currency on the Discount Rate

- The currency of the projected cash flows should be consistent with the currency of (i.e., the inputs used to derive) the discount rate.
- For a U.S.-based investor, this could be accomplished by two means:
  - Discount the local (riyal) cash flows using a local (Saudi) discount rate.
  - Convert the local (riyal) cash flows to U.S. dollars (using a forecast exchange rate) and then discount using a home (U.S.) discount rate.
- Problems arise when there are no reliable inputs to determine a local (foreign) discount rate.
- This may require the use of a home country discount rate, adjusted for local country risk factors.

Framework for Cross-Border Valuation



Source: James Harrington and Carla Nunes, *International Cost of Capital: Understanding and Quantifying Country Risk*. Available at https://www.kroll.com/-/media/assets/pdfs/news/international-coc-understanding-and-quantifying-country-risk.pdf.

International Cost of Capital Models

- We have two general options for determining an international cost of capital.
- Direct approach:
  - Determine a country-specific cost of capital.
  - Forgoes the U.S. capital markets altogether.
- Indirect approach:
  - Determine a U.S. cost of capital and adjust for any incremental country-specific risk.
  - Uses the abundant U.S. capital market data.
- Both approaches yield discount rates that can be applied to foreign-currency denominated forecast cash flows.

International Cost of Capital Models (cont.)

- In choosing a model, the goal is to balance several objectives:
  - The model should have a degree of acceptance, and the model should be used by investors and valuation analysts.
  - Quality data should be available for consistent and objective application of the model.
  - The model's underlying concepts should be understandable and explainable in plain language.
- When selecting a model (or models), it is important to remember:
  - There are several commonly-used approaches to incorporating country factors into a cost of equity capital estimate.
  - There is no consensus as to the best model to use.
  - No model is perfect.

International Cost of Capital Models (cont.)

1. Local (Single-Country) CAPM Model
2. World (Global) CAPM Model
3. Country Credit Rating Model
4. Country Yield Spread Model
5. Relative Volatility Model
6. Local Country Risk Exposure Model

Local (Single-Country) CAPM Model

$$K_{e(local)} = R_{f(local)} + (\beta_{local} \times ERP_{local})$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country
$R_{f(\text{local})}$	=	Return on the local country government (default-risk-free) debt
β_{local}	=	Market risk of the subject company (measured with respect to the local securities market)
ERP_{local}	=	Equity risk premium in local country's stock market

Local (Single-Country) CAPM Model (cont.)

- A direct method, based on the standard CAPM formula.
- Should be applied to local currency projected cash flows.
- Provides a direct approach to estimating cost of capital where all CAPM inputs are available in the local currency.
- Allows one to forego country-specific risk adjustments.
- Applicable only in countries with well-developed financial markets:




World (Global) CAPM Model

$$K_{e(local)} = R_{f(U.S.)} + (\beta_{world} \times ERP_{world})$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country
$R_{f(U.S.)}$	=	Risk-free rate on U.S. government debt
β_{world}	=	Market or systematic risk measured with respect to a global portfolio of equity securities
ERP_{world}	=	Equity risk premium (rate of return expressed in terms of U.S. dollar returns) on a globally-diversified portfolio

World (Global) CAPM Model (cont.)

- A direct method, based on the standard CAPM formula.
- Should be applied to U.S. dollar-forecast cash flows.
- The world beta is based on a regression of U.S. market returns against world index returns (e.g., MSCI World Index).
- The world ERP can be estimated by dividing the U.S. ERP by the beta of the U.S. market in relation to the returns of the world index.
- Alternatively, Dimson, Marsh, and Staunton provide annual estimates of the world ERP.
  - https://www.london.edu/faculty-and-research/academic-research/c/credit-suisse-global-investment-returns-sourcebook

Country Credit Rating Model

$$k_{e(local)} = \alpha + \beta \times Natural\ Log(CCR_{local}) + \varepsilon$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country
α	=	Regression constant
β	=	Regression coefficient
CCR_{local}	=	Country credit rating of local country
ε	=	Regression error term

Country Credit Rating Model (cont.)

- An indirect approach to estimating the cost of equity capital.
- Allows for the estimation of cost of equity for countries that have a country risk rating—even if without a long history of equity returns.
- Country credit ratings are published in the Cost of Capital Navigator's International Cost of Capital Module.
- The model uses a regression, where:
  - Country market return is the dependent variable.
  - Country credit rating for the prior period is the independent variable.
- Assumes that countries with lower creditworthiness (i.e., lower credit ratings) are associated with higher costs of equity capital, and vice versa.

Country Yield Spread Model

$$k_{e(local)} = R_{f(home)} + [\beta_{home} \times ERP_{home}] + CRP$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country (denominated in the home country currency)
$R_{f(home)}$	=	Risk-free rate on government debt in the home country currency
$\beta_{(home)}$	=	Beta (measured using returns denominated in the home country currency)
$ERP_{(home)}$	=	Equity risk premium of home country (denominated in the home country currency)
CRP	=	Country Risk Premium, determined as the difference between the yield-to-maturity on (1) a foreign country government bond issued in the home country currency and (2) a home country government bond with a similar maturity

Country Yield Spread Model (cont.)

- An indirect approach to estimating the cost of equity capital.
- A (local) country risk premium (CRP) is added to the cost of equity capital derived for the home country.
  - The CRP represents the difference between home and local government debt yields.
  - Isolate the incremental risk premium associated with investing in the local market as a function of the spread between the local country's sovereign yields and the home country's sovereign yields—where both are denominated in the home country's currency.
- CRPs are available in the Cost of Capital Navigator: International Cost of Capital Module.

Relative Volatility Model

$$k_{e(local)} = R_{f(home)} + [\beta_{home} \times ERP_{home} \times RVFactor]$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country (denominated in the home country currency)
$R_{f(home)}$	=	Risk-free rate on government bonds in the home country currency
$\beta_{(home)}$	=	Beta (measured using returns denominated in the home country currency)
$ERP_{(home)}$	=	Equity risk premium of home country (denominated in the home country currency)
$RV\ Factor$	=	Relative Volatility Factor, determined as the ratio of the annualized monthly standard deviation of the local country equity returns (denominated in the home country currency) relative to the annualized monthly standard deviation of the home country's equity returns (denominated in the home country currency)

Relative Volatility Model (cont.)

- An indirect approach to estimating the cost of equity capital.
- Originally this model adjusted the beta, but a newer version modifies the equity risk premium, by a Relative Volatility Factor.
  - The RV Factor is the ratio of the volatility of (1) the local country's equity market to (2) the home market's benchmark market index.
- The RV Factor is multiplicative, while the previously-discussed Country Risk Premium was additive.
- Relative Volatility factors are available in Cost of Capital Navigator: International Cost of Capital Module.

Local Country Risk Exposure Model

$$k_{e(local)} = R_{f(U.S.)} + [\beta_{U.S.} \times ERP_{U.S.}] + (\lambda \times CRP)$$

Where:

$K_{e(local)}$	=	Cost of equity capital in local country
$R_{f(U.S.)}$	=	Risk-free rate on U.S. government debt
$\beta_{(U.S.)}$	=	Beta (expressed in U.S. dollars)
$ERP_{(U.S.)}$	=	U.S. equity risk premium (expressed in U.S. dollars)
λ	=	Company's exposure to local country risk
CRP	=	Country risk premium = $\left(R_{f(local)} - R_{f(U.S.)}\right) \times \frac{\sigma_{stock}}{\sigma_{bond}}$
$R_{f(local)} - R_{f(U.S.)}$	=	Yield spread between government bonds issued by the local country versus U.S. government bonds
σ_{stock}	=	Volatility of returns in local country's stock market
σ_{bond}	=	Volatility of returns in local country's bond market

Local Country Risk Exposure Model (cont.)

- An indirect approach to estimating the cost of equity capital.
- Originally published in 2002 by Professor Aswath Damodaran.
- The model is premised to two basic ideas:
  - Country risk derives where the entity operates, not where it is incorporated.
  - If the default spread is the premium demanded for buying a government bond issued by the country, the additional equity risk premium for that country should be greater, because equities are riskier than bonds.
    - This is accomplished by scaling the ERP by the relative standard deviation of stocks vs. bonds in the local market, which will generally yield a greater country risk (CRP) than merely using the spread between the respective countries' bonds.

Strengths and Weaknesses of the Models

Model	Strengths	Weaknesses
Local (Single-Country) CAPM Model	Allows more local factors to be introduced.	• Does not work well in emerging markets. • Generally, requires the "local" country to have a history of bond market and stock market returns.
World (Global) CAPM Model	Can work well if country is integrated and/or the subject company operates in many countries.	• Assumes away meaningful differences across countries. • Generally, requires the "local" country to have a history of bond market and stock market returns. • Does not work well in emerging markets: generally, results in lower betas for companies located in emerging markets, counter to expectations.

Strengths and Weaknesses of the Models (cont.)

Model	Strengths	Weaknesses
Erb-Harvey-Viskanta Country Credit Rating Model	Intuitive / can be applied to a significant number of countries.	• Complexity • Requires access to quality stock market return data from many countries. • Stock market data and country credit rating data is more frequently available for countries that are more developed, which may bias the results. • Results are sensitive to the period chosen over which the regression is performed. • The country credit ratings used as inputs in the CCR Model are (at least in part) based on qualitative factors that are subject to judgement.
Country Yield Spread Model	Intuitive / easily implemented	• Requires that the "local" government issues debt denominated in the "home" government's currency. However, this can be overcome by using a regression of observed yield spreads against country risk ratings. • May double count (or underestimate) business cash flow risks, particularly if the default risk of a given country is not a good proxy for the risks faced by the subject company operating locally.

Strengths and Weaknesses of the Models (cont.)

Model	Strengths	Weaknesses
Relative Volatility Model	Intuitive / easily implemented.	• Does not work well in countries that do not have well-diversified stock markets. • Requires the "local" country to have a history of stock market returns. • Results are sensitive to the period selected to compute standards deviation of returns. • At times does not work well for even the most developed countries resulting in implied adjustments far in excess of what would be expected.
Local Country Risk Exposure Model	Introduces a measure of economic integration at the company level.	• Complexity. • Generally, requires the "local" country to have a history of bond market and stock market returns.

Applicability of Size and other Risk Premia

- Can the international cost of capital models discussed herein be adjusted further for company size or other nonsystematic risks?
- Leading data on size premia is U.S. centric.
- Studies of size premia in international markets are emerging.
  - E.g., studies by Van Dijk, Peek, Dimson, Marsh & Staunton.
  - The Cost of Capital Navigator's International Module now includes European size premium data.
- Further exploration of this topic is beyond the scope of this course.

SECTION 3

Review Questions

Practice Question 1

Q Country risk is primarily associated with?

A. The location where an entity is incorporated

B. The market in which an entity's shares trade

C. Where the entity's revenues are earned and expenses are incurred

D. Where the entity's customers are located

Practice Question 2

Q Which is a "direct method" of estimating a non-US cost of capital?

A. Country Credit Rating Model

B. Country Yield Spread Model

C. Local Capital Asset Pricing Model

D. Global Capital Asset Pricing Model

Practice Question 3

Q The relative volatility model may overstate the cost of capital because?

A. Less-developed markets do not provide reliable data

B. The higher standard deviation results seen in less-developed markets may be due to more liquid markets

C. The higher standard deviation results seen in less-developed markets may be due to less liquid markets

Practice Question 4

Q Which of the following cost of capital models readily adapts to entities with risk exposure to multiple markets?

A. Country Credit Rating Model

B. Relative volatility model

C. Country yield spread model

D. Local country risk exposure model

Practice Question 5

Q Non-systematic risk factors such as size and company-specific risk are not typically included in the non-US cost of capital models because companies outside of the US are generally not subject to such risks?

A. True

B. False

SECTION 4

Valuing Debt Securities

Topics to be Covered

- Introduction
- Debt Instruments Overview
- Common Situations Requiring Valuation of Debt Instruments
- Methods of Debt Instrument Valuation
- Structural Characteristics of Debt Instruments
- Private Promissory Notes
- Summary

Introduction

- An understanding of the valuation of debt securities play an important role in the analysis and appraisal of closely held companies.
- A debt instrument is an obligation by a debtor to repay a creditor at a future date.
  - The debtor is the borrower or issuer of the debt instrument.
  - The creditor is the lender or the buyer of the debt.
- This section provides an overview of debt instruments, situations requiring valuation, valuation methods, common characteristics of debt instruments, and certain valuation adjustments.

Debt Instruments Overview

- Debt constitutes a form of borrowed money that represents a contractual obligation of the debtor, or a promise to pay the creditor according to the contractual terms of the financial instrument.
- Debt securities differ from equity securities in many ways:

Debt Characteristic	Equity Characteristic
Debt represents a contractual senior claim on assets	Equity represents residual claims on assets
Payments to debtholders have priority in liquidation	Payments to equityholders are subordinate
Cost of debt (interest) is tax deductible to company	Cost of equity (dividends) is not tax deductible
No, or limited upside potential	Unlimited upside potential
Lower risk → lower required/expected return	Greater risk → higher required/expected return

Debt Instruments Overview (cont.)

- A debt instrument's risk is determined by its relative seniority in the capital structure and the nature of any collateral.
  - Senior obligations secured by specific assets of the company carry the lowest risk (and promise the lowest return).
  - Unsecured junior or subordinated obligations have the highest risk (and promise the highest return).
- The valuation of debt instruments centers on a DCF analysis where:
  - Contractual interest payments represent the interim cash flows.
  - Repayment of principal represents the terminal value.

Common Situations Requiring Valuation of Debt

- Frequently encountered reasons to value debt instruments include:
  - Purchase or sale transactions.
  - Exchange of equity for debt, or vice versa.
  - Gift, estate, and income taxes.
  - Allocating total enterprise value among classes of securities.
  - Adjusting a balance sheet for debt securities owned or owed.
  - Financial reporting requirements.
- The extent of analysis undertaken will vary with the assignment and the precision required.
- More rigorous analysis will likely be undertaken where the value of the debt instrument is the goal rather than a means to an end.

Methods of Debt Instrument Valuation

- Using a DCF model, the value of a debt investment is equal to the present value of the future cash flows, discounted at a risk-adjusted discount rate.

$$PV = \sum_{i=1}^{n} \frac{CF_i}{(1+k_d)^i}$$

  - Where:
    - CF_i = Cash flow in future period i
    - t = Period when payments are generated
    - k_d = Required market rate at which cash flows are to be discounted
    - n = Maturity of the debt, in periods

- The market rate of return for a debt instrument (i.e., market yield) is the rate that compensates the creditor for the risk of the cash flows.

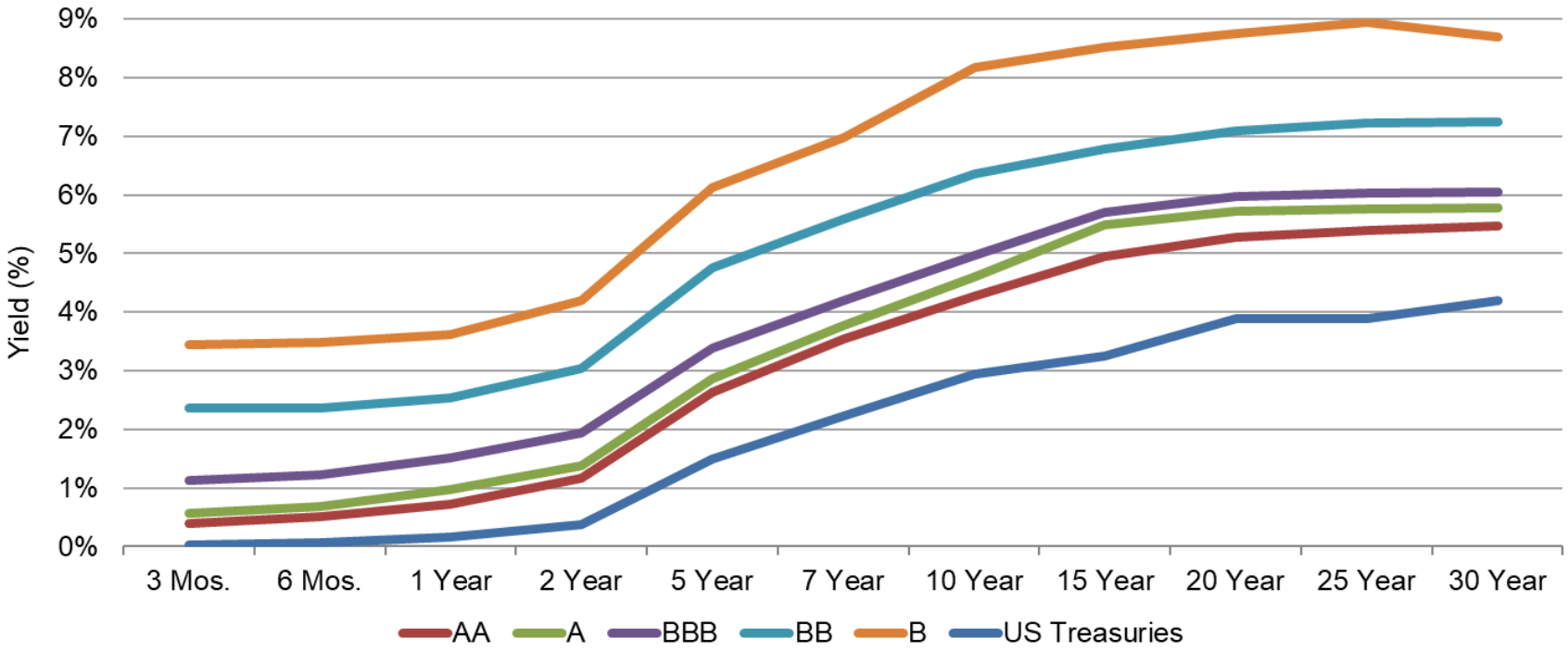
Methods of Debt Instrument Valuation (cont.)

- In a DCF framework, the information needed includes:
  1. the amount and timing of contractual payments associated with the debt instrument.
  2. the appropriate yield to discount the future payments to present value.
- It is imperative that the analyst read the debt agreement(s) in order to properly estimate the contractual payments.
- As an example, we will consider a nonconvertible, noncallable (or straight) debt instrument with fixed periodic interest payments.
- Estimation of the required yield requires both quantitative and qualitative analysis and the appraiser's judgment.

Methods of Debt Instrument Valuation (cont.)

- The yield used to value straight debt is primarily a function of:
  1. The timing of the contractual payments.
     - All else equal, longer-term bonds have a higher required yield than shorter-term bonds due to the term structure of interest rates.
  2. The risk of repayment of the contractual payments.
     - All else equal, higher risk debt instruments have a higher required yield than lower risk debt instruments.
- The required yield can be decomposed into a base rate plus a spread that measures the issuer-specific risk.
- Nonpayment (default) is the usually the largest risk relevant to the valuation of corporate debt instruments.

Term Structure of Interest Rates



Amount and Timing of Future Payments

- One of the most important steps in the valuation of debt is to ensure that the cash flows in DCF model accurately reflect the payment terms of the financial instrument.
  - Interest payments typically occur on a periodic basis (monthly, quarterly, or semi-annually), and may be fixed or variable.
  - Principal payments may be made at maturity in a bullet or balloon payment schedule or per a defined amortization schedule.
- Debt instruments can include contractual features that alter the amount and timing of the future payments.
  - The nature of such characteristics are discussed later in this section.

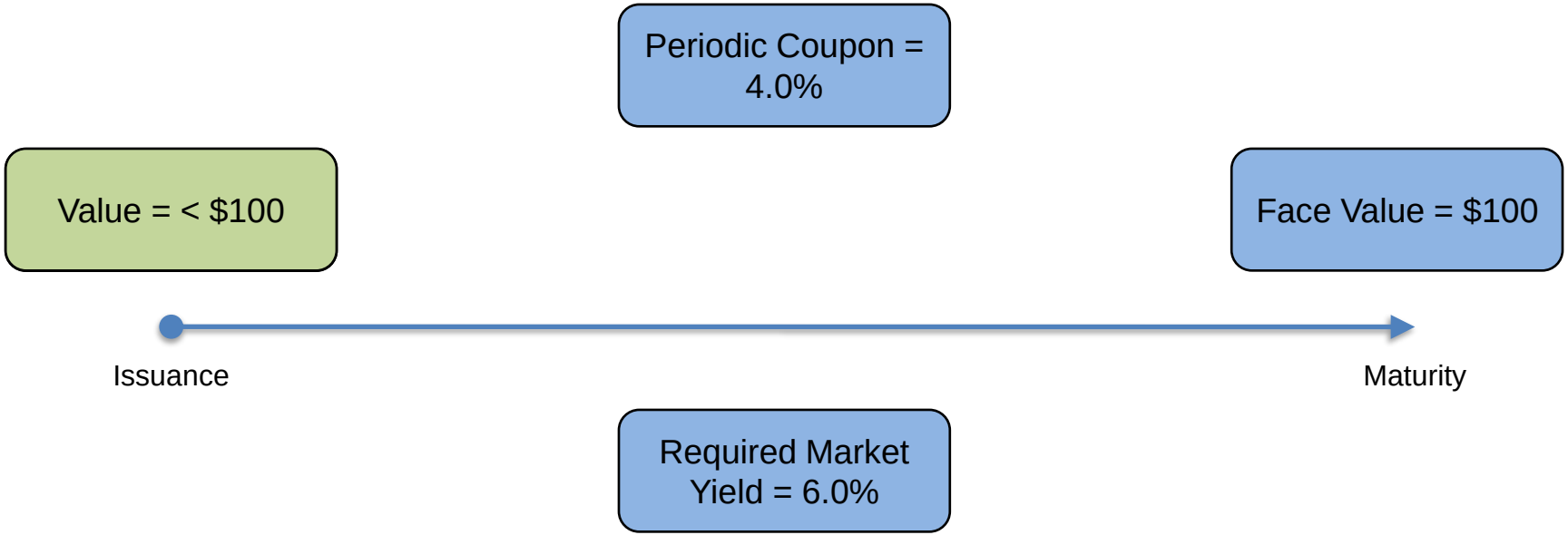
Estimation of Yield

- The required return or yield for a debt instrument may differ from the security's coupon rate of interest.
- Debt valuation principles are driven an "equilibrium relationship":
  - If the debt's market-determined yield is equal to its coupon interest rate, the security's fair market value is equal to its face or par value.
    - In this case, the debt is valued at par because the periodic interest cash flows are discounted at the same yield as the coupon rate.
  - If the coupon interest rate is greater than the market-required yield, the debt instrument's market value is greater than its face or par value.
    - In this case, the debt trades at a premium to par because the periodic interest cash flows are discounted at a lower yield than the coupon rate.

Estimation of Yield (cont.)

- The value of a debt instrument is inversely related to the market yield.
- The following examples illustrates this equilibrium relationship between a debt instrument's coupon rate, required market yield, and value.
- Assume:
  - A nonconvertible, noncallable corporate debt instrument with a three-year maturity.
  - Face amount of $100.
  - Annual coupon of 4% ($4 received on each annual payment date).
  - Required market yield of 6%.

Estimation of Yield (cont.)



Examples of Valuing Debt Securities

	12/31/20X1	12/31/20X2	12/31/20X3
Debt Instrument Cash Flows			
Interest Cash Flow	$4.00	$4.00	$4.00
Principal Cash Flow			$100.00
Total Cash Flow	$4.00	$4.00	$104.00

Credit Analysis

- The yield applicable to a nontraded debt instrument is typically estimated by comparison to issuers of traded debt securities (i.e., credit analysis).
  - The goal of credit analysis is to determine the required rate of return for the subject debt instrument.
- Relevant financial ratios measure two main characteristics of the debtor's ability to pay interest and principal on their aggregated borrowings:
  - **Debt service coverage** – the debtor's ability to make interest payments relative to its cash flows.
  - **Leverage** – the debtor's ability to pay principal relative to its total capitalization.

Credit Analysis (cont.)

- Primary measures of interest coverage include:
  - EBITDA to interest
  - EBIT to interest
  - (FFO plus interest expense) to interest expense
- Core measures of debt capacity include:
  - Debt principal to EBITDA
  - FFO to debt principal
  - CFO to debt principal
  - Debt principal to (debt principal plus equity)

Credit Analysis (cont.)

- The closely held debt issuer's ratios can be compared with those of a broad population of issuers of debt with observable credit ratings.
- A credit rating is an ordinal score that measures the creditworthiness a debt instrument based on the financial condition of the issuer.

		S&P	Moody's	Fitch
Investment Grade	High-Quality Grade	AAA	Aaa	AAA
		AA+	Aa1	AA+
		AA	Aa2	AA
		AA-	Aa3	AA-
	Upper-Medium Grade	A+	A1	A+
		A	A2	A
		A-	A3	A-
	Low-Medium Grade	BBB+	Baa1	BBB+
		BBB+	Baa2	BBB+
		BBB-	Baa3	BBB-
Non-Investment Grade "Junk" or "High Yield"	Low Grade or Speculative Grade	BB+	Ba1	BB+
		BB	Ba2	BB
		BB-	Ba3	BB-
		B+	B1	B+
		B	B2	B
		B-	B3	B-
		CCC+	Caa1	CCC+
		CCC+	Caa2	CCC+
		CCC-	Caa3	CCC-
		CC	Ca	CC
		C	C	C
	Default	D	C	D

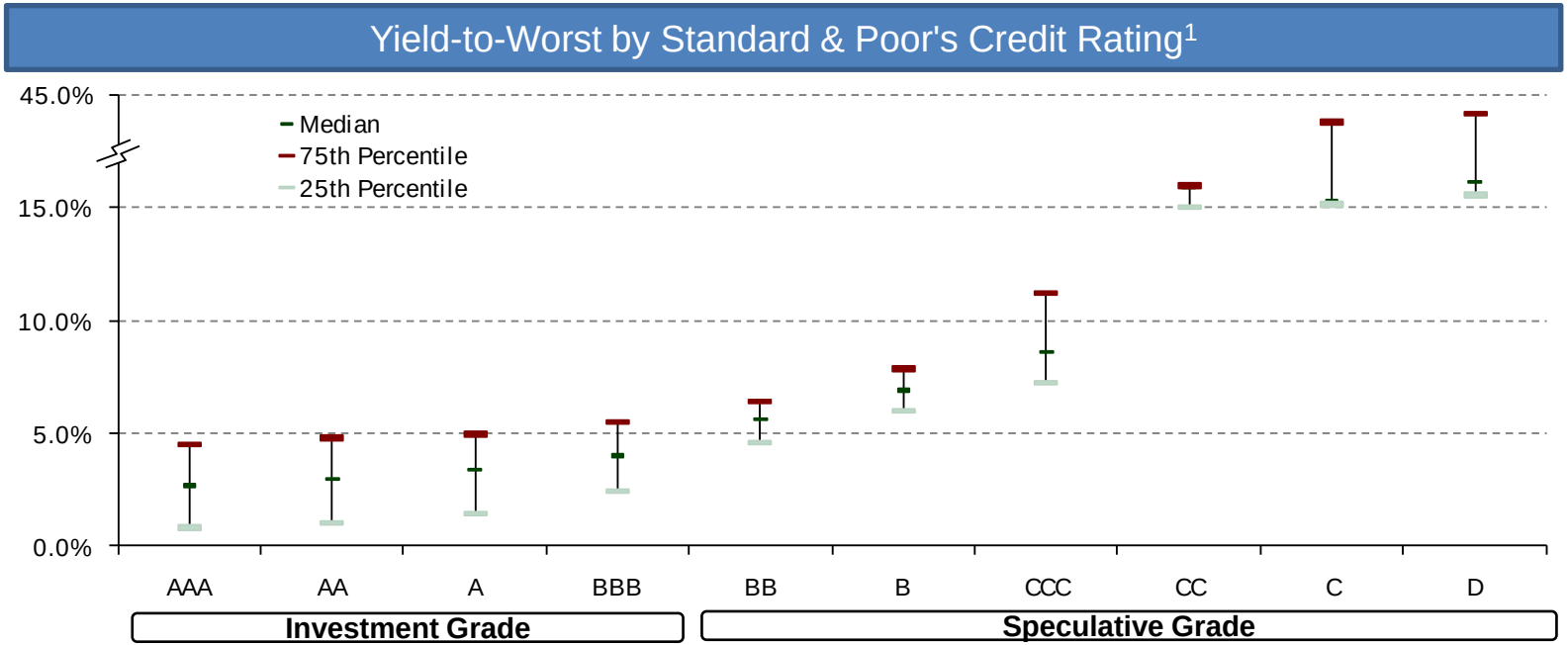
Credit Analysis (cont.)

- Credit ratios like those shown below enable the analyst to estimate the credit rating classification of the privately held debt or debt issuer by applying a qualitatively determined weighting to the financial ratios.

	Medians of Three-Year (2017 to 2019) Averages					
	AAA	AA	A	BBB	BB	B
Operating income before depreciation and amortization / revenues (%)	29.4	22.5	18.5	14.3	9.9	4.8
EBITDA margin (%)	38.2	27.0	22.3	25.6	21.0	19.7
Return on capital (%)	14.0	11.6	8.2	7.9	6.7	6.5
EBIT interest coverage (x)	17.8	28.0	12.7	8.3	6.7	3.5
EBITDA interest coverage (x)	23.5	30.5	15.9	11.4	9.2	6.0
Funds from operation / debt (%)	63.4	311.2	104.3	55.0	36.3	25.1
Free operating cash flow / debt (%)	44.5	137.9	104.3	39.3	25.5	16.3
Debt / EBITDA (x)	1.40	1.56	2.96	3.90	4.73	9.57
Debt / debt plus equity (%)	41.0	35.3	46.3	46.6	55.1	58.8
Number of companies	2	29	201	273	380	496

Source: *S&P Global Market Intelligence, Capital IQ.* Used with permission.

Credit Yields at Various Ratings



1. Based on selected industrial companies' publicly traded bonds in the U.S. with at least $100 million outstanding.
Source: Bloomberg.

Credit Analysis (cont.)

- This process is referred to as a "synthetic credit rating" analysis.
  - It leverages the observable data and published ratings to develop a formula that reflects the credit agency's proprietary process.
- After mapping the subject debt instrument into the estimated credit rating category, the analyst can select specific debt securities with observable trades that are similar in debt rating and nature to the subject debt.
- Because corporate debt is traded relatively infrequently and there are relatively few issuers of traded debt.
- The analyst may consider including only publicly traded debt securities within the same general industry as that of the closely held debt security issuer, if enough publicly traded debt securities are available.

Credit Analysis (cont.)

- The screening and selection of comparable securities can be challenging for debt instruments.
  - Debt instrument features vary, including callability, conversion, fixed and floating coupons, and different levels of seniority and collateral assets.
  - The volume of trading for corporate bonds is relatively low.
- An alternative approach for determining a required yield is to estimate a bond rating appropriate for the subject company, and then simply select the average yield for debt with that rating.
  - By comparing credit ratios for the subject company and the benchmarks, the analyst can estimate the most appropriate bond rating for the subject debt.

Valuation Example – Key Steps

1. Determine the contractual cash flows of the subject debt instrument.
2. Perform a synthetic credit rating analysis to determine the required yield.
   - The subject company has the following financial ratios: FFO to debt: 25%, EBITDA interest coverage: 4.0., debt to EBITDA: 3.3.
   - Using the average S&P credit ratings data provided earlier, the analyst determines that "BB" is the most appropriate rating grade.
   - Obtains data on BB-rated noncallable, nonconvertible senior unsecured corporate bonds with a comparable maturity.
   - In this case, the concluded yield is assumed to 5.0%.
3. Calculate the present value of the principal and interest cash flows.
   - A 5.0% yield results in a net present value of $97.28 (97.28% of face value).

Valuation Example (cont.)

	12/31/20X1	12/31/20X2	12/31/20X3
Debt Instrument Cash Flows			
Interest Cash Flow	$4.00	$4.00	$4.00
Principal Cash Flow			$100.00
Total Cash Flow	$4.00	$4.00	$104.00
Required Yield	5%	5%	5%
Discount Factor	0.9524	0.9070	0.8638
Present Value of Cash Flows	$3.81	$3.63	$89.84
Present Value	$97.28		

Marketability Aspects of Closely Held Debt

- Any DLOM applicable to a closely held debt instrument is typically much smaller than that associated with common stock.
  - Common stock investment returns are generated primarily by a future sale.
  - Debt investment returns are generated predominantly by periodic cash flows (interest) over the term of the debt instrument.
  - Thus, while the stockholder's returns depend on selling the security (i.e., achieving marketability), the debtholder's returns do not.
- Where applicable, a debt DLOM can be handled by either increasing the appropriate yield or taking a discount from the estimated value.
  - An increase in the required yield for illiquidity may also be observed in a quantitative manner using the calibration and benchmarking process described next.

Calibration and Benchmarking

- A variation on the previously described approach helps to control for the differences in the characteristics of private and public debt.
- The first step in the process is called calibration–that is, observing the subject debt's observed yield at issuance.
- The original yield can be benchmarked (compared) to other observable yield data points on the trade date, noting any "yield spread."
- The subject debt's market yield at a future dates is based on the then-observed market yield, plus the previously observed yield spread.

Calibration and Benchmarking – Example

1. Assume the debt is issued at $100 par with a two-year term, quarterly payments, bullet maturity, and 1% quarterly interest.
   - The market yield at origination is calculated to be 4.06% per annum.

	1	2	3	4	5	6	7	8
Calculation of Market Yield	**3/31/20X1**	**6/30/20X1**	**9/30/20X1**	**12/31/20X1**	**3/31/20X2**	**6/30/20X2**	**9/30/20X2**	**12/31/20X2**
Debt Instrument Cash Flows								
Interest Cash Flow	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
Principal Cash Flow								$100.00
Total Cash Flow	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$101.00
Valuation								
Required Yield	4.06%	4.06%	4.06%	4.06%	4.06%	4.06%	4.06%	4.06%
Discount Period (years)	0.25	0.5	0.75	1	1.25	1.5	1.75	2
Discount Factor	0.9901	0.9803	0.9706	0.9610	0.9515	0.9420	0.9327	0.9235
Present Value of Cash Flows	$0.99	$0.98	$0.97	$0.96	$0.95	$0.94	$0.93	$93.27
Present Value	$100.00							

Calibration and Benchmarking – Example (cont.)

2. A synthetic credit rating analysis indicates a rating of BB for the issuer.
3. The yield for comparable BB-rated securities with a two-year remaining term is determined to be 3.60% (origination spread = 0.46%).
4. At the valuation date the remaining term is 1.75 years.
5. An updated credit analysis continues to indicate a rating of BB.
6. The yield for BB-rated debt with a 1.75-year maturity is observed to be 3.30% at the valuation date (a decrease of 0.30%).
7. Apply the 0.30% change in the benchmark yield to the subject debt, reducing the origination yield to 3.76% (down from 4.06%).

Calibration and Benchmarking – Example (cont.)

8. Calculate the net present value of the principal and interest cash flows using the DCF model. Applying the DCF formulas to the contractual cash flows as of the valuation date results in present value of $100.49 or 100.49% of face amount, as a result of the decrease in interest rate.

Valuation at Market Yield	6/30/20X1	9/30/20X1	12/31/20X1	3/31/20X2	6/30/20X2	9/30/20X2	12/31/20X2
Debt Instrument Cash Flows							
Interest Cash Flow	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
Principal Cash Flow							$100.00
Total Cash Flow	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$101.00
Valuation							
Required Yield	3.76%	3.76%	3.76%	3.76%	3.76%	3.76%	3.76%
Discount Period (years)	0.25	0.5	0.75	1	1.25	1.5	1.75
Discount Factor	0.9908	0.9817	0.9727	0.9638	0.9549	0.9461	0.9374
Present Value of Cash Flows	$0.99	$0.98	$0.97	$0.96	$0.95	$0.95	$94.68
Present Value	$100.49						

Issue Date	12/31/20X0
Issue Price	$100
Issue Date Market Yield	4.06%
Valuation Date	3/31/20X1
Change in Market Yield	0.30%
Valuation Date Market Yield	3.76%
Present Value	$100.49

Debt Guarantees

- When estimating the cost of debt capital, the analyst should ascertain whether the debt is secured by (personal) guarantees.
- Such guarantee typically justifies an upward adjustment in the estimated cost of debt, to what it would be without the guarantees.
- The analyst might estimate the value of the guarantee might be estimated as the difference between the market value of the risky debt (interest rate priced at market) minus the value of an equivalent amount of risk-free debt (lower interest rate reflecting the benefit of the guarantee).
- Where appropriate, the balance sheet of the guarantor should reflect a contingent liability as a result of providing the guarantee.

Structural Characteristics of Debt Instruments

- It is important to analyze the various characteristics or provisions that may have an impact on its value, e.g.:
  - Call provisions
  - Debt interest payment terms
  - Payment-in-kind (PIK) interest
  - Zero-coupon debt
  - Principal amortization provisions
  - Sinking fund provisions
  - Seniority and collateral provisions
  - Convertible debt
  - Income tax status

Typical Structural Characteristics

Characteristic	Description	Effect on Required Yield
Issuer Credit Quality	▪ As of the date of the issuance, the issuer's perceived ability to service its obligations to the creditor	▪ Better credit quality reduces the required yield
Call Provision	▪ Allows the debtor to repay the debt prior to its maturity under prescribed conditions.	▪ A call provision typically requires a yield premium
PIK Interest	▪ The issuer may have the option to pay interest "in kind" (by issuing additional debt to the creditor)	▪ A PIK interest feature requires a yield premium
Convertible Debt	▪ The debt may be convertible into another security, typically common stock	▪ A conversion right reduces the required yield
Seniority & Collateral	▪ Debentures (debt with no collateral) is riskier than secured debt, all other things equal	▪ Better seniority and/or collateral reduces the required yield
Transferability	▪ The debt may be restricted in its transferability to someone other than the original creditor	▪ Restrictions on transferability require a yield premium
Term/Maturity	▪ The debt may have a shorter or longer time to maturity	▪ A longer term requires a yield premium
Tax Status	▪ Interest earned on most municipal obligations is exempt from federal (and some state) taxation	▪ A debt security subject to income taxation will require a higher yield than a non-taxable debt security

Private Promissory Notes

- Private promissory notes are debt instruments that are frequently utilized for the transfer of wealth between family members or their entities.
- The yields of rated publicly traded bonds are often not applicable without significant adjustments.
  - Market interest rate for private promissory notes can be two or three times higher than rated corporate bond rates, typically 7% to 12%.*
- Interest rates from publicly traded Business Development Companies (BDCs) may provide a better comparison.
  - Their assets are comprised of senior secured, second lien and mezzanine debt issued by closely held entities.

* Bruce A. Johnson, "Determining the FMV of Small Privately Held Promissory Notes," *Business Valuation Update,* Vol. 25, No. 7, (July 2019), pp. 1–6.

Private Promissory Notes (cont.)

- The market yield of BDCs or their internal lending rates can be used as a base rate for determining an appropriate market rate of interest.
  - Investment yields of BDCs typically range from 7% to 16%.
- To the base rate, the appraiser should add an additional risk premium, usually 2% to 6%, considering the following factors:
  - Horizon Risk
  - Amortization Structure
  - Collateral
  - Marketability
  - Payment History
  - Protective Covenants
  - Personal Guarantee
- Market rates for private notes typically range from 12% to 25%.*

* Bruce A. Johnson, "Determining the FMV of Small Privately Held Promissory Notes," *Business Valuation Update,* Vol. 25, No. 7, (July 2019), pp. 1–6.

Summary

- Debt instrument valuations are required for a wide range of purposes.
- The debt valuation process includes:
  - Analysis of the debt to determine the amount and timing of cash flows.
  - Assessment of cash flow risk using quantitative and qualitative analysis.
  - Comparison with publicly traded debt securities similar in debt rating and nature in order to estimate an appropriate market yield.
- A calibration exercise can also be undertaken to determine a relative adjustment to the debt issuer's market yield.
- Any embedded option-like features should be considered and captured via appropriate valuation methods.

SECTION 4

Review Questions

Practice Question 1

Q Which of the following differences between debt and equity are true?

A. Debt is senior to equity in liquidation and bankruptcy priority

B. Interest expense is tax-deductible, but dividends are not

C. Debt is a contractual obligation of the issuer, but equity is a residual claim on assets

D. All of the above

Practice Question 2

Q If a debt security is convertible into the entity's underlying common stock, a buyer of such debt would?

A. Demand a higher yield because common stock is riskier than debt

B. Demand a higher yield because of the loss of principal repayment in the event of conversion

C. Accept a lower yield since a conversion feature increases the investors potential upside return

D. A conversion feature does not affect the required yield on debt

Practice Question 3

Q Which of the following best describes the concept of "yield to worst" for a ten-year note?

A. If held to maturity the expected yield would be 6%

B. If called in year five, the expected yield would be 4%

C. If converted prior to maturity, the expected yield would be 15%

Practice Question 4

Q An entity has issued a non-convertible debt security with a face value of $100 million and a coupon of 4.0%. In which situation will the fair market value of the debt will greater be $100 at issuance?

A. If the required market yield is 6.0%

B. If the required market yield is 5.0%

C. If the required market yield is 4.0%

D. If the required market yield is 3.0%

Practice Question 5

Q Which of the following methods are commonly used to value debt securities?

A. Sum-of-the parts analysis

B. Calibration and benchmarking analysis

C. Discounted cash flow analysis

D. Guideline public company analysis

SECTION 5

Complex Capital Structures

Topics to be Covered

- Introduction
- Where are Complex Capital Structures Encountered?
- Considerations Before Equity Allocation
- Overview of Equity Allocation Methods
- Case Studies
    1. Current Value Method
    2. Probability-Weighted Expected Return Method
    3. Option Pricing Method
- Comparison of the Equity Allocation Methods
- Common Equity Allocation Pitfalls

Introduction

- A simple capital structure consists only of common stock.
  - The value of a share can be determined simply by dividing the total equity value by the number of shares.
- A complex capital structure might include multiple classes of common and preferred equity, options, warrants, or other convertible instruments.
  - Simply dividing by the number of shares will fail to capture the unique rights, privileges, and preferences associated with the various equity classes.
  - Rather, each securities' economic rights must be separately considered.
- While there are numerous situations requiring the allocation of value among a complex capital structure, we will focus on analyses for share-based compensation purposes (ASC 718).

Where are Complex Capital Structures Encountered?

- Early-stage companies typically rely on venture-style equity financing (rather than traditional debt) due to their risk profile.
- As a result, early-stage companies often have complex capital structures.
  - Common industries include software, healthcare, life sciences, consumer goods and services, and consumer media.
- Early or development stage companies generally progress through various well-defined stages.
- These stages highlight key risk considerations, and in many cases are consistent with certain specific allocation methodologies, which may change as the company migrates from one stage to the next.

Stages of Enterprise Development

Stage	Description
1	Enterprise has no product revenue to date and limited expense history, and, typically, an incomplete management team with an idea, a plan, and possibly some initial product development. Typically, seed capital, or first-round financing, is provided during this stage by friends and family, angels, or venture capital firms focusing on early-stage enterprises, and the securities issued to those investors are occasionally in the form of common equity but are more commonly in the form of preferred equity.
2	Enterprise has no product revenue but substantive expense history because product development is under way, and business challenges are thought to be understood. Typically, a second or third round of financing occurs during this stage. Typical investors are venture capital firms, which may provide additional management or board of directors' expertise. The typical securities issued to those investors are in the form of preferred equity.
3	Enterprise has made significant progress in product development; key development milestones have been met (for example, hiring of a management team); and development is near completion (for example, alpha and beta testing), but generally, there is no product revenue. Typically, later rounds of financing occur during this stage. Typical investors are venture capital firms and strategic business partners. The typical securities issued to those investors are in the form of preferred equity.
4	Enterprise has met additional key development milestones (for example, first customer orders or first revenue shipments) and has some product revenue, but it is still operating at a loss. Typically, mezzanine financing rounds occur during this stage. Also, it is frequently in this stage that discussions would start with investment banks for an initial public offering (IPO).
5	Enterprise has product revenue and has recently achieved breakthrough measures of financial success, such as operating profitability or break-even or positive cash flows. A liquidity event of some sort, such as an IPO or a sale of the enterprise, could occur in this stage. The form of securities issued is typically all common equity, with any outstanding preferred converting to common upon an IPO (and perhaps also upon other liquidity events).
6	Enterprise has an established financial history of profitable operations or generation of positive cash flows. Some enterprises may remain private for a substantial period in this stage. An IPO could also occur during this stage.

Source: *Accounting & Valuation Guide: Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (New York: AICPA, 2013), Table 2-1, ¶ 2.03. Used with permission.

Considerations Before Equity Allocation

- Equity allocation logically requires that the business's total equity value be established first.
- However, there are some exceptions to this process:
  - The probability-weighted expected return method (PWERM) combines the equity valuation and allocation process into a single step.
  - The backsolve method starts with a recent transaction price in one equity class to imply an overall equity value which can then be used to allocate value to a different equity class.
- These methods will be discussed later in this section.

Consideration of Economic and Control Rights

- Preferred and common equity classes have several differences, including those listed below.
- Since these rights will shape the equity allocation method used, it is important to have a solid understanding of the rights of each equity class.
- Frequently encountered preferred equity rights are summarized below.

Economic Rights	Control Rights	Contractual Rights
• Liquidation preferences • Preferred dividends • Redemption rights • Conversion rights • Antidilution rights	• Board representation • Veto rights • Class voting rights	• Registration rights • Drag-along rights • Co-sale (or tag-along) agreements • Rights of first refusal • Rights of first offer • Information rights • Pay-to-play provisions

Overview of Equity Allocation Methods

- There are three primary equity allocation methods:

Method	Brief Description	Most Appropriate When
Current Value Method	Divide the total equity value by the number of securities	• Liquidation is considered imminent
Probability Weighted Expected Return Method	A scenario-based method whereby the business (and equity class) value is estimated under several discrete future outcomes, discounted to present value, and probability weighted	• At any stage of development • When information is available to support assumptions
Option Pricing Method	The firm's future equity value is modelled assuming a lognormal distribution of outcomes, typically using the Black-Scholes method	• At any stage of development • Future outcomes are difficult to predict

- A "hybrid" method would incorporate aspects of several methods.
- Depending on the company’s stage of development, the usage of certain methodologies may be considered more or less appropriate.

Case Study Assumptions

- The four allocation methods will be introduced via a case study, with consistent assumptions used throughout:

Preferred Equity	One class, 1,500,000 shares outstanding, issuance price of $1.00 per share, liquidation price of $1.00 per share, convertible into common equity on a 1-to-1 basis at the original price of $1.00
Common Equity	One class, 1,000,000 shares outstanding
Options on Common Equity	100,000 options with an exercise price of $0.43 per share
Total Equity Value	Appraised total equity value of $1,800,000. Estimated equity volatility of 50%

Case Study Framework

- Case Study #1 will introduce the simple allocation within the CVM.
- Case Study #2 introduces the concept of multiple discrete scenarios in the context of the PWERM.
- Case Study #3 expands to infinite scenarios in the context of OPM.
- The differences between the allocation methods reside in:
  - The timing of the allocation, and
  - The number of scenarios considered.

Case Study #1: CVM

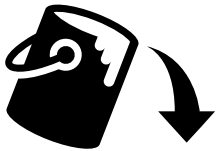
- CVM assumes a liquidation event occurs at or very near the valuation date. It ignores the "optionality" of common stock.
- CVM employs a straightforward liquidation (i.e., "waterfall") process, with three steps:
  1. Determine the total value of the business (e.g., MVIC, EV, TIC).
  2. Determine the equity value of the business.
  3. Allocate the equity value to each class of equity.
- The value distributed to each equity class is a function of amount available to distribute and each security's contractual rights and seniority.

Case Study #1: CVM (cont.)

- CVM assumes each securityholder would exercise any available alternatives to maximize their liquidation proceeds.
  - E.g., a convertible preferred equity holder with a senior claim would first choose to receive the greater of their liquidation preference or their conversion value, depending upon which alternative would result in the higher payoff.
- After the senior security maximizes their payoff, the residual value of distribution proceeds would then be available to the remaining securities.
- This concept is commonly referred to as a waterfall analysis.

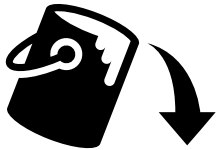
Equity Waterfall Example

Company is sold for $250 million



Preferred A is paid its $150 million liquidation preference. $100 million remains available.

Breakpoint 1 = $150



Preferred B is paid its $75 million liquidation preference. $25 million remains available.

Breakpoint 2 = $225

$25 million residual proceeds available for common stockholders.

Case Study #1: CVM (cont.)

- CVM is easy to use and explain
- However, because CVM assumes a liquidation event, and distribution of firm value, it does not account for potential value change associated with the passage of time (i.e., "option" value).
- Think of a business with a total value of $50 million, and $60 million of preferred equity. Is the common stock worthless? Only if you liquidate today. It not, the common equity has option value.
- Thus, the use of CVM should be limited in practice to when:
  - A liquidity (distribution) event is imminent, or
  - When an enterprise is at such an early-stage that no material progress has been made on the enterprise's business plan.

Case Study #1: CVM – Breakpoints

- To allocate the assumed total equity value of $1,800,000, the first step is to determine how the different investors would behave. E.g.:
  - At what point would the preferred holders choose to forego their $1,500,000 liquidation preference and convert to common at the $1.00 conversion price?
  - At what point would the option holders exercise at the $0.43 strike price?
- We will refer to this inflection point as a "breakpoint."
  - A breakpoint is the value of total equity at which there is a change in the distribution of liquidation proceeds.
  - Breakpoints are the fundamental building blocks of an equity allocation waterfall.

Case Study #1: CVM – Breakpoint #1

- The first breakpoint in our example is $1,500,000, the liquidation preference of the preferred equity.
  - When the equity value is less than $1,500,000, all value would be allocated to the preferred equity holders.
  - Although the preferred equity holders *could* convert below this price, it would be irrational to do so as it would result in a lower payout.
- Once firm value exceeds the first breakpoint, value flows to the next most senior security—in this case, the common equity holders.
- As a result, preferred equity holders receive 100% of distributions up to first breakpoint, and common equity holders receive 100% of the distributions of firm value thereafter up to the second breakpoint.

Case Study #1: CVM – Breakpoint #2

- In this example, two potential actions could be taken if the firm value were great enough:
  - Preferred equity holders could convert into common shares at 1-to-1 conversion ratio (i.e., at the liquidation preference of $1.00).
  - Option holders could exercise their options at the $0.43 strike price.
  - Common equity holders in this example have no choices; they receive the residual based on the choices of other senior equity classes.
- For any share price above $0.43 and below $1.00, the option holders would exercise, while the preferred equity holders would do nothing.
  - Any conversion would leave them without their $1.00 liquidation preference and common equity worth less than $1.00 per share.

Case Study #1: CVM – Breakpoint #2

- The next step is to calculate the portion of total equity value solely allocated to common equity holders after the first breakpoint and before the second breakpoint (i.e., between $0.00 and $0.43).
  - $\frac{Incremental\ value}{1{,}000{,}000} = (\$0.43 - \$0.00) = \$430{,}000$
- The second breakpoint is equal to the incremental value added to the first breakpoint (i.e., breakpoint #2 = $1,500,000 + $430,000 = $1,930,000).
- A simple math check ensures breakpoint #2 is calculated properly:
  - The $1,930,000 value would first be allocated toward the $1,500,000 liquidation preference, leaving a residual amount of $430,000.
  - The residual amount would then be distributed to 1,000,000 shares of common equity resulting in a common equity price per share of $0.43.

Case Study #1: CVM – Breakpoint #3

- The next step is to calculate the portion of total equity value solely allocated to common equity holders (including exercised options) after the second breakpoint (i.e., between $0.43 and $1.00).
  - $\frac{Incremental\ value}{1{,}100{,}000} = (\$1.00 - \$0.43) = \$627{,}000$
- The number of options is added to the common shares outstanding to derive the total number of common share equivalents (CSEs), 1,100,000.
- The second breakpoint is equal to the incremental value added to the first breakpoint (i.e., breakpoint #3 = $1,930,000 + $627,000 = $2,557,000):
  - One can confirm the common price per share at that level would be $1.00 by adding the $43,000 option exercise proceeds to the total of $2,557,000 and dividing the result by the total 1,500,000 CSEs.

Case Study #1: CVM – Breakpoint Interpretation

Equity Value	Description
$0 to $1,500,000	• Equity value paid in the form of a liquation preference to preferred equity.
$1,500,000 to $1,930,000	• $1,500,000 liquidation preference paid to preferred equity. • Residual amount in excess of $1,500,000 paid to common equity.
$1,930,000 to $2,557,000	• $1,500,000 liquidation preference paid to preferred equity. • The options are exercised. The holders of the options pay strike price of $43,000 to the company. • The residual and options strike price are allocated to common equity and options on a pro-rata basis.
$2,557,000 +	• The options are exercised. The option holders pay strike price of $43,000 to the company. • The preferred equity converts into common equity. • The equity value and options strike price are allocated to preferred equity, common equity and options on a pro rata basis.

Case Study #1: CVM – Results

Equity value	$1,800,000
Options strike price	0
Equity value plus strike price	**$1,800,000**
Less: liquidation preference	1,500,000
Residual	**$300,000**
Preferred equity	0
Common equity	1,000,000
Options	0
Total shares	**1,000,000**
Residual per share	$0.30
Preferred equity value	$1,500,000
Common equity value	$300,000
Options value	$0.00
Total	**$1,800,000**

Note that the options are estimated to be worth zero. CVM captures the intrinsic value of the options, but not the option value, because of the assumption of immediate liquidation.

Case Study #2: PWERM

- PWERM is a scenario-based allocation method that simultaneously values the entity and allocates value among the various classes.
- The steps, in order of application, are summarized below:
  1. Determine the possible future scenarios for the business.
  2. Estimate the future equity value under each scenario.
  3. Allocate the future equity value to each share class under each scenario.
  4. Discount the expected future equity value allocated to each share class to present value using a risk-adjusted discount rate.
  5. Weight each possible scenario by its respective probability.
  6. Divide the present value allocated to each share class by the respective number of shares outstanding.

Case Study #2: PWERM (cont.)

- The analyst must exercise professional judgment regarding the reasonableness of management's assumptions.
- The challenges of using PWERM include determining:
  - How many and what scenarios should be considered.
  - Over what time period the scenarios would play out.
  - The projected business and equity exit value under each scenario.
  - Support for the future outcomes and assumptions.
  - What risk-adjusted yield to employ to determine present value.
- PWERM is more often appropriate when a specific liquidity event is expected to occur soon (e.g., 12 to 18 months), making the range of outcomes relatively easy to predict.

Case Study #2: PWERM (cont.)

- To illustrate, assuming the current total equity value is unknown.
- Company value is solved for first and then allocated to the equity classes for each of the following three scenarios that have equal probability:
  1. Sale of the company in one year at a value of $1,400,000 (Liquidation).
  2. Sale of the company in three years at a value of $2,200,000 (Sale).
  3. Initial public offering in five years at a value of $5,000,000 (IPO).
- Assume that the appropriate risk-adjusted equity discount rate is 13.5%.

Case Study #2: PWERM (cont.)

- This results in a probability-weighted discounted equity value under all three scenarios equal to approximately $1,800,000, consistent with the prior CVM example.

(1)	(2)	(3)	(4)	(5)	(6)
Scenario	**Payoff**	**Years in Future**	**Present Value @ 13.5%**	**Probability**	**= (4) × (5)**
Liquidation	$1,400,000	1	$1,233,955	33.3%	$411,318
Sale	2,200,000	3	1,506,386	33.3%	502,124
IPO	5,000,000	5	2,659,659	33.3%	886,544
Probability-weighted discounted equity value (rounded)					**$1,800,000**

Case Study #2: PWERM (cont.)

- The amount allocated to each security is shown below.

	Liquidation	Sale	IPO
Expected time to exit	1 year	3 years	5 years
Preferred equity	$1,400,000	$1,500,000	$2,909,423
Common equity	$0	$675,455	$1,939,615
Options	$0	$24,545	$150, 962

Case Study #2: PWERM (cont.)

- The future values are discounted to present value at a present value discount rate equal to 13.5%, as shown below.

	Liquidation	Sale	IPO
Probability	33.3%	33.3%	33.3%
Preferred equity	$1,233,955	$1,027,081	$1,547,615
Common equity	$0	$462,498	$1,031,743
Options	$0	$16,807	$80,301

Case Study #2: PWERM (cont.)

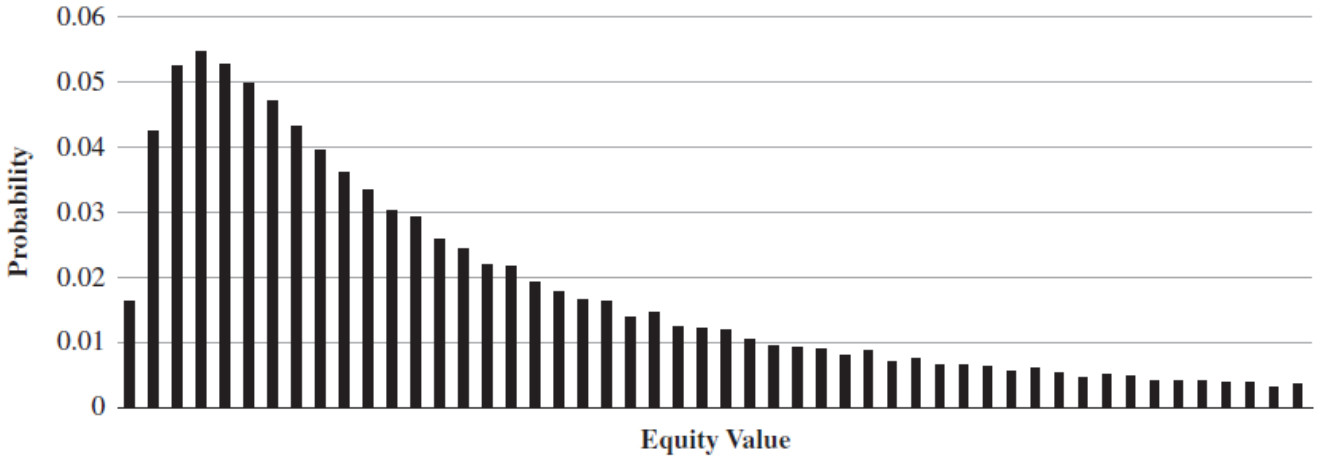
- The discounted values are probability-weighted to get the values of each security and divided by the number of shares to get the values per share.
- Preferred Equity:
  - Total Value $= \left(\frac{1}{3} \times \$1{,}233{,}955\right) + \left(\frac{1}{3} \times \$1{,}027{,}081\right) 1 + \left(\frac{1}{3} \times \$1{,}547{,}615\right) = \$1{,}269{,}550$
  - Per Share Value $= \$1{,}269{,}550 \div 1{,}500{,}000 = \$0.85$
- Common Equity:
  - Total Value $= \left(\frac{1}{3} \times \$0\right) + \left(\frac{1}{3} \times \$462{,}498\right) + \left(\frac{1}{3} \times \$1{,}031{,}743\right) = \$498{,}080$
  - Per Share Value $= \$498{,}080 \div 1{,}000{,}000 = \$0.50$
- Options:
  - Total Value $= \left(\frac{1}{3} \times \$0\right) + \left(\frac{1}{3} \times \$16{,}807\right) + \left(\frac{1}{3} \times \$80{,}301\right) = \$32{,}369$
  - Value per share $= \$32{,}369 \div 100{,}000 = \$0.32$

Case Study #2: PWERM (cont.)

- Note that the values allocated under PWERM are different from the values calculated in CVM.
- This is because CVM assumes a distribution is imminent and implicitly ignores the nonlinear payoff structure and optionality of the securities.
- Unlike CVM, PWERM produced a positive value for the options because the method considers a range of outcomes to allocate the value.

Case Study #3: OPM

- One can take the discrete PWERM analysis a step further and model the equity value outcomes as a continuous probability distribution.
- The splitting of equity value distribution into small intervals, assuming a lognormal probability distribution, an equity volatility of 50% and a distribution in year 5 is illustrated below:



Case Study #3: OPM – Key inputs

- OPM is particularly sensitive to two input assumptions—term (or time to an exit event) and volatility of possible equity values.
  - The time to exit will typically be supported by discussions with management, other advisors, industry information, and general market conditions.
  - Volatility estimates are typically based on an analysis of the equity volatility for identified guideline public companies.
  - The analyst will typically want to match the volatility look-back period with the expected time to exit of the subject company.
  - If available, would also consider any available forward estimates for time periods that are consistent with the time to exit.

Case Study #3: OPM (cont.)

- Fortunately, we do not have to run a PWERM with all the discrete outcomes shown in the prior figure.
- The Black–Scholes model provides a simple solution to calculating the payoffs associated with specific regions of the distribution.
- In the OPM, the possible equity values at time of exit are assumed to be lognormally distributed.
- The OPM treats the securities in the capital structure as claims on the assets of the company.
- Like the PWERM, the OPM assumes the assets are sold at some point in the future.

Case Study #3: OPM (cont.)

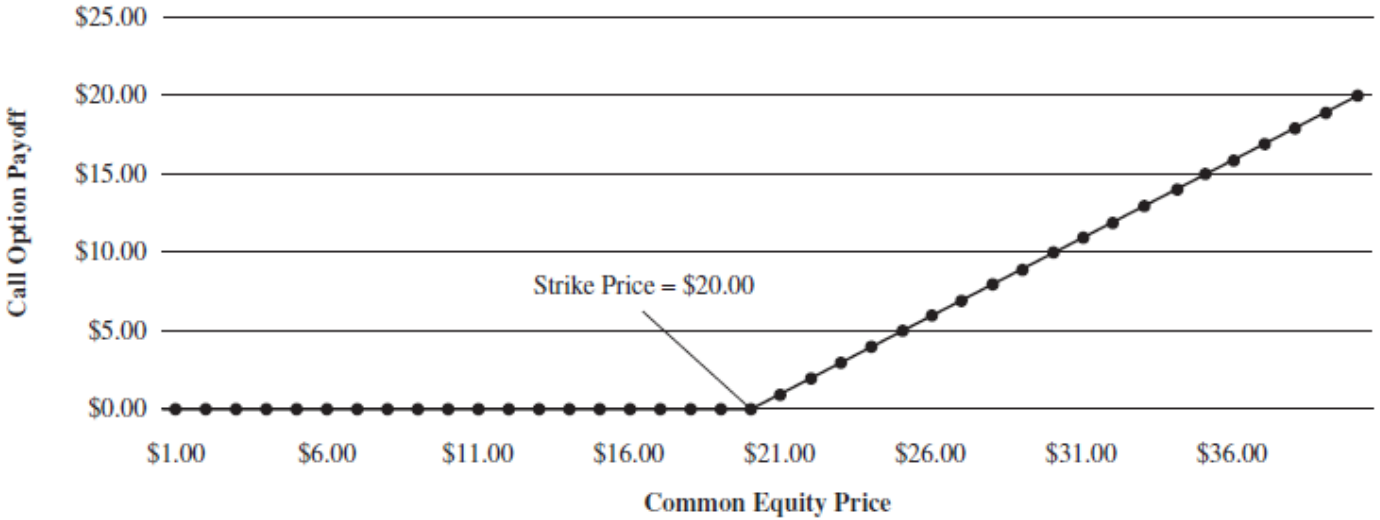
- The example will illustrate how OPM can estimate common equity value in a company with (only) debt and common equity.
- The values calculated in the OPM are different from the values in the PWERM because the term and equity value outcomes do not match, and because the OPM considers an infinite number of scenarios.
- For this example, we will assume the company has a simple capital structure composed of debt and common equity to illustrate the method in its most basic form.

Case Study #3: OPM Assumptions

- The company's enterprise (i.e., total asset) value is $2,000,000.
- The company has $1,500,000 of debt outstanding.
- The volatility of asset values is estimated at 30%.
- A liquidity event (e.g., IPO or sale) is expected to occur in year 3.
- The three-year risk-free rate is 2.0%.

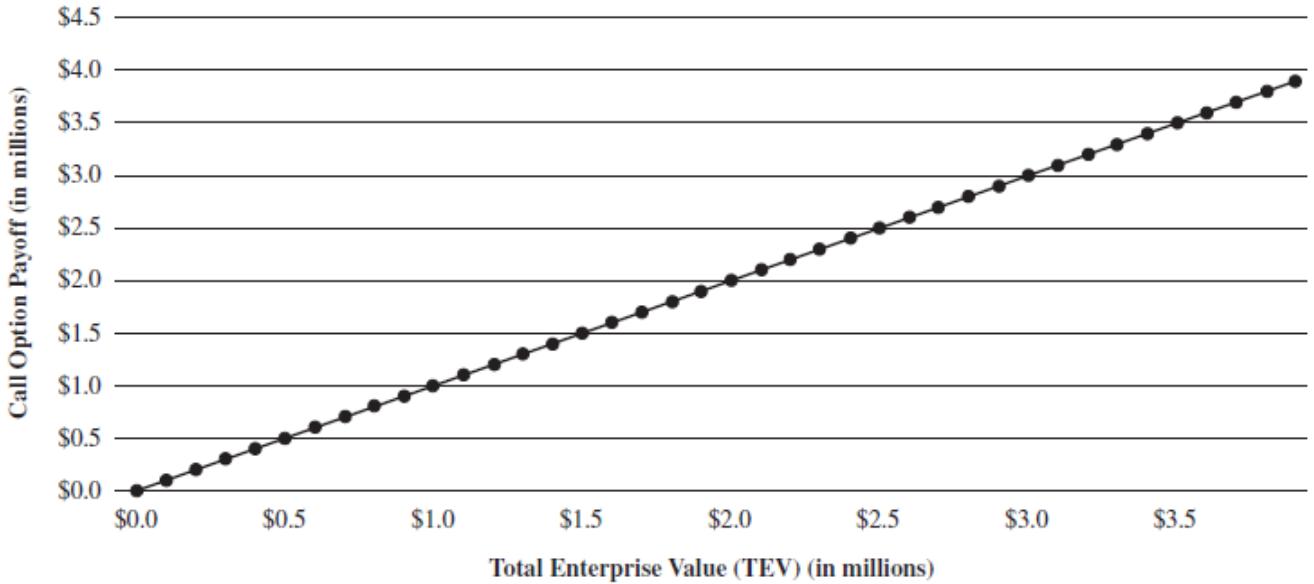
Case Study #3: OPM – Basic Framework (cont.)

- Note the payoff structure of a European call option on a share of common equity with a strike price of $20 can be plotted at maturity.



Case Study #3: OPM – Basic Framework (cont.)

- One can model the company's total enterprise value as a European call option on the assets of the company with a strike price of zero.



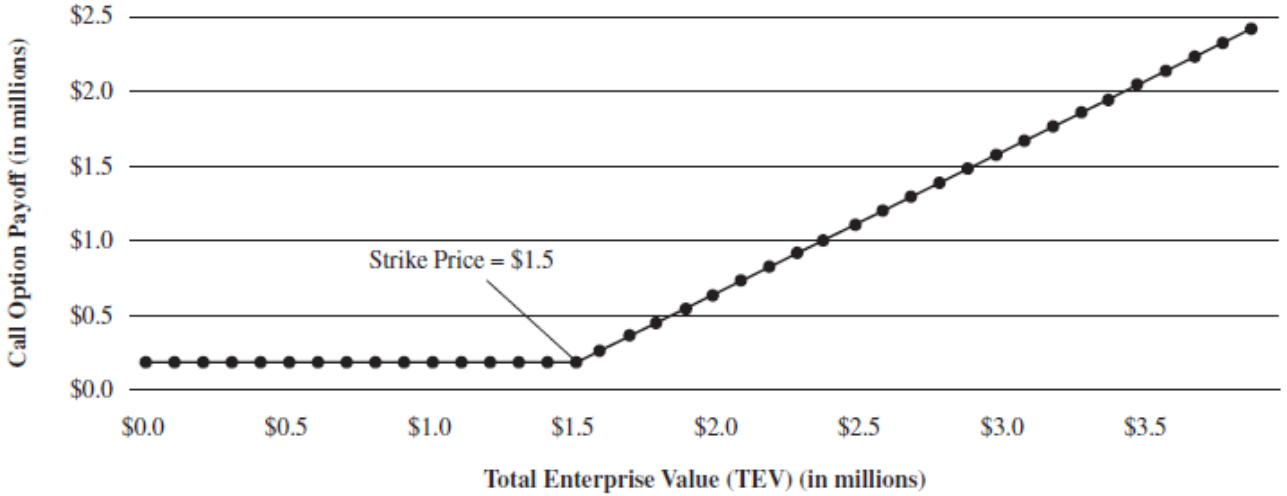
Case Study #3: OPM – Basic Framework (cont.)

- When the strike price is set equal to zero, the payoff structure of the option is the asset value. In our example, that option is worth $2,000,000 and can be modeled using Black–Scholes.

	Call 0
TEV (MVIC)	$2,000,000
Strike price	$0
Volatility	30.0%
Risk-free rate	2.0%
Expected term	3.0 years
Option value	$2,000,000

Case Study #3: OPM – Basic Framework (cont.)

- One can model common equity in a similar way—as a call option with a strike price matching the debt owed by the company when the assets are sold. In this example, that amount is $1,500,000.



Case Study #3: OPM – Basic Framework (cont.)

- In this case, the common equity value can be modeled as a call option.

	Call 1
TEV (MVIC)	$2,000,000
Strike price	$1,500,000
Volatility	30.0%
Risk-free rate	2.0%
Expected term	3.0 years
Option value	**$716,358**

Case Study #3: OPM – Basic Framework (cont.)

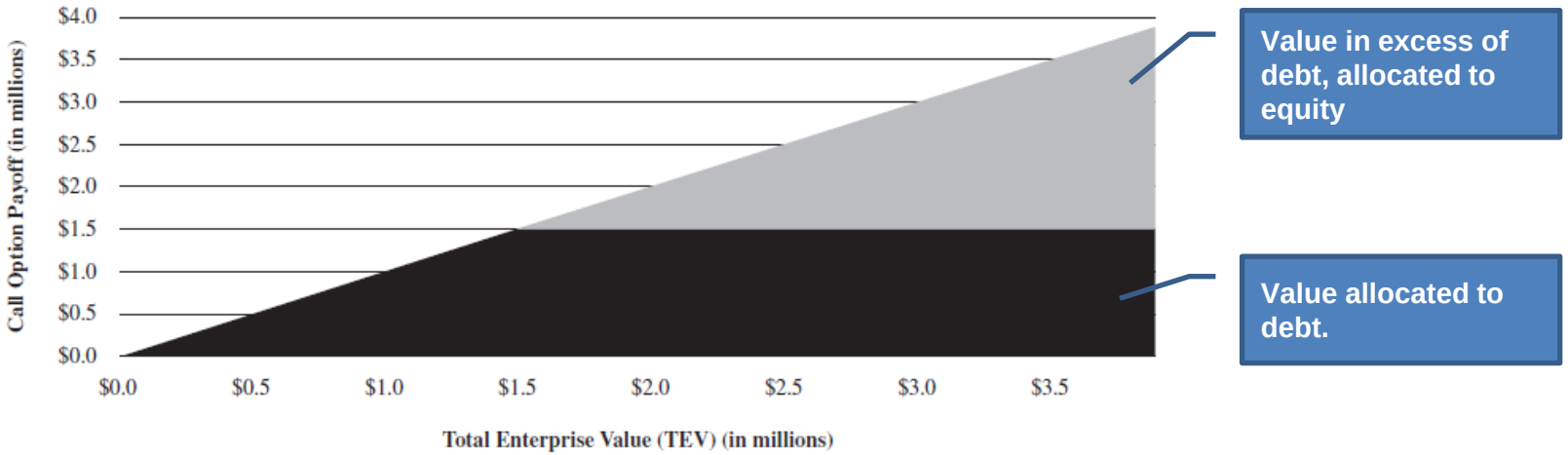
- The common equity is estimated to be worth $716,358.
- Debt value can be calculated by subtracting the value of the second call option (i.e., common equity value) from the value of the first call option.

	Call 0	Call 1
TEV (MVIC)	$2,000,000	$2,000,000
Strike price	$0	$1,500,000
Volatility	30.0%	30.0%
Risk-free rate	2.0%	2.0%
Expected term	3.0 years	3.0 years
Option value	**$2,000,000**	**$716,358**
Common (call 1)		$716,358
Debt (Call 0 minus Call 1)		$1,283,642

Note the debt is estimated to be worth less than the projected amount owed at maturity because there is a significant probability that the projected TEV in year 3 would fall below that amount.

Case Study #3: OPM – Basic Framework (cont.)

- This example illustrates a fundamental building block of OPM.
  - Any region of the lognormal distribution can be modeled as either a long call option or a short call option.



Comparison of Equity Allocation Methods

- A convenient way to compare the allocation methods and assess their relevance is to rank them along four attributes: applicability, subjectivity, flexibility, and complexity.

	Applicability	Subjectivity	Flexibility	Complexity
CVM	Low	None	None	Low
PWERM	High	High	High	Moderate
OPM	High	Low/Moderate	Moderate	High
Hybrid method	High	High	High	High

Comparison of Equity Allocation Methods (cont.)

- Each method has its advantages and disadvantages:
  - CVM is simple to implement, requires no judgment, and any analyst presented with the same set of facts would reach the same conclusions.
  - However, CVM is applicable in very limited circumstances.
  - PWERM is flexible and can be applied to almost any situation.
  - However, PWERM involves a many subjective assumptions that are difficult to reconcile and/or support.
- Therefore, PWERM is considered most appropriate when:
  - Management can estimate probable discrete exit events.
  - Valuing later stage companies, (e.g., closer to a planned IPO filing date).
  - The lognormal probability distribution assumption of OPM is inconsistent with expectations, requiring a tailored set of discrete scenarios.

Comparison of Equity Allocation Methods (cont.)

- Unlike PWERM, OPM involves making fewer assumptions that can more readily be supported with publicly available information.
- OPM is, however, complex to implement, difficult to explain, and does not provide as much flexibility as PWERM.
- A hybrid method would combine characteristics of various methods and thus rank high along all four attributes.

Comparison of Equity Allocation Methods (cont.)

- A summary of the shortcomings of the different allocation methods is shown below.

CVM	OPM	PWERM	Hybrid Methods
Not forward looking Fails to consider optionality of security	Difficult to explain and understand Sensitivity to assumptions Assumes single estimate of liquidity event timing Unable to capture certain dilutive impacts Assumes equity value follows log-normal distribution Doesn't capture "milestone" value changes	Complex to implement Requires detailed assumptions about future outcomes Considers only specific set of discrete outcomes Subject to significant judgment	Similar to OPM and PWERM

Common Equity Allocation Pitfalls

- There are several pitfalls that analysts may fall victim to, leading to distorted security values and difficulties in audit review.
- There are two primary causes of selection of an incorrect method:
  - Pinpointing the stage of development.
  - Identifying expected outcomes.
- Within the allocation, several issues can lead to problematic allocations:
  - Failing to capture appropriate economic rights.
  - Bundling options with different strike prices.
  - Excluding warrants and options inside OPM.
  - Including exercise proceeds.
  - Erroneous or unsupported inputs.

SECTION 5

Review Questions

Practice Question 1

Q What type of companies are most likely to have a complex capital structure?

A. Companies with audited financial statements

B. Companies with employee stock ownership plans

C. Companies financed with venture capital

D. Companies with a single shareholder/owner

Practice Question 2

Q The stages of enterprise development can be helpful by?

A. Providing a framework for evaluating an entity's stage of life

B. Allowing appraisers to definitively select the appropriate valuation method

C. Enabling the selection of a cost of capital model

D. Providing a framework to evaluate the risk and uncertainty of an entities' business plan and cash flows

Practice Question 3

Q The Current Value Method can provide a useful allocation of value when an entity?

A. Is expecting a liquidity event in one year

B. Is expecting an imminent liquidity event

C. Has a simple capital structure (common stock only)

D. Is at a very early stage and has not raised outside capital

Practice Question 4

Q An advantage of the Probability-Weighted Expected Return Method is?

A. The use of continuous probabilities to consider all possible outcomes

B. The avoidance of having to estimate discount rates

C. The ability to back-solve for common stock value using evidence from recent preferred stock financing events

D. Relatively simple to model and explain

Practice Question 5

Q An advantage of the Option Pricing Model is?

A. The use of discrete probabilities avoids complex option calculations

B. The avoidance of assumptions related to future liquidity events (e.g., timing, amount, type)

C. Its simplicity makes explaining the model to clients and auditors relatively straightforward

D. Its ability to capture the option value of common stock

Practice Question 6

Q What are the first two "breakpoints" in the following capital structure?

Security	Shares Outstanding	Liquidation / Exercise Price
Series A Preferred Stock	2,000,000	$0.50
Series B Preferred Stock	5,000,000	$1.00
Common Stock Options	500,000	$2.00

A. $1 million; $5 million

B. $1 million; $6 million

C. $2 million; $7 million

D. $6 million; $7 million

SECTION 6

Fairness Opinions

Topics to be Covered

- Introduction
- Corporate Law Relevant to Fairness Opinions
- The Role and Duties of the Board of Directors
- Board Decisions in the Transaction Context
- Overview of Fairness Opinions
- Underlying Financial Analyses
- Scope of Work Issues
- Summary

Introduction

- In evaluating material corporate control transactions, a corporation's board of directors will often seek a "fairness" opinion.
  - E.g., a sale, merger, acquisition, leveraged buyout, leveraged recapitalization, going private transaction.
- A fairness opinion addresses the fairness, from a financial point of view, of the consideration to be received by the target company or its stockholders in the transaction, or to be paid by the buyer if involved on the buy-side.
- Fairness opinions are typically issued by an investment bank or a business valuation firm in certain situations.

Introduction (cont.)

- Fairness opinions serve important purposes:
  - Practical – by providing important information that enables the directors to make better informed decisions.
  - Legal – as indicia of the exercise of care by the corporation's board.
  - Information – as a supplement to the information made available to the corporation's shareholders.
- While fairness opinions are not required by regulation, law, or statute, they serve a vital role in a board's deliberation of a corporate transaction.
- Fairness opinion providers are well served to have a thorough understanding of relevant corporation law.

Corporate Law Relevant to Fairness Opinions

- State corporation law applies to both closely held and public corporations and is comprised of statutes and the body of case law.
- Certain federal laws applicable to public corporations:
  - Securities Act of 1933 – regulates public offerings and sales of securities.
  - Securities and Exchange Act of 1934 – addresses a variety of subjects, including requirements regarding periodic disclosure of information by companies with listed securities.
  - Neither directly regulates the management of a corporation.
  - Both laws mandate disclosure of many facets of a corporation's internal affairs.
- Various stock exchanges also have corporate governance requirements.
  - E.g., to list on NYSE or NASDAQ a majority of a company's board members must independent.

The Primacy of Delaware

- The commonwealth of Delaware has become the principal state of incorporation for large American corporations.
  - More than 65% of Fortune 500 entities are incorporated in Delaware.
- Delaware General Corporation Law (DGCL) is flexible and affords discretion to corporation management.
- Delaware has a sophisticated and efficient judicial system.
  - Specialized business court known as the Delaware Court of Chancery.
- Delaware has an extensive body of corporate law.
  - Provides a "roadmap" as to how corporate governance will be viewed.
  - Influential on other states.

The Role of the Board of Directors

- Stockholders in a Delaware corp. have important albeit limited rights:
  - Participate in annual and special meeting.
  - Nominate and elect directors.
  - Receive certain information about the corporation.
  - To approve actions by the board (e.g., sale of the corporation).
  - Assert so-called derivative claims on behalf of the corporation.
- Those powers are counterbalanced by their limited obligations and exposure to potential personal liability.
  - No legal duty to the corporation or their fellow stockholders.
  - No personal recourse for the corporation's debts.

The Role of the Board of Directors (cont.)

- The board is ultimately responsible for the management of the corporation's business and affairs.
- The board acts as a "supervisor" and delegates the day-to-day management of the business to the officers of the corporation.
- A board has the power to designate certain tasks to committees, e.g.:
  - Audit committee
  - Nominating committee
  - Compensation committee
- For public companies, SEC rules require such committees to consist of independent directors.

Directors' Fiduciary Duties

- Under Delaware law, directors have "fiduciary duties" to the corporation and its stockholders, consisting of:
  - The duty of loyalty.
  - The duty of care.
- These duties constitute the fundamental principles to which directors must adhere in managing the business of the corporation.
- These duties generally require that directors' paramount consideration is the best interests of the corporation and its stockholders.
- The DGCL does not directly address the nature and scope of directors' fiduciary duties, leaving that interpretation to the courts.

The Duty of Care

- Directors are required to perform their oversight duties in good faith:
  - In a manner that they believe to be in the best interest of the corporation
  - With such care "that a person in a like position would reasonably believe appropriate under similar circumstances."
- The directors need not be aware of every aspect of the corporation's business, but must:
  - Be reasonably informed as to material matters.
  - Be actively involved.
  - Inform themselves of all material and reasonably available information before making a business decision.
  - Act with the requisite degree of care in making such decisions.

The Duty of Care (cont.)

- Directors are generally allowed to rely on recommendations and advice of experts (e.g., investment bankers, attorneys) provided that such reliance is reasonable and in good faith.
- Such experts must be both qualified and independent.
- Directors need to probe and test an expert's assumptions, analysis, and conclusions.
- Directors' actions will be judged by a "gross negligence" standard.
  - E.g., in 1985, the board of Trans Union was found to be grossly negligent where the board approved the sale of the company after only a few hours of deliberation, without the advice of a financial advisor, and without the benefit of a fairness opinion.

The Duty of Loyalty

- Directors also owe a fiduciary duty of loyalty to the corporation and its stockholders, which requires they:
  - Act in good faith.
  - Act in the best interests of the corporation and its stockholders.
  - Refrain from receiving improper personal benefits.
- For instance, a director cannot:
  - Have an interest in a transaction being considered by the corporation.
  - Approve a transaction that benefits a controlling stockholder to the detriment of noncontrolling stockholders.
  - Abdicate their responsibility to the corporation by failing to act.

The Duty of Loyalty (cont.)

- A conflict of interest does not automatically result in a breach of the duty of loyalty.
  - Rather, it is how the director handles the conflict that matters.
- Duty of loyalty issues can be mitigated if actions are approved by a special committee comprised of disinterested and independent directors.
- Also, duty of loyalty challenges can be overcome where the directors and officers can demonstrate that a challenged transaction was "entirely fair" to the corporation and its stockholders.
  - "Entire Fairness" is Delaware's highest standard of review.
  - It shifts the burden of proof from plaintiff to defendant.

Good Faith

- A third duty of "good faith" is sometimes thought to apply to directors.
- The Delaware Supreme Court clarified that the duty of good faith is an element of the duty of loyalty and not an independent fiduciary duty.
- The Court also clarified that bad faith is not simply bad judgment or negligence but implies conscious wrongdoing and disregard for duties.
- A breach of the duty of good faith will result in personal liability for a director.

Fiduciary Duties Relative to Insolvent Companies

- Directors of *solvent* companies owe fiduciary duties of loyalty and care to the corporation and its stockholders, but not to the creditors or holders of preferred stock.
  - Creditors are presumed to be able to protect themselves contractually.
- When a corporation becomes insolvent, the board's fiduciary duties are to all the corporation's residual claimants.
- Accordingly, directors must continue to make decisions based on what they believe will be in the best interests of the corporation but with the additional consideration directed to the interests of creditors.

Board Decisions in the Transaction Context

- Directors' decisions are generally protected by the "business judgment rule" which presumes the directors:
  - "acted on an informed basis, in good faith, and in the honest belief that the action taken was in the best interests of the company."
- Accordingly, directors' decisions will be respected by the courts unless the directors:
  - Are interested.
  - Lack independence relative to the decision.
  - Do not act in good faith.
  - Act without a rational business purpose.
  - Failure to consider all material facts reasonably available.

The Business Judgment Rule

- A court will not second-guess the outcome of business decisions by holding a director personally liable for a mistake in judgment.
  - A lower threshold for negligence liability would unduly discourage a board from making necessary and inherently risky decisions.
- The business judgment rule recognizes that directors, rather than the courts, are generally best situated to make difficult business decisions.
- When the rule applies, a plaintiff will bear the burden of rebutting the presumption that the directors acted properly.
- Should a plaintiff succeed in rebutting the presumption, the burden then shifts to the directors to prove that the challenged action was "entirely fair."

Conflict Transactions and Going Private

- The business judgment rule will not protect directors who are not independent, or who are deemed to be interested.
- This risk is of the greatest concern to the courts in the context of so-called, going-private transactions.
  - Generally, a transaction in which a controlling or significant stockholder and/or the corporation's management and an outside investor acquires all of the corporation's stock held by the public.
  - Subject to the fiduciary issues described above.
  - Subject to Rule 13e-3 of the Exchange Act.

Entire Fairness

- If directors are denied the presumption of the business judgment rule, they will be required to establish the "entire fairness" of the transaction.
- The concept of entire fairness involves a two-pronged test against which an interested party transaction would be judged:
  - Fairness in a procedural sense (i.e., fair dealing) – pertains to the process that a board followed, the quality of the result, and the disclosures made.
  - Fairness in a substantive sense (i.e., fair price) – pertains to the economic and financial considerations relied upon when valuing the proposed transaction.
- The receipt of a fairness opinion can be a critical element convincing a court that a fair price was paid or received in a transaction.

Overview of Fairness Opinions

- Boards seek fairness opinions when evaluating material corporate control transactions (e.g., sale, merger, acquisition, buyout, recap, go private)
- A fairness opinion is not:
  - An opinion that the transaction the best alternative.
  - A substitute for the judgment of the board.
  - A valuation analysis or appraisal.
  - An evaluation of the business rationale underlying the proposed transaction.
  - A recommendation to proceed with the proposed transaction.
  - An opinion that the process was fair or reasonable.
- Typically delivered at the time that the board makes its decision to approve the proposed transaction.

Why do Boards Seek Fairness Opinions?

- There is no legal or statutory requirement to obtain a fairness opinion.
- Prior to the mid-1980s, fairness opinions were not common.
- Since *Van Gorkom* (1985), receipt of a fairness opinion has become a necessary and integral aspect of the board's decision-making process.
- Courts have looked with favor on a board's receipt of such an opinion in connection with its evaluation of M&A proposals.
- A fairness opinion provides an indication that the board was fully informed, and thereby accorded the presumption of the business judgment rule.

When do Boards Seek Fairness Opinions?

- Boards are typically advised to seek fairness opinions when they face decisions pertaining to corporate control transactions, particularly when:
  - The terms and conditions depart are not customary.
  - There is a lack of a competitive sale process.
  - There are multiple classes of equity with different rights.
  - A corporate affiliated is a party to the transaction.
  - The transaction involves a new line of business.
  - The transaction is driven by expected synergies.
  - Transactions involving potential conflicts of interest
  - Transactions involving fiduciaries (e.g., ESOPs).

What do Fairness Opinions Say?

- Fairness opinions tend follow a standard format, including:
  - Description of the transaction.
  - Description of the opinion requested.
  - Description of the review undertaken.
  - Description of the relevant assumptions, qualifications, and limitations.
  - Description of the opinion provider's additional roles, if any, in the transaction and associated fees.
  - Description of any past, current, and expected future materials relationships.
  - Description of who is entitled to rely upon the opinion.
  - The conclusion regarding fairness.

What do Fairness Opinions Say? (cont.)

- Typically, that the consideration to be paid or received in the transaction is fair from a financial point of view to a specified party.
  - The identity of that party is dependent upon the form of the transaction.
  - Typically, it is the party receiving or paying the transaction consideration.
- No objective metric has been established to determine what is meant by "fair from a financial point of view."
  - An offered price is generally deemed fair to a target if it falls *within or above* the valuation range for the target.
  - Conversely, an offered price is generally deemed fair to an acquirer if it falls *within or below* the valuation range for the target.
  - Note that a conclusion of "fair" does not indicate the "best price."

What do Fairness Opinions Say? (cont.)

- Fairness opinions are typically accompanied by a board book that details the underlying analyses conducted by the opinion provider.
- It is in these analyses that the meaning and worth of the fairness opinion lies and a well-advised board will carefully review the book in connection with their receipt of the fairness opinion.

Standards and Regulation

- Fairness opinions fall outside the purview of appraisal standards.
- FINRA member firms are required to follow FINRA Rule 5150 when issuing a fairness opinion provided to public stockholders, requiring:
  - Disclosure of any contingent compensation.
  - Disclosure of any material relationship.
  - Disclosure of whether the opinion was approved by a review committee.
  - Disclosure of information relied on and whether independently verified.
- Many consider Rule 5150 to represent industry best practices.
- Even nonmember firms are well-advised to be familiar with the rule.

SEC Disclosure Requirements

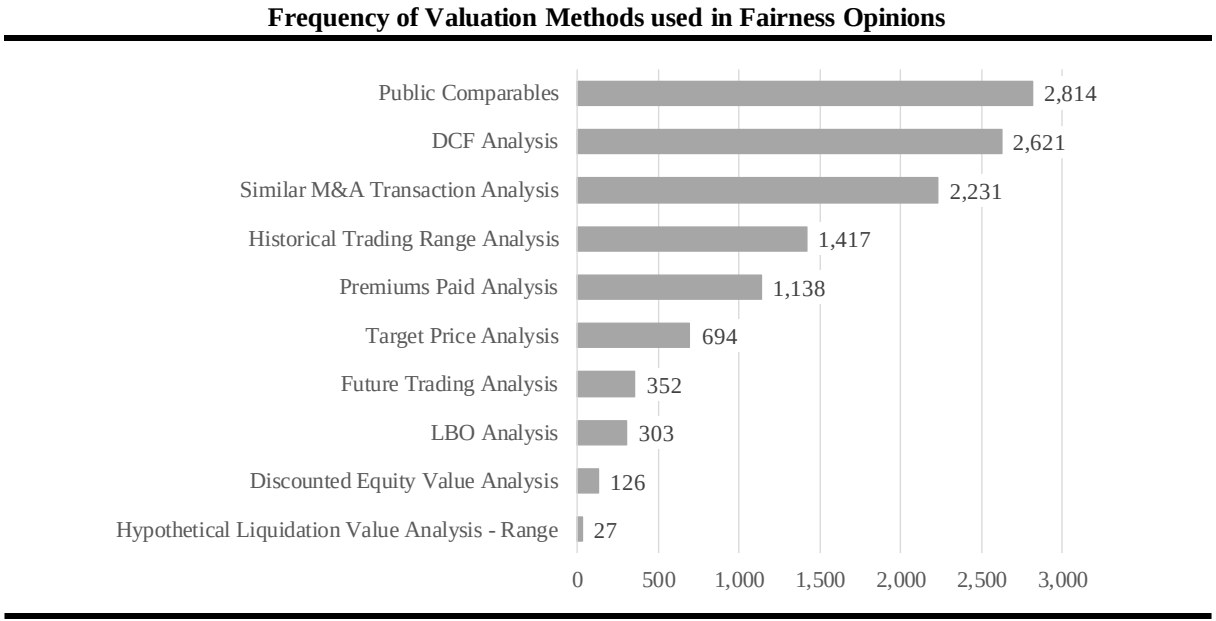
- The SEC requires fairness opinions and the underlying financial analyses to be material information that must be disclosed to public stockholders.
  - The analyses undertaken by the opinion provider.
  - The discount rates and terminal values used in DCF analyses.
  - The public companies referred to in selected companies analysis.
  - The transactions referred to in the selected transactions analysis.
- In a going private transaction, the filer must furnish any underlying written analyses (e.g., the board book) prepared by the opinion provider.
- Opinion providers regularly retain counsel to review the engagement letter, fairness opinion letter, board book, and description of the analysis.

Underlying Financial Analyses

- Financial analyses that enables the comparison of a range of values to the proposed consideration, commonly including:
  - Discounted cash flow analysis.
  - Guideline public company (selected companies) analysis.
  - Guideline transaction (selected transactions) analysis.
- Various other financial analyses are sometimes used:
  - Analysis of the proposed consideration.
  - Prior share price analysis.
  - Premiums-paid analysis.
  - Leveraged buyout analysis.
  - Present value of future share price analysis.

Underlying Financial Analyses (cont.)

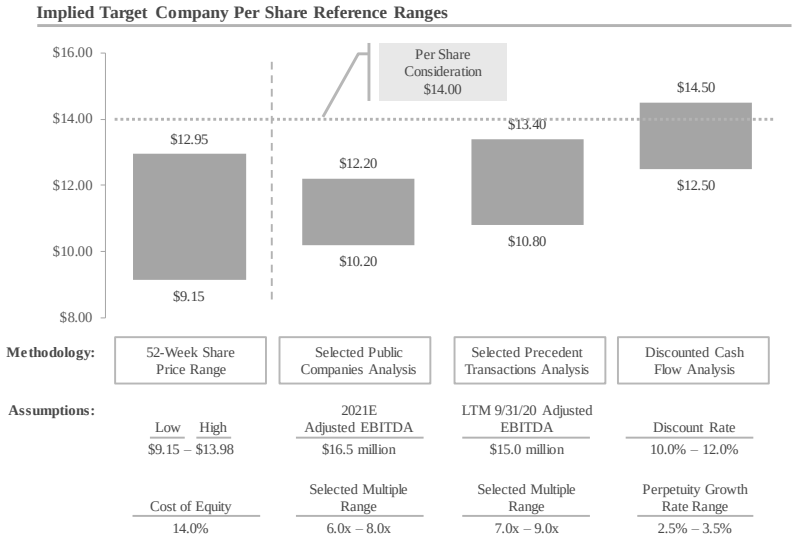
- A study of more than 3,000 publicly disclosed opinions found the other financial analyses were utilized with less frequency that the "core three."



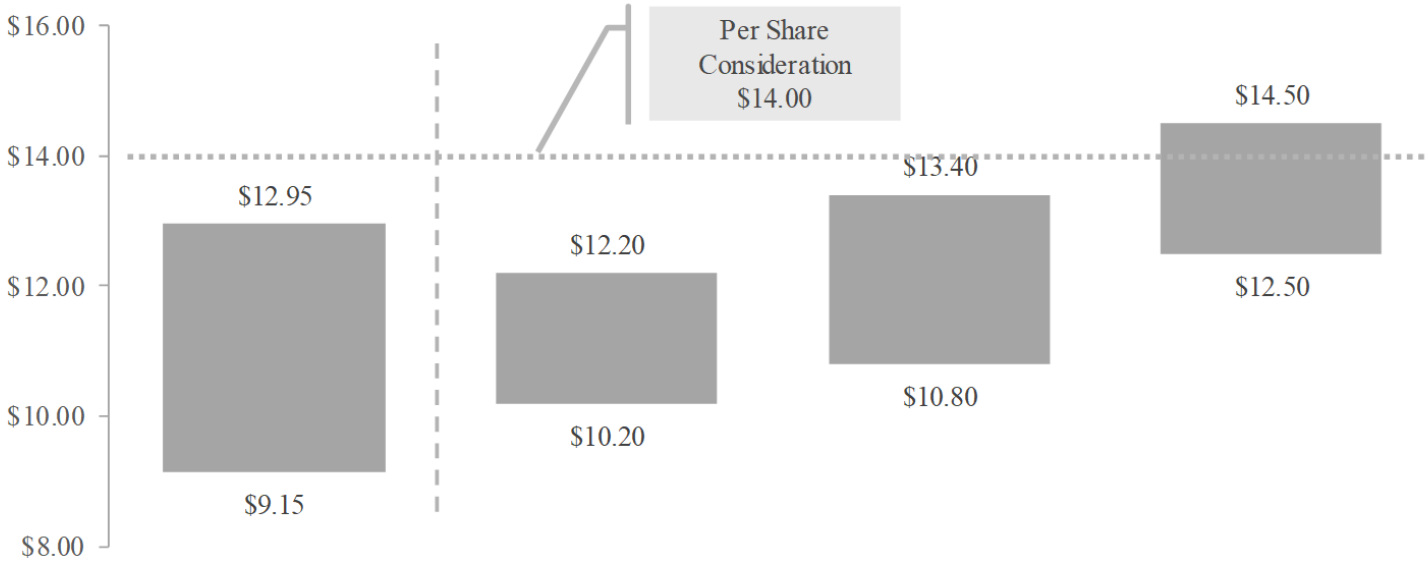
Source: Duff & Phelps, A Kroll Business, "In Defense of Fairness Opinions: An Empirical Review of Ten Years of Data" (2017). Used with permission.

Underlying Financial Analyses (cont.)

- The fairness of the proposed consideration is assessed by comparison to an indicated value range resulting from each valuation method.



Implied Target Company Per Share Reference Ranges



Methodology:	52-Week Share Price Range	Selected Public Companies Analysis	Selected Precedent Transactions Analysis	Discounted Cash Flow Analysis
Assumptions:	Low – High: $9.15 – $13.98	2021E Adjusted EBITDA: $16.5 million	LTM 9/31/20 Adjusted EBITDA: $15.0 million	Discount Rate: 10.0% – 12.0%
	Cost of Equity: 14.0%	Selected Multiple Range: 6.0x – 8.0x	Selected Multiple Range: 7.0x – 9.0x	Perpetuity Growth Rate Range: 2.5% – 3.5%

Scope of Work Issues

- Defining the concept of fairness:
  - Many believe a proposed consideration is fair if it falls within a range of reasonably determined fair market values of the securities to be transferred in the transaction.
  - Matthews & Lee provided this guidance:
    - The minimum level of financial fairness in a proposed transaction is a function of the amount that dissenting shareholders to the transaction could reasonably expect to obtain in a statutory appraisal action.[1]
  - Thus, a "fair price" is likely one that is within a reasonable range of fair market value and not less than the price that the shareholders would be awarded in an appraisal action.

1. M. Mark Lee and Gilbert E. Matthews, “Fairness Opinions,” in Robert F. Reilly and Robert P. Schweihs (eds.), *The Handbook of Advanced Business Valuation* (New York: McGraw-Hill, 2000), pp. 16–17.

Scope of Work Issues (cont.)

- Effective Date:
  - A fairness opinion speaks to the date of the opinion letter itself.
  - A fairness opinion is typically provided to the board at the time of its consideration of the transaction, generally well before any stockholder vote.
- Standard of Value:
  - A fairness opinion does not typically state a standard of value.
  - Following the guidance described above by Lee and Matthews, the applicable standard of value would appear to be fair value, or the analogous standard applicable to dissenting shareholder matters under state law.

Scope of Work Issues (cont.)

- Premise of Value:
  - A fairness opinion also does not typically state a premise of value.
  - Since fairness opinions are typically issued in connection with corporate control transactions, going-concern value is typical.
- Relative Level of Value:
  - Most fairness opinions are issued in connection with change-in-control transactions, where discounts for lack of control and marketability are irrelevant.
  - Where the applicable standard of value is fair value (e.g., in Delaware), such standard is generally interpreted to represent a pro rata controlling interest level of value.

Summary

- Fairness opinions provide important decisional information to boards as well as evidence that the board has satisfied its duty of care.
- While not required, fairness opinions are pervasive in transactions involving issues of corporate control and/or possible conflicts of interest.
- Experienced fairness opinion issuers share an understanding of relevant corporation law, directors' duties, and corporate transaction dynamics.
- A fairness opinion is not an appraisal or a valuation.
- A price can generally be considered fair if within the range of values that an investor might otherwise receive from an effective auction process.
- Opinion issuers are well-advised to seek the advice of legal counsel.

SECTION 6

Review Questions

Practice Question 1

Q Board members (directors) owe the following duties to the company?

A. The duty of care

B. The duty of loyalty

C. The duty of good faith

D. The duty of business judgement

Practice Question 2

Q Under the business judgement rule courts will generally not second guess the business decisions of directors if?

A. The decision was more than one year ago

B. The directors do not have a conflict of interest

C. The directors act in good faith

D. The directors act in the best interest of the company

Practice Question 3

Q Which of the following is true?

A. A fairness opinion is an appraisal and subject to USPAP

B. A fairness opinion is an appraisal but is not subject to USPAP

C. A fairness opinion is not an appraisal but is subject to USPAP

D. A fairness opinion is not an appraisal and is not subject to USPAP

Practice Question 4

Q Business appraisers may be well-qualified to offer fairness opinions because:

A. Appraisers have less conflicts of interest than investment banks

B. Appraisers have better industry insights than investment banks

C. Fairness opinions are largely based on fundamental valuation analysis

D. Business appraisers should not offer fairness opinion services

Practice Question 5

Q Fairness opinions are often considered to be subject to greater risk than ordinary valuations because?

A. Boards of directors frequently sue their fairness opinion providers when transaction benefits are not realized as expected

B. Many public company transactions are subject to stockholder litigation, requiring the fairness opinion provider to support its work in litigation

C. Fairness opinions are often publicly disclosed, which can attract attention from adverse interests

SECTION 7

Solvency Opinions

Topics to be Covered

- Introduction
- Risks Addressed by Solvency Opinions
- Solvency Opinion Determinations
- Analyses Supporting Solvency Opinions
- Additional Solvency Opinion Issues
- Summary

Introduction

- In a leveraged transaction, a company's liabilities increase without a corresponding increase in assets.
- Capital providers, corporations, and boards utilize solvency opinions to provide evidence of a board's discharge of its fiduciary duty of care and to defend against fraudulent transfer claims.
- This section discusses:
  - The risks addressed by solvency opinions issued in connection with strategic or financial transactions.
  - Analyses that are undertaken by the solvency opinion provider.

Risks Addressed by Solvency Opinions

- Solvency opinions protect board members from risks created by highly leveraged transactions.
- Successful fraudulent transfer claims have the potential of unwinding the transaction in question, even years after the transaction was completed.
- There are two types of fraudulent transfers, as address on the following page.

Risks Addressed by Solvency Opinions (cont.)

1. Intentional fraudulent transfer.
2. Constructive fraudulent transfer—in which there are two conditions:
   - The debtor (company) received less than reasonably equivalent value
   - The debtor (company):
     1. was insolvent on the date that such transfer was made or became insolvent as a result of such transfer;
     2. had an unreasonably small amount of capital for the business in which it was engaged; or
     3. intended to incur debts that would be beyond the debtor's ability to pay as such debts matured.

Risks Addressed by Solvency Opinions (cont.)

- Solvency opinions also address the legality of dividends and distributions as governed by state law.
  - E.g., Delaware law requires that corporations only pay dividends to their shareholders from "capital surplus."
- Solvency opinions provide protections to corporations and boards and assist corporate directors in carrying out their fiduciary duties.
- A solvency opinion should not be construed as:
  - A valuation opinion, appraisal, or a fairness opinion.
  - A guarantee that a company can pay its debts as they come due.
  - A substitute for a creditor's due diligence.
  - An analysis of the company's credit worthiness.

Solvency Opinion Determinations

- A solvency opinion is addressed to the company's board of directors.
- A solvency opinion is essentially a collection of determinations made by the opinion provider addressing the key components of Federal Bankruptcy Code and state law regarding fraudulent transfers and the legality of dividends, distributions, or repurchases.
- Each solvency determination covers a specific aspect of the Federal Bankruptcy Code or state law.
- The determinations are typically made from the perspective of having given effect to the consummation of the proposed transaction and framed as follows.

Solvency Opinion Determinations (cont.)

1. The fair value of the company's assets would exceed the company's stated liabilities and identified contingent liabilities.
2. The company should be able to pay its debts as they become due.
3. The company should not have an unreasonably small amount of capital for the businesses in which it is engaged or in which management has indicated it intends to engage.
4. The fair value of the company's assets would exceed the sum of:
   - The company's stated liabilities and identified contingent liabilities. and
   - The total par value of the issued capital stock.

Analyses Supporting Solvency Opinions

- The determinations expressed in a solvency opinion derive from financial analyses performed by a qualified independent opinion provider.
- The determinations address both valuation and cash flow generation and include:
  1. The balance sheet test
  2. The cash flow test
  3. The reasonable capital test
  4. The capital surplus test (*optional, used to address state capital surplus requirements in certain transactions*)
- A company need only fail one test to be considered insolvent.

The Balance Sheet Test

- The balance sheet test addresses whether the value of the company's assets exceeds its liabilities (i.e., positive equity).
- While the standard of value is not mandated, the following definitions are often used:
  - Fair value.
  - Fair present salable value.
- Both are based on the market value of the assets rather than book value and imply valuation on a controlling interest basis.
- The value of the assets needs to incorporate nonoperating or contingent assets as well as off-balance-sheet and contingent liabilities.

The Balance Sheet Test (cont.)

Balance Sheet Test

($ in 000's)	**Values**
Public Company / M&A Transaction Analysis	645,000
Discounted Cash Flow Analysis	655,000
Enterprise Value Conclusion	**$650,000**
Cash	5,000
Income Tax Payable	(3,000)
Present Value of After-Tax Non-Recurring Expenses	(500)
Fair Value of Total Assets	651,500
Debt	(250,000)
Contingent & Other Liabilities	0
Net Asset Value	**$401,500**

The Cash Flow Test

- The cash flow test directly addresses the determination associated with whether the company can pay its debts as they become due and mature.
- This analysis requires the opinion provider to diligence the company-provided financial forecasts and perform certain sensitivity analyses.
- The following exhibit provides an example of the calculations to determine net cash flow and the financial ratios considered in the analysis.

The Cash Flow Test – Base Case

($ in 000's)	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Adjusted EBITDA	86,000	88,000	92,000	95,000	99,000	104,000
Cash Taxes	(20,000)	(22,000)	(24,000)	(25,000)	(27,500)	(31,000)
Net Working Capital	(2,500)	(3,000)	(4,500)	(4,500)	(4,000)	(3,500)
Non-Recurring Expenses	(700)	0	0	0	0	0
Capital Expenditures	(15,000)	(15,000)	(15,000)	(15,000)	(12,000)	(12,000)
Cash Interest Expense	(19,500)	(18,500)	(17,500)	(16,500)	(15,500)	(14,500)
Mandatory Amortization	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)
Repayment of Debt at Maturity	0	0	0	0	0	(175,000)
Debt Refinancing	0	0	0	0	0	175,000
Net Cash Flow	**$15,800**	**$17,000**	**$18,500**	**$21,500**	**$27,500**	**$30,500**

Total Debt	$237,500	$225,000	$212,500	$200,000	$187,500	$175,000
Total Cash	20,800	37,800	56,300	77,800	105,300	135,800
Revolver Availability	135,000	135,000	135,000	135,000	135,000	135,000
Net Debt-to-LTM EBITDA	2.5x	2.1x	1.7x	1.3x	0.8x	0.4x
LTM EBITDA-to-Cash Interest, Net	4.4x	4.8x	5.3x	5.8x	6.4x	7.2x
Fixed Charge Coverage	1.5x	1.6x	1.8x	1.9x	2.1x	2.3x

The Cash Flow Test (cont.)

- The same cash flow analysis will also be performed on a reasonable downside forecast referred to as a sensitivity case.
- The opinion provider will determine the appropriate variables to change and by what magnitude.
- Practitioners will often look to prior performance during a recession or historical period of weaker performance to gauge the magnitude of change in the sensitivity case.
- The following exhibit provides an example of a comparison of a company's base case relative to the sensitivity case.

The Cash Flow Test – Base & Sensitivity Case

Base Case & Sensitivity Case

($ in 000's)	2021	2022	2023	2024	2025	2026
Revenue						
Base Case	$560,000	$585,000	$620,000	$650,000	$675,000	$690,000
Sensitivity Case	$530,000	$550,000	$565,000	$595,000	$625,000	$645,000
Revenue Growth						
Base Case	1.8%	4.5%	6.0%	4.8%	3.8%	2.2%
Sensitivity Case	(3.7%)	3.8%	2.7%	5.3%	5.0%	3.2%
Adjusted EBITDA						
Base Case	$86,000	$88,000	$92,000	$95,000	$99,000	$104,000
Sensitivity Case	$73,000	$73,000	$75,000	$81,000	$87,500	$90,000
Adjusted EBITDA Margin						
Base Case	15.4%	15.0%	14.8%	14.6%	14.7%	15.1%
Sensitivity Case	13.8%	13.3%	13.3%	13.6%	14.0%	14.0%
Cash Interest Expense						
Base Case	$3,211	$3,152	$2,820	$2,267	$1,628	$665
Sensitivity Case	$3,486	$3,486	$3,098	$2,474	$1,763	$714
Capital Expenditures						
Base Case	$15,000	$15,000	$15,000	$15,000	$12,000	$12,000
Sensitivity Case	$15,000	$13,000	$13,000	$13,000	$12,000	$12,000

The Cash Flow Test (cont.)

- The following exhibit provides an example of the calculations to determine net cash flow and financial ratios resulting from the sensitivity case.
- The opinion provider must make a positive determination that the company can pay its debts as they become due in the sensitivity case as well as the base case.

The Cash Flow Test – Sensitivity Case

($ in 000's)	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Adjusted EBITDA	73,000	73,000	75,000	81,000	87,500	90,000
Cash Taxes	(17,500)	(18,000)	(18,500)	(20,000)	(22,500)	(25,000)
Net Working Capital	0	(1,500)	(2,500)	(4,000)	(4,000)	(3,500)
Non-Recurring Expenses	(700)	0	0	0	0	0
Capital Expenditures	(15,000)	(13,000)	(13,000)	(13,000)	(12,000)	(12,000)
Cash Interest Expense	(19,500)	(18,500)	(17,500)	(16,500)	(15,500)	(14,500)
Mandatory Amortization	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)	(12,500)
Repayment of Debt at Maturity	0	0	0	0	0	(175,000)
Debt Refinancing	0	0	0	0	0	175,000
Net Cash Flow	**$7,800**	**$9,500**	**$11,000**	**$15,000**	**$21,000**	**$22,500**

Total Debt	$237,500	$225,000	$212,500	$200,000	$187,500	$175,000
Total Cash	12,800	22,300	33,300	48,300	69,300	91,800
Revolver Availability	135,000	135,000	135,000	135,000	135,000	135,000
Net Debt-to-LTM EBITDA	3.1x	2.8x	2.4x	1.9x	1.4x	0.9x
LTM EBITDA-to-Cash Interest, Net	3.7x	3.9x	4.3x	4.9x	5.6x	6.2x
Fixed Charge Coverage	1.2x	1.4x	1.5x	1.7x	1.9x	2.0x

The Reasonable Capital Test

- The reasonable capital test addresses whether the company has sufficient capital to operate the business (i.e., equity cushion).
- The opinion provider will consider several factors, including:
  1. Amount of equity cushion resulting from the balance sheet test.
  2. Amount of availability and liquidity in the base and sensitivity case.
  3. The magnitude of change in the sensitivity case relative to the base case.
  4. The industry in which the business operates and the inherent volatility.
  5. Company specific risks that may negatively impact projected performance.
  6. The structure of the company's debt and its ability to refinance.
  7. Current credit market conditions.
  8. The magnitude, timing, and nature of identified contingent liabilities.

The Capital Surplus Test

- The capital surplus test addresses whether the value of the company's assets exceeds its liabilities and its capital.
- It is used to address certain state statutes requiring that dividend and/or stock redemption transactions be made from surplus capital.
- The exhibit below provides an example of the calculations to determine capital surplus.

Capital Surplus Test

($ in 000's)	**Values**
Net Asset Value	**$401,500**
Less: Stated Capital	(12)
Capital Surplus	**$401,488**

When are Solvency Opinions Sought?

- Even if not directly required, the use of solvency opinions in leveraged transactions has increased and become best practice.
- Solvency opinions are often considered where there is a transfer of cash or assets out of a company via a distribution or sale, such as:
  1. Corporate spin-offs
  2. Leveraged dividend recapitalizations
  3. Leverage buyout transactions
  4. Special dividends, self-tender offers, stock buybacks or redemptions
  5. Debt refinancing transactions
  6. Asset sales by financially distressed companies
  7. Corporate modernization transactions

Solvency Opinion Reliance and Disclosure

- The typical solvency opinion is addressed directly to the board and is furnished solely for the board's use and benefit.
- It does not address the merits of the transaction and is not a recommendation as to how the board should vote.
- Other parties (e.g., lenders) are not typically privy to the solvency opinion.
- The opinion provider may agree to disclose the solvency opinion to agreed-upon parties on a nonreliance basis.
- Unlike fairness opinions, solvency opinions are rarely disclosed.
- Disclosure of a solvency opinion increases risk.

Company Financial Forecasts

- The financial forecasts provided by the company are a critical component of the analysis supporting the solvency opinion and should:
  - Represent the company's expected financial case.
  - Be prepared on a post-transaction basis.
  - Cover the duration of the transaction debt.
- A company may also provide a reasonable downside financial forecast.
- The opinion provider may require a management representation letter as discussed in further detail later in the section.

Contingent Assets and Liabilities

- The balance sheet test requires the opinion provider to consider the company's contingent assets and liabilities.
- Contingent assets are potential economic benefits that depend on the outcome of future events over which the company does not control.
- Contingent assets may include items such as:
  1. Contingent consideration to be received as part of a prior divestiture.
  2. Potential proceeds from legal actions or settlements.
  3. Milestone payments for the completion of certain operating requirements.
  4. Royalty income from the licensing of certain technology.
- Contingent assets are not typically recorded on a company's balance sheet because of their uncertainty.

Contingent Assets and Liabilities (cont.)

- Contingent liabilities are a potential payment obligations that depend on the outcome of future events that the company does not control.
- Contingent liabilities may include items such as:
  1. Contingent payments related to prior acquisitions
  2. Potential payments related to legal actions, settlements, regulatory actions
  3. Milestone payments to partners related to operating requirements
  4. Environmental remediation costs
  5. Uncertain tax positions
- The opinion provider will typically rely on company management (or consultants) to determine the potential magnitude, probability, and timing of payment associated with a contingent asset or contingent liability.

Management Representation Letter

- Solvency opinion providers will often request a management representation letter addressing such items as:
  - Historical financial statements (and any adjustments thereto).
  - Changes since the last available financial statements.
  - Financial forecasts reflects management's best estimate.
  - Amount, timing, or probability of any payments associated with contingent assets and liabilities.
  - Ability to refinance the debt before the end of the forecast period.

International Solvency Opinion Considerations

- The legal and analytical framework around solvency opinions is also relevant for internationally domiciled companies.
  - For instance, in Bermuda, a company shall not declare or pay a dividend, or make a distribution out of contributed surplus, if there are reasonable grounds that the company would be unable to pay its liabilities as they become due or the realizable value of the company's assets would be less than its liabilities.
- The duties of company directors and the laws governing dividends or distributions vary based on jurisdiction.
- It is critical that opinion providers understand the proper determinations needed in each transaction, and in the relevant jurisdiction.

Summary

- Transactions involving financial leverage raise concerns for both capital providers and the company's board of directors.
- Solvency opinions address concerns regarding fraudulent transfers and the legality of dividends/distributions/repurchases.
- Solvency opinions, like fairness opinions, are evidence of a board's discharge of its fiduciary duty of care.
- Objective and rigorous solvency analyses prepared by independent financial advisors can help defend against fraudulent transfer claims.
- The use of solvency opinions has increased in the past decade and has become best practice in assessing leveraged transactions.

SECTION 7

Review Questions

Practice Question 1

Q Which of the following statements is true?

A. Solvency opinions are generally issued in connection with leveraged transactions

B. Solvency opinions are an appraisal, and are thus subject to valuation standards such as USPAP

C. Like fairness opinions, solvency opinions are frequently publicly disclosed

D. Solvency opinion fees are typically lower than other valuation analyses

Practice Question 2

Q The purpose of a solvency opinion is?

A. To establish the fair market value of the company

B. To enable a company to avoid a post-transaction claim of fraudulent conveyance (transfer)

C. To inform a board whether their company will have adequate capital following a leveraged transaction

D. To enable a company to unwind a transaction in the event the company cannot pay its debts as the come due

Practice Question 3

Q The fundamental solvency tests include?

A. The Balance Sheet test

B. The Reasonable Income test

C. The Cash Flow test

D. The Reasonable Capital test

Practice Question 4

Q The fundamental question addressed by the reasonable capital test is?

A. Whether the entity has a minimum "equity cushion" of 25%

B. Whether the entity has a minimum "equity cushion" of 75%

C. Whether the entity has insufficient capital for the business in which it is engaged

D. Whether the entity is expected to be able to repay its debts as they become absolute and mature

Practice Question 5

Q Given the following entity data, which of the following statements are accurate?

○ Enterprise value	$300 million
○ Stated liabilities	$200 million
○ Identified contingent liabilities	$50 million
○ Par value of capital stock	$10 million

A. The entity passes the balance sheet test with a cushion of $40 million
B. The entity passes the balance sheet test with a cushion of $50 million
C. The entity passes the surplus capital test with a cushion of $40 million
D. The entity does not pass the balance sheet test

SECTION 8

Litigation and Dispute Resolution

Topics to be Covered

- Introduction
- The Role of Experts in Valuation-Related Disputes
- Types of Disputes Requiring Valuation-Related Testimony
- Admissibility of the Valuation Expert's Testimony
- The Litigation Process
- Damages and Methods of Quantification
- Financial Forensics Investigations
- Summary

Introduction

- Valuation analysts may have the opportunity to provide services in connection with litigation or other disputes.
- Often this involves providing expert witness testimony in a deposition, arbitration, or trial.
- Such services can be a natural extension of the cumulative experience and expertise gathered over a professional career.

The Role of Experts in Valuation-Related Disputes

- Individuals with specialized knowledge, skill, experience, training, or education can be helpful in presenting evidence in litigation proceedings.
- An "expert" provides objective and opinion-based evidence—as opposed to fact-based evidence—to assist the trier of fact, if:
  - The knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.
  - The testimony is based on sufficient facts or data.
  - The testimony is the product of reliable principles and methods.
  - The expert has reliably applied the principles and methods to the facts of the case.

The Role of Experts (cont.)

- The valuation expert can assist litigation counsel in several ways:
  - Provide an initial case assessment.
  - Evaluate settlement alternatives.
  - Assist in the initial discovery process by suggesting helpful documents.
  - Provide valuation-related services and testimony.
  - Review and comment on reports and analyses prepared by other experts.
- The expert must remain independent, impartial, and objective.
- The expert should advocate for their opinions, but not for their client.
- The expert's opinion and analysis must be defensible, and their credibility must be maintained in front of a trier of fact.

Testifying Expert or Consulting Expert

- In certain instances, trial counsel may employ the services of more than one valuation expert:
  - In order to place more than one expert's opinion before the trier of fact.
  - In order to have different experts concentrate on certain especially controversial or critical aspects of the case.
  - In order to have one expert for the case in chief and another for rebuttal.
  - In order to have both a consulting expert and a testifying expert.
- Because the consulting expert will not be called as a witness at trial, their identity does not typically need to be disclosed to opposing counsel.
- The consultant's work is generally shielded by the same confidentiality rules that protects attorney work product.

Types of Disputes Requiring Valuation Testimony

- The following paragraphs summarize some of the more common types of disputes where the parties may be well served to retain the services of a qualified and experienced valuation expert:
  - **Marital Dissolutions.** When the marital estate includes a closely held business, the valuation of that business often becomes a hotly contested issue in the division of property between the spouses.
  - **Shareholder Disputes.** Shareholder disputes result from legal actions involving the value of corporate securities, including, for instance, buy-sell agreements, entity dissolutions, and minority shareholder oppression claims.
  - **Estate, Gift, Charitable Contributions, and Income Taxes.** The need to report appraised values for intrafamily transfers and charitable contributions of closely held securities is an area of common dispute.

Types of Disputes Requiring Valuation Testimony (cont.)

- **Contract Disputes.** Contract disputes can occur when a party fails to perform any or all of its duties required by a contract (i.e., a "breach").
- **Business Interruption Claims.** Businesses can suffer contract or tort claims that may be measured in terms of lost profits.
- **State and Local Ad Valorem (Property) Taxes.** Special-purpose properties and income-producing properties subject to state and/or local property taxes are often the subject of valuation controversies.
- **Bankruptcy and Reorganization.** An expert may be called upon to provide a variety of valuation-related financial advisory services in connection with entity reorganizations and matters pending in the U.S. Bankruptcy Courts.
- **Intellectual Property Rights Infringement.** Such claims involve an allegation that a party violated another's rights pertaining to the I.P.

Admissibility of the Valuation Expert's Testimony

- Using their specialized knowledge in the microeconomic analysis of property valuation, the expert must:
  - Develop and support a sound position, and
  - Communicate that position in terms that a judge and/or jury can understand.
- Courts have the responsibility to act as gatekeepers and exclude testimony that fails to meet certain thresholds for credibility and reliability.
- Federal cases addressing the admissibility and exclusion of expert testimony include *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, *General Electric Co. v. Joiner*, *Kumho Tire Company v. Carmichael*, and *Frye v. United States*.

The *Daubert* Standard

- The criteria established by *Daubert* (and its progeny) are:
  1. Has the methodology been tested?
  2. Has the methodology been subjected to peer review?
  3. Is the error rate of the methodology known?
  4. Is the methodology generally accepted?
- Factors 1 and 3, related to reliability, "are not applicable to [non-scientific testimony], whose reliability depends heavily on the knowledge and experience of the expert, rather than the methodology or theory behind it."*

* *Hangarter v. Provident Life & Acc. Ins. Co.*, 373 F.3d 998, 1017 (9th Cir. 2004).

What Makes an Expert "Qualified"?

- Previous experience is helpful, but not required.
- Real-world transactional and appraisal experience.
- Strong knowledge of the valuation-related aspects of the law.
- Access to appropriately qualified staff.
- Access to online library and research resources.
- Active involvement in professional organizations (e.g., attending or speaking at seminars, writing for relevant professional publications).

Conflicts of Interest and Expert Independence

- The expert must be independent of the parties on both sides of the case.
- The expert should identify any potential conflicts prior to having meaningful discussions with the potential client.
  - Conflicts may be "actual" or "perceived."
  - Even the mere appearance of a conflict can discredit a witness.
- Having provided prior services (on an unrelated matter) for the opposing party or law firm is not automatically a disqualifying conflict.
- Experienced experts avoid conflict issues by not exchanging confidential information with a potential client until they have been formally retained.

Engagement Agreement

- Because an expert's engagement agreement may be discoverable, the retaining attorney may want the letter to lack specificity as to scope.
- Since it may be difficult to precisely determine the scope of a litigation support engagement, hourly fee structures are very common.
- Some valuation experts charge a different hourly rate for expert testimony than for other valuation services although there is little benefit from doing so and record keeping can be complicated.
- Often, litigation cases are structured in advance around specific phases.
- The importance of a retainer payment cannot be overstated.
- Frequent billings can be helpful to avoid collection issues.

The Litigation Process

- The expert often assists in the various phases of the litigation process:
  - **Case assessment.** The expert can assist attorneys in assessing the case and providing preliminary analysis based on the information available.
  - **Fact discovery.** The information-gathering phase of the case, consisting of interrogatories, depositions, subpoenas, and requests for production.
  - **Expert discovery.** Helps a party learn about the opinions to be offered at trial by the opposing party's expert witness.
  - **Pretrial briefs.** A summary of the evidence that will be presented at trial, with information that supports the filing party's case.
  - **Trial.** Testimony at trial may be the most important litigation support service.
  - **Re-hearing and appeal.** The expert may provide support during the appeal process advice.

Expert Discovery

- The purpose of expert discovery is to learn about the opinions to be offered by an expert witness. Methods include:
  - **Expert Depositions.** The purpose of deposing opposing experts usually is to understand their opinions and the bases thereof.
  - **Affidavits.** The purpose of an affidavit is to put a sworn statement before the court without the author's physical presence.
  - **Written Reports.** The process for the exchange of expert reports (if any) varies by jurisdiction or the agreed-upon procedures for the case.
  - **Rebuttal Reports.** The process of reviewing and rebutting the opposing expert's position is often just as important to reaching a satisfactory resolution as preparing the expert's affirmative valuation.

Pretrial Briefs

- Case briefs can be enriched by the expert's insights.
- The expert will often be asked to review or discuss briefs before filing.
- Similarly, the expert often can assist counsel's review and understanding of the opponent's case briefs, particularly regarding:
  - Any mischaracterization of the expert's own report or testimony.
  - Any unjustifiable conclusions or implications made.
  - Erroneous factual statements on some valuation matter.
  - Unsupported assertions or conjecture.
- The expert's review can ensure that any unwarranted contentions do not go unnoticed but are treated with a firm and convincing reply.

Damages

- Compensatory damages are monies awarded for actual losses.
  - The amount awarded is based on the proven harm, loss, or injury suffered by the plaintiff.
  - Intended to restore the plaintiff's status to what it was prior to (or "but for") the alleged offense.
- Punitive damages are monies awarded in addition to compensatory damages.
  - Intended to punish the defendant for especially egregious or harmful behavior.

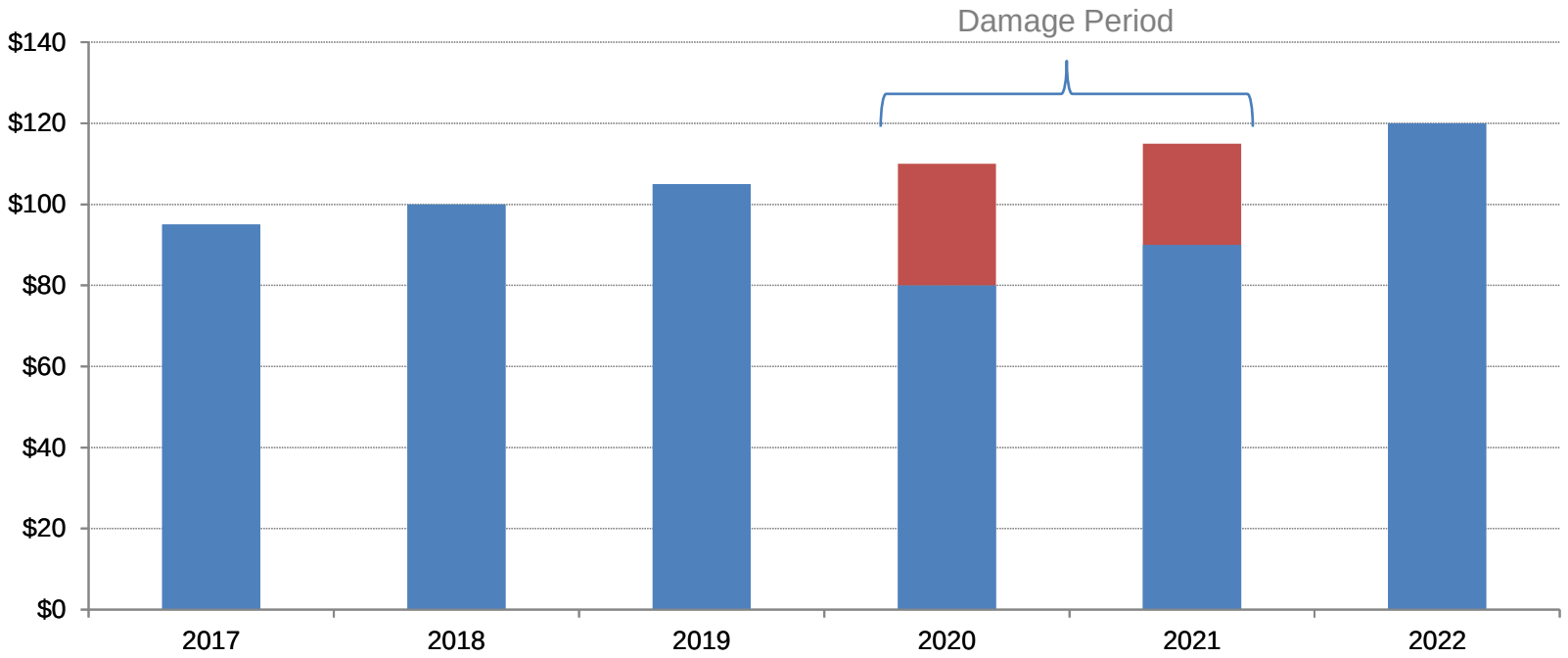
Calculating the Amount of Damages

- Economic damages often require or benefit from the use of business valuation methods and frameworks (e.g., the income approach).
- Unlike valuation experts, damages experts often consider only a single method, and may utilize data from beyond the valuation date.
- The methods used to calculate claims can be categorized as:
  - Before and after method
  - Yardstick (comparable) method
  - Sales forecasts (but for) method
- The quantification of damages is typically calculated as (1) what the plaintiff would have realized minus (2) what the plaintiff actually realized.

The Before-and-After Method

- The expert estimates economic income during the damage period based upon a comparison of:
  - Results attained prior to the alleged damaging acts and/or after the effects of the alleged acts have subsided, and
  - Results during the period of the effect of the alleged acts.
- The expert must be able to establish and support a proven historical financial record for the subject property so that operations preceding and succeeding the event are able to serve as damage bookends.
- This method is logical and simple to explain, but it does not account for unrelated events that occurred during the damage period that might have impacted profitability regardless of the damaging act.

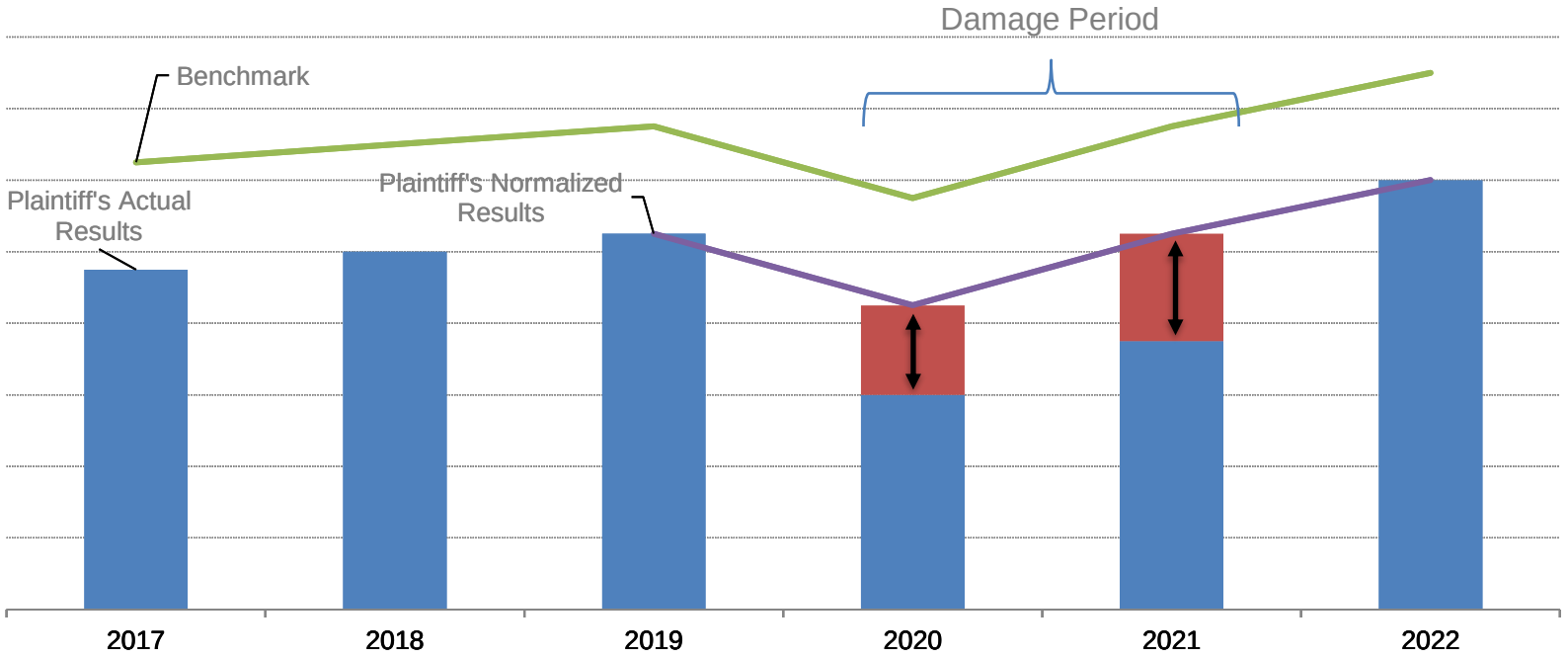
The Before-and-After Method (cont.)



The Yardstick (Comparable) Method

- The expert compares the company's economic income to analogous results of comparable companies or industries.
- The expert must identify similar companies or industries that are unaffected by the defendant's alleged damaging actions.
- The method provides a straightforward, understandable procedure for estimating losses.
- The key lies in carefully identifying the most appropriate guideline companies or industries.

The Yardstick (Comparable) Method (cont.)



Sales Forecasts (But For) Method

- The expert creates a performance model for the subject company, unaffected by the defendant's wrongful actions.
- The model is then compared with the actual results realized by the company during the relevant period.
- Of the three general damages estimation methods, some variation of the sales forecast method is likely the most commonly-used.
- Note that courts tend to prefer forecasts based on historical track records.

Present Value

- The combined value of lost profits and any decrease in overall business value is limited to the present value of total future profits anticipated by the business prior to the alleged damaging acts.
- The reason is that the value of any business is the present (discounted) value of all expected future profits.
- There are two concepts relevant to discounting: ex ante and ex post:
  - Ex ante (Latin for "from before") relies on information known or knowable as of the date of the offending act or action (typical for business valuation).
  - Ex post (Latin for "from after") relies on information known or knowable as of the date of the trial.

Mitigation

- The harmed party has a duty to mitigate—that is, take action to reduce or minimize the effect of—the offending party's actions.
- Damages are not recoverable for losses that could have been avoided.
  - A buyer suffering damages is required to make reasonable efforts to find replacement goods.
  - Excess costs incurred in acquiring replacement goods, differences between the contract price and the resale price incurred by the seller, and incidental damages such as expenses incurred in stopping the manufacture of goods, and inspecting, transporting, receiving, or storing goods that resulted from the breach are normally recoverable.
- The burden of proof for mitigation of damages lies with the defendant.

Summary of Damages

- In general, damage cases require a creative, but realistic, approach to calculating hypothetical values absent the alleged effects of the damaging party's actions.
- A thorough understanding of the damaged party's industry and operations are important in any damage calculation.
- Knowledge of case law will provide the expert with important guidance regarding approaches and methods that the courts will or will not accept in the calculation of damages in the specific legal context in question.

Financial Forensics Investigations

- During the valuation analyst's due diligence, indications of instability in the underlying relationships embedded in the historical financial statements may surface.
- If explanations provided are unsatisfactory, further investigation should be considered.
- This typically requires engaging a specialist trained in forensic techniques.

Summary

- If retained early in the litigation proceedings, the expert can be helpful in many aspects of the litigation process, including discovery and settlement efforts.
- It is essential that the attorney and their client fully respect the expert's independence in arriving at any opinions.
- The expert should not only avoid bias in fact, but also should also avoid any appearance of bias.
- The effective use of the expert's knowledge and experience in providing litigation support services can facilitate an expeditious and satisfactory outcome in many controversy cases.

SECTION 8

Review Questions

Practice Question 1

Q Which of the following statements is true with regard to an expert witness?

A. Need not expect that their communications and workfile will be discoverable

B. Has first-hand knowledge about events relevant to the litigation

C. Is not typically identified to the opposing party prior to trial

D. Has specialized knowledge and expertise and is retained to assist the trier of fact

Practice Question 2

Q Under the *Daubert* standard, which of the following factors may be considered in determining whether a valuation methodology is valid?

A. Whether the method can be and has been tested

B. Whether the method has been subjected to peer review

C. The method's known or potential error rate

D. whether the method has attracted widespread acceptance within a relevant community

E. All of the above

Practice Question 3

Q Which best describes the process by which the opposing side has an opportunity to learn about the expert's opinions?

A. Deposition

B. Daubert motion

C. Rebuttal

D. Trial

Practice Question 4

Q Which of the following best describes the Yardstick/ Benchmark damages model?

A. The method uses the injured party's economic performance immediately before the damages began and immediately after full recovery

B. The method uses benchmark data with which the injured entity's performance is compared during the damage period

C. The premise is that but-for the alleged injury, the injured company's performance relative to the benchmark would continue during the damage period

D. An ex-ante approach

Practice Question 5

Q Which of the following is a disadvantage common to the 'Before and After Model' and the 'Benchmark/Yardstick Model'?

A. Not easy to explain to the trier of fact

B. Does not specify specific lost business attributable to the unlawful act

C. Does not consider unrelated events that might have occurred during the damage period

D. Is not widely accepted

SECTION 9

Intangible Assets

Topics to be Covered

- Introduction
- Business Valuation and Intangible Assets
- Types of Intangible Assets
- Reasons to Value Intangible Assets
- Intangible Asset Valuation
- Summary

Introduction

- Intangible assets are nonphysical, nonfinancial assets that grant rights, privileges, or operational competitive advantages to the owner.
  - E.g., trademarks, trade names, patents, technology, trade secrets, contracts, and customer relationships.
- Intellectual property (IP) is a subset of intangible assets that have legal protections and include creations of the mind.
  - E.g., copyrights, patents, trademarks, and trade secrets.
- Intangible assets can create competitive advantages and barriers:
  - Product differentiation
  - Exclusivity
  - Technological capabilities
  - Economies of scale

Business Valuation and Intangible Assets

- Businesses without material intangible assets can often be valued by individually appraising the assets and liabilities of the entity.
- However, for most going concerns, the business value cannot be readily estimated as the sum of the individual the tangible and intangible assets.
- Intangible assets can be either operating or nonoperating asset:
  - Operating intangible assets are required to support business operations and their value is generally captured in the invested capital value.
  - Nonoperating intangible assets are those not being used in operations.
- In each case, the valuation methods used should be assessed to ensure they correctly capture the value of the intangible asset.

Types of Intangible Assets

- There are many types of intangible assets and many ways to group them.
- Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) set forth five categories:
  - Customer-related intangible assets
  - Technology-related intangible assets
  - Marketing-related intangible assets
  - Contract-based intangible assets
  - Artistic-related intangible assets
- These classifications capture all intangible assets except for goodwill (to be discussed later).

Customer-Related Intangible Assets

- Customer-related intangible assets include but are not limited to:
  - Customer lists
  - Order or production backlogs
  - Customer contracts
  - Noncontractual customer relationships
- In assessing whether a business has customer-related intangible assets, it helps to consider the role of customers in the financial forecast, e.g.:
  - What portion of forecasted revenue is associated with existing customers?
  - What portion of forecasted revenue is contractual/related to existing orders?
  - How much information does the company have about its customers?
  - How loyal are customers and how long are they expected to stay?

Technology-Related Intangible Assets

- Technology-related intangible assets are associated with a business' institutionalized or protected technological capabilities.
- Examples of technology-related intangible assets include but are not limited to:
  - Patented and unpatented technology
  - Trade secrets, such as secret formulas, processes, or recipes
  - Proprietary or internally developed computer software
  - Databases or curated information

Marketing-Related Intangible Assets

- Marketing-related intangible assets are used for marketing or promotional purposes.
- Examples of marketing-related intangible assets include but are not limited to:
  - Trademarks and trade names
  - Internet domain names
  - Trade dress or other unique characteristics that are associated with the business or its products, such as unique color, shape, packaging, or design of a product

Contract-Based Intangible Assets

- Contract-based intangible assets derive their value from a contractual arrangement.
- Examples of contract-based intangible assets include but are not limited to:
  - Licensing agreements
  - Franchise agreements
  - Operating rights and permits
  - Lease agreements or right-of-use assets
  - Use rights to certain land or commodities, such as oil, timber, mineral, or water rights

Artistic-Related Intangible Assets

- Artistic-related intangible assets relate to creative, artistic works.
- Artistic-related intangible assets are frequently protected through copyright law or other legal mechanisms.
- Artistic-related intangible assets include but are not limited to:
  - Developed content relating to plays, operas, or ballets
  - Literary works, such as books or magazines
  - Musical works, such as compositions or song lyrics
  - Pictures and photographs
  - Videos and audiovisual material, such as films, motion pictures, or television programs

Goodwill and Going-Concern Value

- Goodwill and going-concern value are distinct but related concepts.
- Goodwill represents the value of future economic benefits that arise out of the assemblage of a business' assets that is not directly ascribed to any other asset.
- From an accounting perspective, goodwill is measured as the excess amount of the consideration paid for an acquisition of a business above the value of the acquired assets, net of liabilities.
- Outside the context of financial reporting, references to goodwill differ:
  - The total intangible value of a business.
  - The intangible value of a business not attributed to other intangibles.
  - The expectancy of repeat patronage.

Goodwill and Going-Concern Value (cont.)

- In the income tax context, goodwill is the going-concern value of a business in excess of the liquidating value of its PPE, receivables, and other balance sheet assets.
- Goodwill has been described qualitatively as the preference of customers that arises from such sources as excellence of reputation, efficiency of service and skill in utilization of trademarks, brand names, and other forms of advertising.
- The U.S. Tax Court have said that the evidence of goodwill as the value of the excess earnings of a business (i.e., residual income after required returns for tangible assets).

Goodwill and Going-Concern Value (cont.)

- The Intern*ational Valuation Glossary—Business Valuation* defines goodwill as follows:
  - An intangible asset which represents any future economic benefit arising from a business, an interest in a business, or from the use of a group of assets which has not been separately recognized in another asset. In a financial reporting context, goodwill is measured as the difference between the aggregate of (i) the value of the consideration transferred (generally at fair value), (ii) the amount of any non-controlling interest, and (iii) in a business combination achieved in stages, the acquisition-date fair value of the acquirer's previously-held equity interest in the acquiree, and the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities as assumed.

Goodwill and Going-Concern Value (cont.)

- Going-concern value also has different definitions when used in different contexts.
- In the income tax context, going-concern value can be defined (in part) as:
  - A composite of several unaccounted-for or prematurely-expensed business development expenditures which contribute to future earnings.
- The *International Valuation Glossary—Business Valuation* defines going concern value as:
  - A premise of value that assumes the business is an ongoing commercial enterprise with a reasonable expectation of future earning power.

Personal Goodwill

- Personal goodwill is associated with specific individual(s) of a business
  - E.g., the technological know-how of a business resides with a key individual and that knowledge is not replicable without that individual.
  - Similarly, a proprietor has a client relationship that is not an institutionalized customer relationship, and the customer's loyalty is solely to the proprietor.
- Most relevant in the valuation of small businesses or professional practices.
  - E.g., Big four accounting firm v. single-practitioner.

Personal Goodwill (cont.)

- Generally, in a FMV context the value of personal goodwill is excluded.
  - Buyers are generally unwilling to pay for intangible value that has not been institutionalized.
- Parties may attempt to retain and institutionalize personal goodwill in order to reduce the ability and willingness of key individual(s) to compete and assist in the transfer value from the individual to the business.
  - E.g., employment agreements with sellers, noncompete agreements, equity awards, or contingent consideration.
- The Tax Court reaffirmed that, when a corporation has no employment contract with an employee, the employee's personal relationships are not corporate assets (*Martin Ice Cream*).

Reasons to Value Intangible Assets

- Financial Reporting:
  - Under ASC 805, buyers are generally required to value all assets when they are acquired (purchase price allocation).
  - The buyer determines the fair value of the purchase consideration for the business, then allocates that value among the acquired tangible and intangible assets for recognition on its opening balance sheet.
  - ASU No. 2014–18 allows private companies to elect an accounting alternative for the recognition of acquired identifiable intangible assets.
  - Private companies that make this election are not required to value customer-related intangible assets or noncompete agreements as a part of business combination accounting.

Reasons to Value Intangible Assets (cont.)

- Tax Reporting:
  - IRC § 482 provides that related-party transactions involving the transfer of intangible assets “yield results that are consistent with the results that would have been realized if uncontrolled taxpayers had engaged in the same transaction under the same circumstances.”
  - This often requires the valuation of intangible assets for such purposes.
  - Unlike in financial reporting, IRC § 197 specifies that taxpayers may amortize the tax basis of acquired intangible assets and goodwill ratably over a 15-year period.
  - Acquisitions of small businesses are sometimes structured so the buyer purchases the firm's assets and the personal goodwill in separate transactions, requiring an appraisal supporting the allocation of value.

Reasons to Value Intangible Assets (cont.)

- Litigation:
  - Although measures of damages in IP litigation are not usually based directly on the value of the IP, intangible assets are frequently valued in connection with IP disputes.
  - For example, a party that believes its patent is being infringed may want to value that patent to assist with a negotiated settlement or buyout.
- Advisory and Consulting:
  - Valuations of intangible assets are also sometimes performed in an advisory or consulting capacity.
  - If a business is evaluating the purchase or sale of intangible asset(s), it may seek appraisals to support valuations or to evaluate the reasonableness of contemplated royalty rates.

Intangible Asset Valuation

- Like in any valuation, the analyst should consider the cost, market, and income approaches, and select the methodologies that produce the most reliable indications of value.
  - Reliable transaction information is rarely available.
  - Income streams may be reasonably measured or forecast.
  - Cost approach is typically most appropriate but may fail to capture the full economic benefits (e.g., the exclusivity conferred by patent protection).
- There are various sources of authoritative and nonauthoritative guidance to consider when valuing intangible assets.
- Several useful resources are included in the online chapter bibliography.

Income Approach

- The income approach refers to those methodologies based on the present value of future expected economic income.
  - Key assumptions include cash flows, estimated life, and discount rate.
  - Applications include the multi-period excess earnings method (MPEEM), cost savings methods (including the relief-from-royalty method), and the with-and-without method.
- IVS 210 suggests that the income approach should be used as the primary basis for the valuation of an intangible asset only if:
  - The primary economic benefit of ownership of the subject intangible asset is the ability to generate income, additional income, or reduced costs.
  - Those future economic benefits can be reasonably forecasted.

Remaining Useful Life

- In applying an income-based approach, economic benefits should be forecasted over an asset's remaining useful life.
- The remaining useful life should be estimated as the period over which the economic benefits of the intangible asset are expected.
- For customer relationships, it is often necessary to estimate some level of attrition (customer loss experience) over time.
  - Thus, a terminal value is typically not appropriate.
- For technology, it may be possible to estimate the remaining useful life of existing technology based on the business' past product cycle.
- Revenue patterns for different technologies will vary.

Income Approach – MPEEM Method

- The first step is determining the businesses' primary intangible asset.
  - Frequently customer-related intangible assets, enabling technology, and exceptionally strong trade names.
- The projected revenues and income of the primary asset—and supporting (contributory) assets—are then estimated.
- Contributory asset charges (CACs) reflect costs that would be incurred by the asset owner to generate the earnings if isolated from the business.
- Subtracting the CACs from the business earnings leaves the "excess earnings" generated by the primary asset.
- The projected excess earnings are discounted to present value to estimate the value of the subject intangible asset.

Income Approach – MPEEM Method (cont.)

- Contributory assets typically include fixed assets, working capital, and all intangible assets needed to support the business operations.
- There are two types of CACs:
  - Charges that represent the return a hypothetical lessor would expect to earn on the supporting asset (the return on the contributory assets), and
  - Charges that would compensate a hypothetical lessor for the economic depreciation of the asset (the return of the contributory asset).
- A tax amortization benefit is generally added back to account for the step-up and related IRC § 197 amortization a hypothetical buyer would receive.

Income Approach – Relief-from-Royalty Method

- Measures the cost savings that the owner of an intangible asset realizes because it owns, rather than licenses, an intangible asset.
  - Appropriate for assets that are regularly licensed, such as technology, trademarks, or trade names.
  - Should not be used to value the primary asset of an operating business.
- Value is determined by forecasting future revenues supported by the intangible asset and multiplying that revenue by a royalty rate that would be required to license the intangible asset in an arm's-length transaction.
- Royalty rates are based on market data for transactions involving licenses of similar assets and/or some form of a profit split analysis.

Income Approach – Relief-from-Royalty Method (cont.)

- The data for licensing transactions is often limited as there is typically no active market for intangible assets and many transactions are unreported.
- Also, the method may not capture the value of all the rights of ownership of some intangible assets, such as a trademark.
- The profit split method involves selecting a royalty rate based on the estimated share of the company's pre-royalty profit margin that the royalty rate would comprise.
- In selecting a royalty rate, key factors to consider include:
  - The degree to which an intangible provides a competitive advantage.
  - For marketing-related intangibles, the amount that a trade name drives revenues and profit margins.

Income Approach – With-and-Without Method

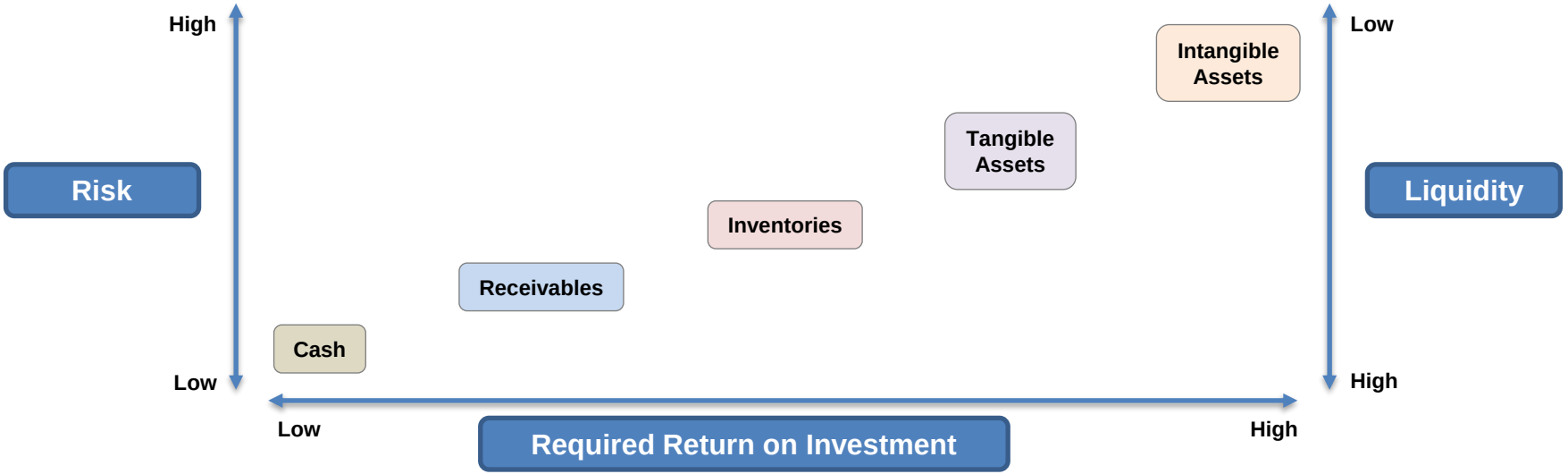
- Measures the value of an intangible asset by comparing the value of a business with and without the intangible asset.
  - Scenario-based forecasts are created for the entity—one with the benefits of subject intangible asset included and one without it.
  - The difference between the scenarios is the indicated value of the asset.
- Frequently used to value noncompetition agreements, personal goodwill, and lease agreements that are not at market rates.
- This approach can be challenging to apply for noncompetition agreements and personal goodwill, as assumptions in the “without” scenarios frequently involve a degree of subjectivity that can be difficult to validate.

Discount Rates for Intangible Assets

- Each income approach method requires a discount rate estimate that reflects the risk characteristics of the subject intangible asset.
  - Little, if any, direct market evidence.
- Discount rates can reflect the relative differences in the risk of different intangibles, and typically correlate to position on the balance sheet.
  - Cash is the least risky and has the lowest expected return.
  - Fixed assets have less risk than intangible assets.
  - Identifiable intangible assets have less risk than goodwill.
  - Among intangibles, projected future income for an existing technology is typically less risky than the projected income for in-process technology.

Discount Rates for Intangible Assets (cont.)

- This figure illustrates the risk-liquidity-return relationship among common asset categories.



Discount Rates for Intangible Assets (cont.)

- Asset-specific discount rates for tangible and intangible assets are typically calculated by adjusting key assumptions of the WACC, such as debt-to-capital levels and company-specific risk adjustments:
  - The debt-to-capital assumption should reflect the ability of an asset to serve as collateral. For intangible assets, the debt-to-capital is often close to zero.
  - For calculating asset-specific discount rates, an asset-specific risk premium may be appropriate and will vary depending on the specific circumstances pertaining to each intangible.
- Discount rate estimates can be evaluated for reasonableness using a weighted average return on assets (WARA) calculation.
  - The WARA is an asset-weighted average rate of return figure and should approximate the WACC.

Tax Amortization Benefit (TAB)

- It is generally assumed that a hypothetical buyer of an intangible asset would be able to benefit from a step-up and subsequent amortization of that intangible pursuant to IRC § 197.
- Thus, the present value of the TAB is generally included in the value of intangible assets when applying an income-based approach.
  - E.g., present value of the income tax savings over the amortization period.
- TAB calculations should generally reflect tax law in the jurisdiction of the acquired firm.
  - E.g., a U.S.-based firm that acquires a New Zealand-based company would typically use New Zealand tax rules for the TAB calculation.

Market Approach

- The market approach is rarely applied to value intangible assets.
- Obtaining reliable transaction data is difficult:
  - Transactions involving individual intangible assets are rare.
  - Transaction data is typically private and/or difficult to verify.
- Assessing comparability can also be difficult:
  - Characteristics and economics of intangible assets can be unique.
  - E.g., rights provided to owner, expiration dates, etc.
- Thus, market transactions are generally not reliable for intangible asset valuations.

Market Approach (cont.)

- Some intangible assets are good candidates for the market approach:
  - Where the comparable intangible assets are frequently sold separately from any other tangible or intangible assets (i.e., naked sale); and
  - Where the benefits conferred by the intangibles are relatively uniform (e.g., taxi medallions, airport landing rights).
- IVS 210 suggests the market approach should only be used as the primary valuation basis if the following two criteria are met:
  - Information is available on arm's-length transactions involving identical or similar intangible assets on or near the valuation date.
  - Sufficient information is available to allow the valuer to adjust for all significant differences between the subject and the transactions.

Cost Approach

- The cost approach is primarily used for assets that are not revenue generating or provide no exclusive right (i.e., contributory assets).
  - E.g., assembled work force, internally developed software.
- IVS 210 suggests the cost approach should be used as the primary valuation basis only if the following three criteria are met:
  - It would be possible for market participants to re-create an intangible asset of similar utility to the subject asset.
  - There are no legal protections or other barriers preventing market participants from recreating an asset of similar utility or profiting therefrom.
  - The intangible asset could be recreated quickly enough that a market participant would not be willing to pay a significant acquisition premium.

Cost Approach (cont.)

- To estimate the cost to recreate an intangible asset, one should consider direct and indirect costs, a profit mark-up, and opportunity costs :
  - Direct costs are costs that can be directly attributed to the recreation of the intangible asset, such as labor and materials.
  - Indirect costs are overhead costs required to re-create the asset.
  - Profit mark-up refers to the expected mark-up on costs that a business would reasonably expect to realize on its direct and indirect cost investments.
  - Opportunity costs represent the profits that a hypothetical buyer would forego due to not having an intangible asset in place for immediate use.

Cost Approach (cont.)

- Intangible assets may be subject to various forms of obsolescence:
  - Intangibles are subject to functional and/or economic obsolescence.
  - Intangible assets are not subject to physical deterioration.
- Functional and economical obsolescence should be deducted from the replacement cost new when using the cost approach:
  - Functional obsolescence (e.g., relative age, relative excess operating costs) leads to a shorter economic life and reduced economic benefits.
  - Economic obsolescence can be difficult to allocate amongst the different assets of a business enterprise and is typically not expected.

Cost Approach (cont.)

- There is divergence in practice on whether the cost approach should be performed on a pre- or after-tax basis.
- An after-tax valuation using the cost approach recognizes that the costs incurred for developing an intangible asset are typically immediately deductible expenses.
- The buyer of a business includes payment to the seller for these intangible assets in its purchase price for the business.
- The pretax cost approach indication is converted to an after-tax basis and the present value of the tax savings from amortization of the value of the asset over the 15-year life is added to the after-tax cost figure.

SECTION 9

Review Questions

Practice Question 1

Q Which of the following most accurately describes intangible assets?

A. A limited category of assets that have legal protections and include creations of the mind.

B. The value of future economic benefits that arise out of the assemblage of a business' assets that is not directly ascribed to any other asset.

C. Assets that derive their value from physical attributes.

D. Nonphysical, nonfinancial assets that grant rights, privileges, or operational competitive advantages to the owner.

Practice Question 2

Q Which of the following is a correct listing of the five categories of intangible assets?

A. Marketing-related, Technology-related, Artistic-related, Data processing-related, Engineering-related.

B. Tangible personal property, Tangible real property, Intangible personal property, Intangible real property.

C. Artistic-related, Contract-based, Customer-related, Marketing-related, Technology-related.

Practice Question 3

Q Which of the following statements about the value of intangible assets is correct?

A. The value of an intangible asset flows from its physical features.

B. The required rate of return for an intangible asset will typically be lower than the required rate of return for a tangible asset.

C. The bundle of legal rights associated with an intangible asset helps create the intangible asset.

D. An intangible asset will typically require the use of tangible assets in order to realize its full value.

Practice Question 4

Q Income approach methods commonly used to value intangible assets include:

A. Discounted cash flow method.

B. Relief from royalty method.

C. Excess earnings method.

D. Multi-period excess earnings method.

E. Capitalization of single-period earnings method.

Practice Question 5

Q Which of the following businesses is more likely to be associated with high personal goodwill?

A. A global accounting firm with 5,000 partners

B. A national accounting firm with 1,000 partners

C. A regional accounting firm with 100 partners

D. A local accounting firm with 2 partners

SECTION 10

Writing the Business Valuation Report

Topics to be Covered

- Introduction
- Uniform Standards of Professional Appraisal Practice
- Business Valuation Reporting Standards
- Valuation Professional Organizations' Reporting Standards
- Guidelines for Effective Report Writing
- Evaluating the Report
- Common Errors and Shortcomings in Business Valuation Reports
- Summary

Introduction

- This chapter discusses the following topics related to the preparation and issuance of business valuation reports:
  - An overview of the valuation reporting process
  - *Uniform Standards of Professional Appraisal Practice (USPAP)* business valuation reporting standards
  - *International Valuation Standards (IVS)* business valuation reporting standards
  - Prominent VPO's business valuation reporting standards
  - General suggestions for writing effective business valuation reports

USPAP – Relevant Definitions

- Appraisal – “the act or process of developing an opinion of value”
- Appraisal Report – “any communication, written or oral, of an appraisal, appraisal review, or consulting service that is transmitted to the client upon completion of an assignment”
- Assignment – “a valuation service provided as a consequence of an agreement between an appraiser and a client”
- Valuation Services – “services pertaining to aspects of property value”

USPAP – Reporting Standards

- USPAP provides business value reporting standards
  - Does not provide specific guidance regarding report form or format
- The length, type, and content of a business valuation report may be influenced by the following:
  - The valuation client
  - Any applicable regulatory requirements
  - Any applicable statutory authority
  - The courts, through published judicial precedent
  - The type of business ownership interest being valued
  - The nature of the business valuation problem

USPAP – Obligations of Appraisers

- To comply with USPAP, an appraiser must adhere to rules, including:
  - The **Ethics Rule** addresses:
    - Conduct – perform assignments with impartiality, objectivity, and independence
    - Management – addresses, compensation, advertising, and signatures
    - Confidentiality – addresses the confidential nature of the client relationship.
  - The **Record Keeping Rule** describes minimum work file contents and requirements for file retention and custody.
  - The **Competency Rule** states that appraisers have or acquire the necessary competencies to effectively complete the appraisal assignment.

USPAP – Obligations of Appraisers (cont.)

- The **Scope of Work Rule** states for each assignment an appraiser must:
  - identify the problem to be solved
  - determine and perform the scope of work necessary to develop credible results
  - disclose the scope of work in the report
- The **Jurisdictional Exception Rule** addresses situations in which a law or regulation precludes compliance with any part of USPAP

USPAP – Reporting Standards

- USPAP describes the minimum standards to be applied in business valuation reports.
  - The **Scope of Work Rule** states that a report "must contain sufficient information to allow the client and other intended users to understand the scope of work performed. The information disclosed must be appropriate for the intended use of the assignment results."
  - Standards related to the development of a business valuation report are presented in USPAP Standard 9
  - Standards for reporting the results of a business valuation are presented in USPAP Standard 10

USPAP – Reporting Standards (cont.)

- USPAP Standards Rule 10–1 states that each written or oral business valuation report must:
  - Clearly and accurately set forth the appraisal in a manner that will not be misleading
  - Contain sufficient information to enable the intended user(s) of the valuation to understand the report properly
  - Clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment

Business Valuation Reporting Standards

- USPAP Standards Rule 10–2 provides the option to prepare either a written Appraisal Report or a written Restricted Appraisal Report.
- An Appraisal Report be appropriate for the intended use and comply with the following minimum disclosure requirements:
  - Identify the client and any other intended users
  - State the intended use of the valuation
  - Contain information sufficient to identify the business and the interest valued, including the characteristics relevant to the type and definition of value and intended users of the valuation
  - State the extent to which the interest contains elements of ownership control and the extent to which the interest appraised lacks elements of marketability and/or liquidity

Business Valuation Reporting Standards (cont.)

- State the standard and definition of value and the premise of value and cite the source of the definition
- State the effective date of the valuation and the date of the report
- Summarize the scope of work used to develop the valuation
- Provide sufficient information to indicate that the appraiser complied with the USPAP business valuation development requirements
- State all extraordinary assumptions and hypothetical conditions and state that their use might have affected the assignment results
- Include a signed certification per USPAP Standards Rule 10–3

Business Valuation Reporting Standards (cont.)

- A Restricted Appraisal Report must state a restriction that limits the use of the report to the client and the named intended users and warn that the report may not contain supporting rationale for all the opinions and conclusions set forth in the report.
- In an Appraisal Report the information must be summarized, and in a Restricted Report it may be stated.
- A work file in support of a Restricted Report must be sufficient for the appraiser to produce an Appraisal Report.

Business Valuation Reporting Standards (cont.)

- USPAP Standards Rule 10–4 provides professional guidance concerning oral business valuation reports.
- Oral reports are often presented within the context of expert witness testimony, either in deposition or in trial.
- Effectively, USPAP does not distinguish between the development of oral reports and written reports.
  - The development of the assignment results should be the same
  - The details of the work performed should be maintained in the work file
  - The work file should include summaries of all oral reports or a transcript of testimony, including the appraiser's signed and dated certification

International Valuation Reporting Standards

- The reporting standards under USPAP and IVS are very similar.
- IVS does not require a particular form or format of report.
- The report must be sufficient to communicate to the intended users the scope of the valuation assignment, the work performed, and the conclusions reached.
- IVS states that the report should be sufficient for an appropriately experienced valuation professional with no prior involvement with the valuation engagement to review and understand the report.

International Valuation Reporting Standards

- For all assignments performed under IVS, a written scope of work must:
  - Identify the appraiser
  - Disclose any material connection with the subject or other relevant parties
  - state the nature of any assistance from others
  - Identify the client
  - Identify any other intended users
  - Identify the asset or liability to be valued
  - State the currency to be used for the valuation
  - State the purpose of the valuation
  - State the basis/bases of value
  - State the valuation date
  - State the nature and extent of the appraiser's work
  - Identify any limitations or restrictions on the inspection, inquiry, and/or analysis in the valuation assignment
  - Identify relevant information that is not available due to conditions of the assignment and assumptions and special assumptions made as a result
  - Identify all assumptions and special assumptions
  - Identify the nature and source of any relevant information that is to be relied upon and the extent of any verification to be undertaken
  - Describe the agreed upon report format
  - Communicate any restrictions on use, distribution, and publication of the valuation report and those relying upon it
  - State that the valuation will be prepared in compliance with IVS and that the appraiser will assess the appropriateness of all significant inputs
  - Explain the nature of any departures from IVS

International Valuation Reporting Standards

- Reports prepared under IVS must convey the following, at a minimum:
  - The scope of the work performed and the intended use of the report
  - The intended use
  - The approach or approaches adopted
  - The method or methods applied
  - The key inputs used
  - The assumptions made
  - The conclusion(s) of value and principal reasons for any conclusions reached
  - The date of the report (which may differ from the valuation date)
- See: *A Bridge from USPAP to IVS 2020*.

IRS Business Valuation Guidelines

- In 2006, the IRS released Business Valuation Guidelines.
- It is worth noting that the IRS guidelines are compatible with USPAP.
- The IRS Business Valuation Guidelines are subject to updating.

ASA Reporting Standards

- Professional association standards are generally not authoritative but are usually binding on the organization's membership.
  - ASA members practicing in the U.S. are required to observe USPAP, while members practicing outside the U.S. must observe either USPAP or IVS
  - When performing a business valuation, all ASA members must follow the ASA Business Valuation Standards (BVS) as well as the ASA Principles of Appraisal Practice and Code of Ethics
- ASA BVS outlines the requirements for a Comprehensive Written Business Valuation Report, but also allows for other report formats that are less comprehensive.
- ASA standards are only applicable to ASA members.

AICPA Reporting Standards

- Statement on Standards for Valuation Services No. 1 pertains to valuation of a business, security, or intangible asset.
- VS Section 100 defines two types of valuation reports when reporting the conclusions of a valuation engagement:
  - A **Detailed Report** is structured to provide sufficient information to permit intended users to understand the data, reasoning, and analyses underlying the analyst's conclusion of value
  - A **Summary Report** is structured to provide an abridged version of the information that would be provided in a Detailed Report
- AICPA standards are only applicable to AICPA members.

Additional Reporting Standards

- The NACVA Professional Standards are similar to the AICPA standards.
- The CBV Institute's Practice Standard 110 provides for three types of valuation reports:
  - A **Comprehensive Valuation Report** based on a comprehensive review and analysis of the business, its industry, and all other relevant factors, adequately corroborated and generally set out in a detailed report
  - An **Estimate Valuation Report** based on limited review, analysis, and corroboration of relevant information, set out in a less detailed report
  - A **Calculation Valuation Report** based on minimal review and analysis and little or no corroboration of relevant information, set out in a brief report

Guidelines for Effective Report Writing

- It is important for the analyst to comply with applicable professional standards concerning the business valuation development and reporting.
  - Nonetheless, compliance with applicable professional standards will not ensure an effective valuation report presentation.
- A technically correct valuation may be poorly written and fail to effectively communicate the analyses and conclusion to the intended user.
- This section will provide practical recommendations for improving the content and style of valuation opinion reports.
- Remember the fundamental rule of effective valuation report writing:
  - Say what you did
  - Do what you said

General Principles of Good Report Writing

- The basic principles for writing a good business valuation report are not unique. The report must enable the reader to understand:
  - The purpose and scope of the assignment
  - The steps taken to carry it out
  - The conclusion reached
  - The logical flow of data and rationale that led to and supported the conclusion
- The report should be well organized, as comprehensive as necessary, well documented, and presented in an easily readable style.
- The content should be relevant to the report's purpose, avoiding extraneous material.

General Principles of Good Report Writing (cont.)

- The report writer should be conscious of the intended audience.
- The report should be free of obscure jargon.
- Each aspect of the conclusion(s) should be clearly supported.
- The report must be **coherent**, with logical transitions.
- Topics should be organized under headings.
- The report should be **replicable**.
  - Could another competent appraiser replicate the value based solely on the report, the resources used, and the analysis provided?
- External sources should be clearly cited.
- The report should be internally consistent.

Evaluating the Report

- See “Reviewing a Business Valuation Report” in VAB6, Ch 24.
  - Is the report understandable to the reader?
  - If the report and listed data sources were handed to another competent analyst, could all the data provided be independently checked for accuracy and thoroughness?
  - Is there replicability?
  - Did the analyst clearly appraise the property that was identified to be appraised?
  - Is the valuation methodology appropriate for the purpose of the valuation, the relevant standard of value, the ownership characteristics (e.g., a noncontrolling, nonmarketable interest) and any controlling statutes or judicial precedent?

Evaluating the Report (cont.)

- Are the approaches, methods, and procedures employed those generally accepted in the valuation community and grounded in strong economic theory and application (i.e., would the report withstand a Daubert or similar challenge)?
- Is the report internally consistent (i.e., nothing in one place that seems to contradict something somewhere else)?
- Is the report comprehensive (i.e., does it do everything it promises to do; are all the topics included that seem necessary to support the conclusions reached)?
- Are there any obvious omissions in the report?
- Does the report logically lead to convincing support for the conclusion(s)?
- Is the professional format acceptable (spelling, grammar, layout)?

Common Report Errors and Shortcomings

- Failure to conform to applicable standard of value / level of value
- Internal inconsistencies
- Language or analysis that reveals a bias or lack of objectivity
- Extensive and irrelevant boilerplate
- Undefined jargon
- Inadequate guideline company data and analysis
- Leaps of faith
- Emphasis of items not in proportion to their relative importance
- False sense of precision
- Failure to explain relevance of research and analysis

Summary

- USPAP Standards Rule 10 provides valuable professional guidance for analysts, even in instances when the valuation report does not technically have to comply with USPAP.
- It is recommended that even analysts not associated with other VPOs be generally familiar with their professional standards and guidance.
- Effective valuation reports are clear, convincing, cogent, and concise.
- Reports presented in a complete, logical, and readable manner, can be instrumental to the intended user's understanding and ability to rely on the valuation report and its conclusions.
- Poorly written valuation reports impair the intended user's ability to understand and therefore rely on the report and its conclusions.

SECTION 10

Review Questions

Practice Question 1

Q Which of the following is true?

A. USPAP provides standards rules for business valuation development, but not reporting

B. USPAP provides separate standards rules for business valuation development and reporting

C. USPAP compliance is optional for ASA members

D. USPAP does not provide specific guidance regarding report form or format

Practice Question 2

Q If an appraiser is preparing a business valuation report for an investor who is not otherwise familiar with the subject company:

A. A restricted appraisal report would be appropriate

B. A restricted appraisal report would not be appropriate

C. USPAP does not provide standards guidance as to the appropriate type of report in this context

Practice Question 3

Q ASA's Business Valuation Standards provide detailed standards pertaining to what type of report?

A. Comprehensive written business valuation report

B. Appraisal report

C. Restricted appraisal report

D. Calculation report

Practice Question 4

Q The "fundamental" rule of effective business valuation report writing is?

A. Every paragraph should have a footnote

B. Boilerplate is your friend

C. Assume your audience is a high-school kid

D. Say what you did and do what you said

Practice Question 5

Q Which of the following are important characteristics of a credible and well-supported valuation report?

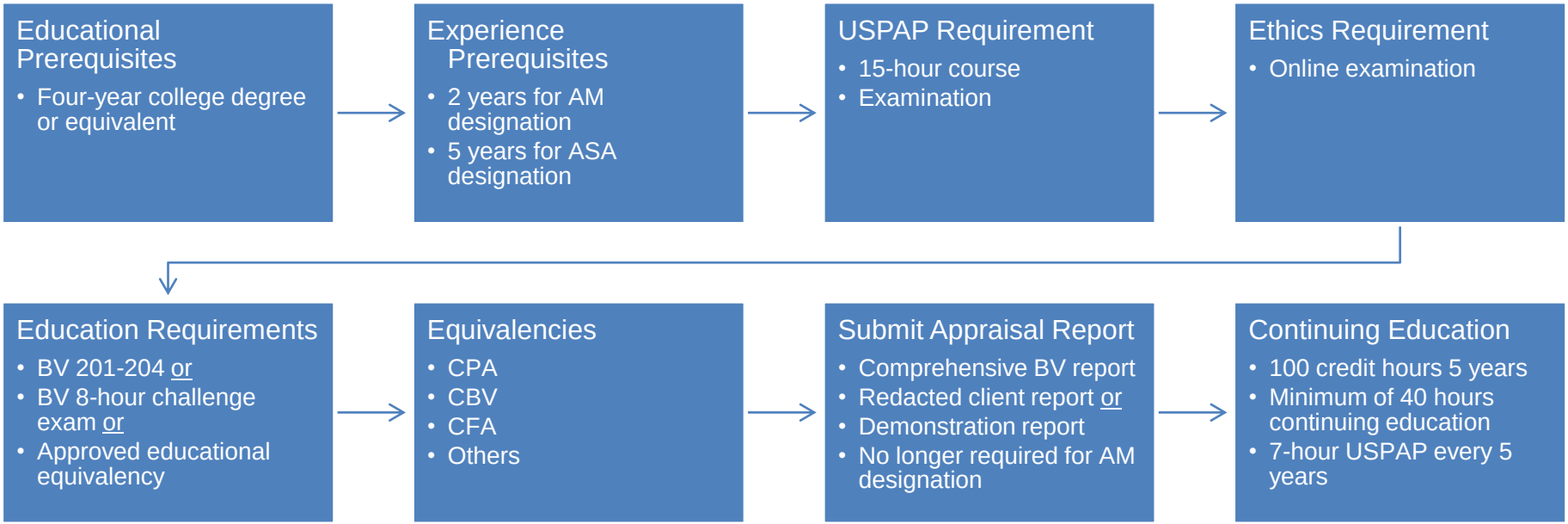
A. Scope of work clearly identified
B. Internally consistent
C. Logical flow of information
D. Sources provided for external inputs
E. No obvious omissions
F. Replicable based on information presented therein
G. All of the above

SECTION 11

Advancement and Accreditation

(not tested)

Quick Guide to BV Accreditation*



* This chart is oriented toward the experienced practitioner. For complete details please review the ASA BV Accreditation Guide.

USPAP Examination

- Adopted by the U.S. Congress in 1989, the Uniform Standards of Professional Appraisal Practice (USPAP) is the generally recognized ethical and performance standards for the U.S. appraisal profession.
- Updated periodically years so that appraisers have the information they need to deliver unbiased and thoughtful opinions of value.
- ASA Admin Rules require members to observe USPAP, although:
  - Canadian members may follow CUSPAP.
  - Other International members may follow International Valuation Standards.
- Requirements: Successful completion of a 15-hour USPAP course and exam. The seven-hour "refresher" USPAP course is required every five years thereafter.

Code of Ethics Examination

- Applicants are required to successfully complete a 35-question ethics exam.
- The ASA ethics examination is designed to test the applicant's knowledge of the ASA's Principles of Appraisal Practice and Code of Ethics.

Appraisal Report Submission & Review

- Advancement to Senior Member requires the submission and acceptance of a comprehensive written appraisal report.*
- Such reports assist the BOE in evaluating the scope of practice, ethical attitude, level of education, and appraisal competency achieved by the applicant.
- The litmus test is whether the examiner can replicate the concluded value in the report based solely on the report, the reasoning and logic provided therein, the resources used, and the analysis provided.
- Submitted reports must comply with USPAP and the ASA BV Standards.

* For complete details of the report submission and review process please review the ASA Candidate BV Report Review Checklist available at http://www.appraisers.org/credentials/am-asa/accreditation-guides-forms.

BV Appraisal Report Guidelines

- Advancement to Accredited Senior Appraiser requires the submission of one comprehensive written business valuation report.

ABC COMPANY APPRAISAL REPORT

- Reports are reviewed by members of the ASA Board of Examiners on a fatal flaw basis.
- Report must comply with BVS-VIII of the ASA Business Valuation Standards
- The report must include the use of both the income approach AND the market approach
- Must include explanations of how factors such as discount rates, valuation multiples, and premiums or discounts were determined and used.

BV Report Review Checklist

- Published in Chapter 24 of *Valuing a Business*.
- Candidates must complete the ASA Candidate BV Report Review Checklist and submit with application.
- Not all elements on the checklist are required or appropriate for every appraisal report.
- Pass/Fail items are clearly marked.

Pass/Fail vs Fatal Flaw Issues

- Pass/Fail Items are those items required to be in the report. Exclusion may not be "fatal" in terms of impairing the concluded value but are required content for credentialing.
- Fatal flaw items are errors that impair the concluded value and are evidence of insufficient competency for credentialing.
- Non-fatal flaw items in and of themselves will not cause failure:
  - Minor or isolated mathematical errors such as rounding.
  - Judgement issues based on a subjective analysis of data or information.
  - Occasional typographical or spelling errors.
  - Alternative procedural choices (e.g., source of size premium data).

Pass/Fail Items

- Name of company
- Form of ownership
- Portion to be appraised
- Name and standing of party hiring the appraiser
- Effective / valuation date
- Date report prepared

Purpose of the appraisal

Degree of control

Definition of standard of value

Capital structure

Distribution of ownership

Sources of information

Pass/Fail Items (cont.)

- Subject company financial statements presented with sufficient detail.
- Adequate explanation of financial statement adjustments.
- Company's financial ratios, income statement, balance sheet, etc. compared with themselves over time to identify trends.
- If projections were utilized in the valuation, key assumptions underlying the projections must be identified and discussed.
- Are the valuation methods all on one consistent level of value?
- Appraiser certification.
- Statement of limiting conditions.
- Signature of appraiser.

Suggestions

- Read and follow the guidance in:
  - BV Accreditation Guide
  - ASA BV Standards
  - USPAP
  - BV Report Review Checklist
- If your firm does not prepare detailed reports, take the time to expand an actual report to a demonstration report that meets the requirements.
- Apply valuation principles and methodologies that are consistent with leading valuation treatises and ASA Principles of Valuation courses.
- Avoid non-applicable boilerplate.

Suggestions

- Don't select your most complicated and unique project or report.
- Stick to the basics – this is not the right place to show off your new valuation theory or method.
- Ask a mentor to review your report.
- Check your math.

Exam Review

ASA
Providing Value Worldwide