AMERICAN BANKRUPTCY INSTITUTE

2023 Annual Spring Meeting

Enterprise Valuation Today: "It Ain't What It Used to Be"

CONCURRENT SESSION

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JW Infinity Consulting LLC; New York

2023

Enterprise Valuation Today
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Brad Orelowitz | The Michel-Shaked Group; Boston, MA
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April 22, 2023

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Enterprise Valuation Today
"It Ain't What It Used To Be"

The use of valuations in the restructuring and bankruptcy process and issues to consider when assessing valuation methodology and assumptions.

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When Valuation Matters to Management in Restructuring

- Mergers & Acquisitions
- Income, Gift and Estate Taxes
- Board Decisions
- Corporate Recapitalizations
- Debt Restructuring
- Employee Stock Ownership
- Strategic Planning
- Going private transactions
- Accounting fair value determinations
- Taxation

Types of Valuations Used:

- Fairness/Solvency opinions
- Purchase price allocations
- Transfer pricing studies
- Valuation of intangible assets such as trademark, IP and goodwill
- Valuation of common stock, preferred stock, partnership interests, options, and warrants
- Valuation of promissory notes and subordinated debentures

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When Valuation Matters to Trustees

- Litigation / Adversary proceedings: Preferences, Fraudulent conveyances
- Insurance claims – D&O, professional, property or general liability
- Settlement / mediation proceedings
- Asset sales: §363 sales or any sale of business, real estate, machine & equipment, IP, trademark, etc.
- Tax purposes

Types of Valuations Used:

- Preference analysis: Ordinary Course and New Value analyses
- Solvency opinions
- Reasonably equivalent value
- Liquidation analysis
- Balance sheet test
- Calculation of damages i.e., value of the litigation claim

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When Valuation Matters to Debtors/Creditors

- Chapter 11 Plan confirmation
- DIP financing
- Litigation / Adversary proceedings / Chapter 5 causes of action determination
- Proof of claim / claim objections
- §363 sales
- Mass tort claims
- Third party releases

Types of Valuations Used:

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- Solvency opinions
- Valuation of intangible assets such as trademark, IP and goodwill
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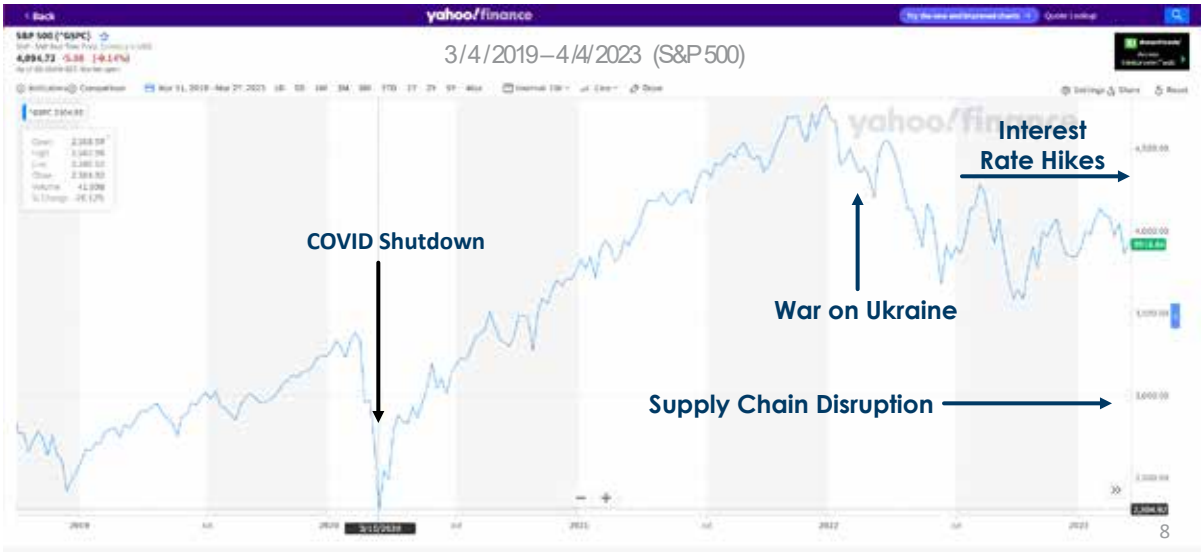
Considerations for Valuations:
Impact of Recent Economic Events & Stock Market



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Considerations for Historical Valuations: Impact of Recent Events

- Timing of valuation
- What was known or knowable?
- Timeline of events
  - Pre-pandemic indicators
  - March 2020 stock market collapse
  - Lock downs: Local & state-specific/regional/national/international
  - Lock downs: Industry-specific impact (Healthcare vs. Restaurant/Travel)
  - 2020 – 2021 Stock market recovery: Industry-specific?
  - 2022 – Stock market correction, interest rate hikes and potential recession
  - 2023 – Interest rate hikes, the banking crisis and layoffs

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Compare: Georgia and New York Governor's COVID-19 Executive Orders

	New York	Georgia
Public Health State of Emergency	3/7/2020	3/14/2020
Public School Closure	3/16/2020	3/18/2020
"Pause Order"/Shelter in Place except "Essential Services"	3/20/2020	4/3/2020
Social Distancing	4/15/2020	4/27/2020
- Masks or Face Coverings Required in Public	✓	
- Bars, Performance Venues, Public Pools closed, other businesses, incl. restaurants/fitness centers, open - "Gathering" restrictions (Masks Encouraged)		✓
Businesses Open - "Gathering" Restrictions (#persons increased)	5/15/2020	5/28/2020
Public Health State of Emergency Lifted	6/25/2021	7/1/2021

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Compare: Georgia and New York Governor's Economic Executive Orders

	New York	Georgia
Public Health State of Emergency Lifted	6/25/2021	7/1/2021
State of Emergency:		
- Economy, Supply Chain, Healthcare Infrastructure		6/30/2021 - 4/15/2022
- Healthcare	9/27/2021- 4/22/2023	
- Hospital Capacity – COVID	11/26/2021- 9/12/2022	
State of Emergency: Supply Chain		
Extended as a result of the 11/1/2022 closure of a Level 1 Trauma Center: 460 beds, 100,000 ER patients		4/14/2022 - 3/11/2023 *(expired)*

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What we know, or don't know, today…

- Potential for Recession?
- Inflation?
- Interest Rates?
- Liquidity?
- Impact of continued Supply Chain Disruption?
- Impact of War in Ukraine? (i.e., food, oil & gas, rare earth minerals)
- Impact of Oil & Gas Shortage? (local/national/international)
- Labor Shortages and Mass Layoffs?
- Regulation?

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Primary Components of Valuation Analysis

- Projections of Future Performance
- Risk
- Capital Structure

As reflected in the Discount Rate or Weighted Cost of Capital ("WACC")

- Comparable Company Transactions
- Benchmark Performance Data

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Primary Components of Valuation Analysis

Assessment of Risk Reflected in Projections & the WACC

- Do the projections reflect management's best estimate of the impact of recent economic and market changes on the business?

Neiman Marcus

MYTHERESA

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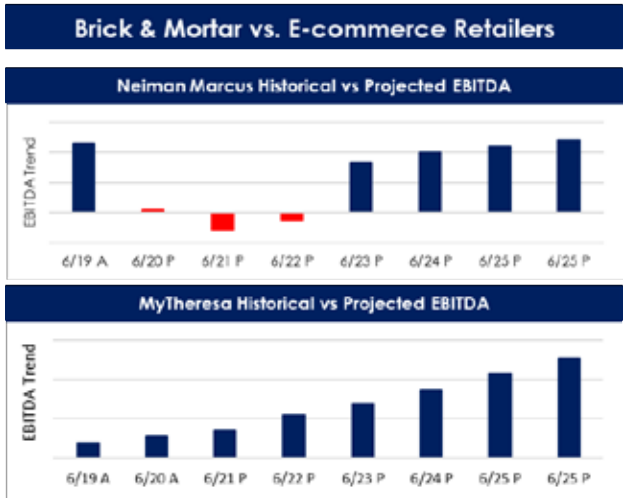
Primary Components of Valuation Analysis
Assessment of Risk Reflected in Projections

- Do projections consider changes in markets, technology, and/or supply and distribution channels? Are the changes temporary or permanent?
- Example: Projections made after March 2020 by brick-and-mortar retailers reflected a dramatic dip in response to market changes resulting from the COVID-19 pandemic.
- In stark contrast, many e-commerce retailers projected steady growth.



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Primary Components of Valuation Analysis
Assessment of Risk Reflected in the WACC

Risk

- Performance Risk – Likelihood of meeting projections
  - Products
  - Market
  - Technology
  - Regulation
- Systematic Risk (Beta) and Market Risk
  - Economic Risk – Impact of local, national and global economic issues on the company individually or the industry on whole
  - Comparative Risk – Risk of investment in the company vs. other available investments (i.e., U.S. Treasuries, public company stock)

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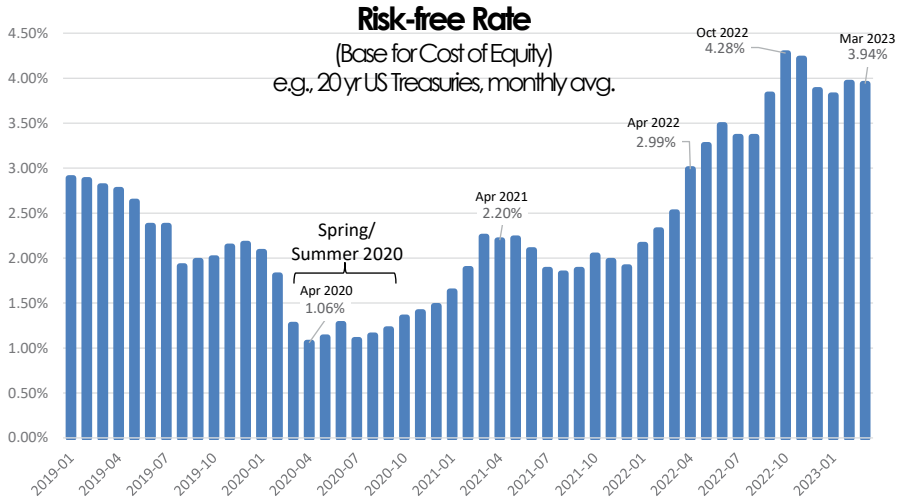
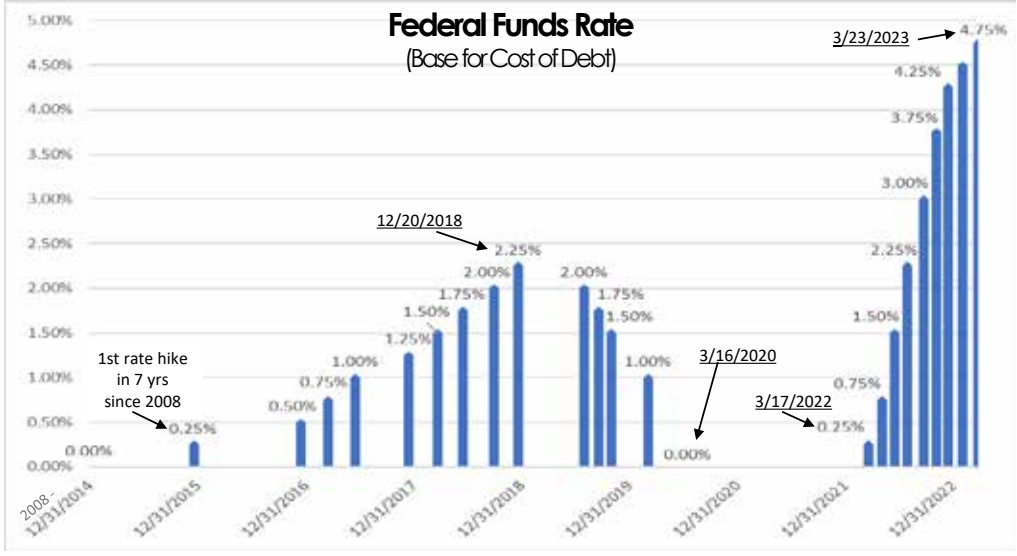
Foundations of Risk: Costs of Equity & Debt



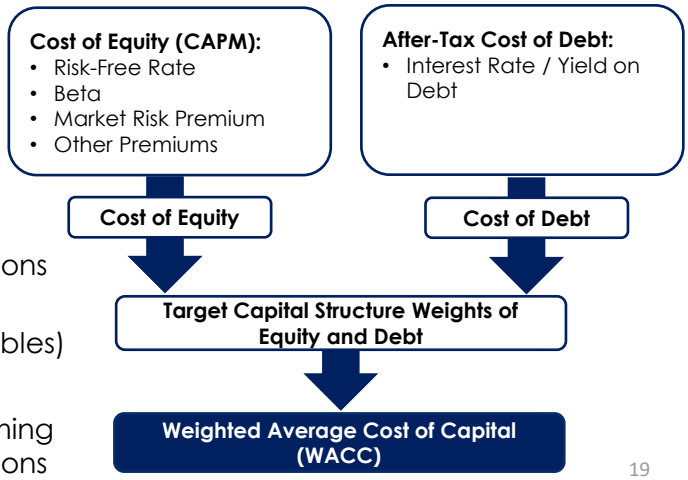
Foundations of Risk: Costs of Equity & Debt



Primary Components of Valuation Analysis

Incorporation of Risk & Capital Structure into the WACC

- Changes in the Risk-Free Rate and related changes in Cost of Debt
- Capital Structure as a % of Equity to Debt
- *Question:* Do the cash flow projections consider risk related to:
  - Asset liquidity v. illiquidity (intangibles)
  - Access to equity/debt
  - Leverage including amount & timing of payments, covenants/Restrictions



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Primary Components of Valuation Analysis

Assessment of Risk Reflected in Projections & WACC

- If the projections reflect management's best estimate of future performance, was the discount rate used to calculate the present value of those cash flows normalized in order to prevent double-counting?
- Are historical measures of Systematic Risk (Beta) and Market Risk meaningful?

TAILORED BRANDS

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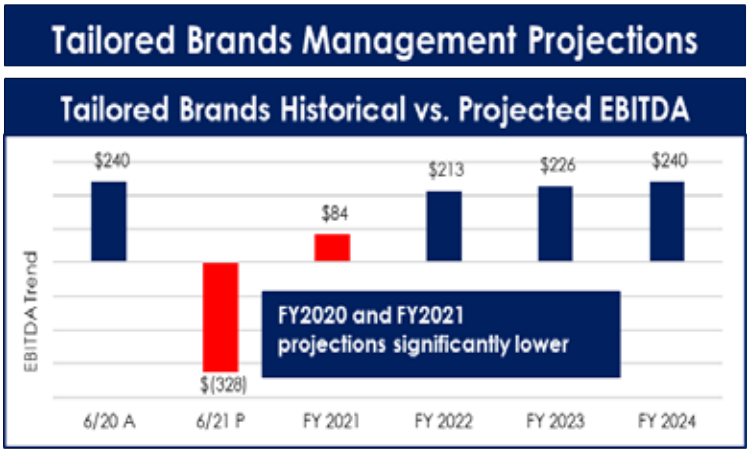
Primary Components of Valuation Analysis
Impact of Risk Built Into Both Projections and the WACC

Risk in Projections

- Tailored Brands projections already reflected the impact of COVID-19 on the business.
- Management stood by its projections throughout the bankruptcy, stating they represented the best estimate of its performance going forward.

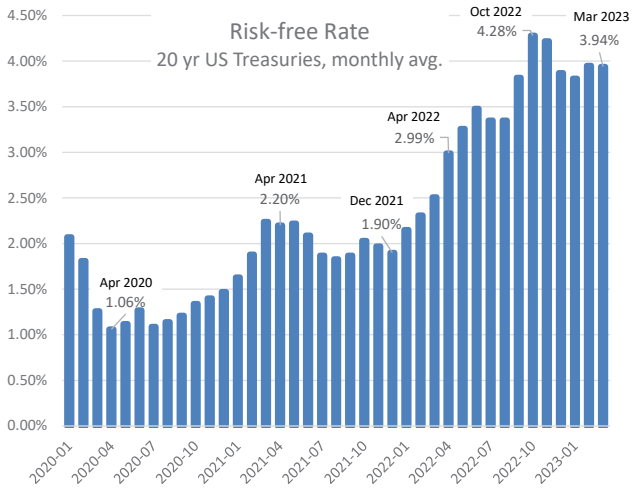


Primary Components of Valuation Analysis
Impact of Risk Built Into Both Projections and the WACC

Risk in Cost of Capital: The Risk-free Rate

Cost of Equity (CAPM):
- Risk-Free Rate
- Beta
- Market Risk Premium
- Other Premiums

- As value is highly date sensitive, an increase in the Risk-free rate, all else being equal, results in a decrease in value.
- The Risk-free rate was not an issue in Tailored Brands as the valuation was as of a specific date. However, this reality is clearly visible today with the failure of Silicon Valley Bank.



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How an Increase in Interest Rates Led to Silicon Valley Bank Failing

- SVB cash deposits declined as its customers, many startup companies, were unable to raise venture capital funding as they had in the past yet continued to spend.
- Cash deposits at SVB declined – a **short-term liability**
- Bank had invested in US Treasury Bonds – **long-term investments**.
- As interest rates rose, bond values declined.
- As a result of SVB's liquidity needs, SVB had to sell bonds at a $1.8 billion loss.

Example, a 2% increase in interest rates could lead to a 40% decline in bond value.

Bond Values Decline when Interest Rate Increase

Bond Value	Interest Rate	Coupon
$1,000	3%	$30
$600	5%	$30
40% Decline		

- Disclosure of the loss and of SVB's investments led to a rush on the bank.
- Deposit holders withdrew $42 billion in a single day.

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Primary Components of Valuation Analysis
Impact of Risk Built Into Both Projections and the WACC

Risk in Cost of Capital: Systemic Risk (Beta)

Cost of Equity (CAPM):
- Risk-Free Rate
- Beta
- Market Risk Premium
- Other Premiums

- At the beginning of 2020, stock market volatility (measured by the VIX Index) increased significantly. As a result, we were seeing abnormal "inflated" Beta values.
- Using an inflated Beta would have resulted in an inappropriate increase in the WACC and a reduced value.

Tailored Brands 5-Year Beta			
5 Year Beta	12/31/2019 "Pre-Covid Beta"	03/31/2020 "Inflated Beta"	% Increase in "Systematic Risk"
Tailored Brands Relevered Beta	**0.92**	**1.42**	**54%**

Using projections adjusted for COVID-19 and a WACC inflated by an abnormal Beta effectively double counts the risk associated with the pandemic

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Primary Components of Valuation Analysis
Sensitivity of Value to WACC

Systemic Risk (Beta)

- For example, for a hypothetical continuing cash flow of $1,000, the WACC calculated using a pre-COVID beta results in a present value of $10,297. However, using a post-COVID beta, the value would be $8,300.
- In this hypothetical example, using an inflated beta would result in a reduction in value of 19%, all else being equal.

The Risk-free Rate

- Hypothetically, an impact of a 1% to 3% change in the Risk-free Rate would reduce value by between $786 and $1,306; a further reduction in value of 5% to 13%.
- Combining the change in value from both beta and the Risk-free Rate would result in a reduction in value of 32%, all else being equal.

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Thank You!

Q&A?

Primary Components of Valuation Analysis

Projections of Future Performance

- Consideration of historical performance
- Operational changes
- Changes in leverage and interest rates
- Growth rate(s)
- Capital expenditures and working capital requirements
- Variations in assumptions for multiple product/service lines

Use of Historical Valuations to Assess Projections vs. Actual Performance

- Assessment of quality of prior projections by management and/or financial advisors compared to actual performance
- Valuations used for debt financing and/or M&A transactions
- Valuations used for internal purposes
- Sales of shares
- Assessment of base-case projections and alternatives used in prior solvency opinions and fairness opinions

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HANDOUT MATERIALS
Enterprise Valuation Today: "It Ain't What It Used to Be"

Ken Mann (Moderator); SC&H Capital; Ellicott City, MD
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The use of valuations in the restructuring and bankruptcy process and issues to consider when assessing valuation methodology and assumptions.

I. Introduction – Standard of Value: "Fair Value" means the amount at which the aggregate assets of the company would change hands between a willing buyer and a willing seller, within a commercially reasonable period of time, each having reasonable knowledge of the relevant facts, neither being under any compulsion to act, with equity to both.

II. Common Valuation Approaches:
   a. The **income approach** is a general way of determining a value indication of a business, business ownership interest, security or asset using one or more methods that convert anticipated economic benefits into value. Under the income approach, value is measured as the present worth of anticipated future net cash flows generated by a business or asset.
   b. The **market approach** is a general way of determining a value indication of a business, business ownership interest, security or asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities or assets that have been sold. The market approach is based on the principle of substitution, which reflects the premise that an informed investor would pay no more for a security or asset than he/she could pay for another security or asset of equal utility.
   c. The **cost approach** is a general way of determining a valuation indication of a business, business ownership interest, security or asset using one or more methods based on the discrete cost of reproducing specific assets and liabilities. The cost approach is based on the assumption that a prudent investor would pay no more for a security or asset than the amount at which it could be replaced or reproduced.

III. In a fraudulent conveyance opinion, the analyst opines on the solvency of a debtor corporation at the time of a specific transfer. The analyst may also opine on whether the debtor corporation (1) had an unreasonable small amount of capital to continue operations and (2) was expected to be able to meet it debt obligations. The analyst typically performs the following three tests to determine if a fraudulent transfer has occurred:
   a. The **balance sheet** test – determines whether, at the time of the transaction, the total fair value of the debtor's assets (both tangible and intangible assets) is greater than the total amount of the debtor's liabilities.
   b. The **cash flow** test – analyzes the debtor's ability to meet its debt obligations as such obligations become due.
   c. The **capital adequacy** test – determines whether the debtor is engaged in a business or a transaction for which it has adequate amount of capital.

IV. Primary Components of Valuation Analysis
   a. Assessment of Risk Reflected in Projections & WACC
   b. Projections of Future Performance
   c. Use of Historical Valuations to Assess Projections vs. Actual Performance

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V. When Valuation Matters to Management in Restructuring:
   a. Mergers & Acquisitions
   b. Income, Gift and Estate Taxes
   c. Board Decisions
   d. Corporate Recapitalizations
   e. Debt Restructuring
   f. Employee Stock Ownership
   g. Strategic Planning
   h. Going private transactions
   i. Accounting fair value determinations
   j. Taxation
   k. Types of valuations: Employee Stock Ownership, Strategic Planning, Going private transactions, Accounting fair value determinations, Taxation

VI. When Valuation Matters to Trustees:
   a. Mergers & Acquisitions
   b. Income, Gift and Estate Taxes
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   d. Corporate Recapitalizations
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   k. Types of valuations: Preference analysis: Ordinary Course and New Value analyses, Solvency opinions, Reasonably equivalent value, Liquidation analysis, Balance sheet test, Calculation of damages ie. value of the litigation claim

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   a. Chapter 11 Plan confirmation
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   e. §363 sales
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VIII. Considerations for Historical Valuations:

a. Impact of Recent Events

i. Timing of valuation
ii. What was known or knowable?
iii. Timeline of events
iv. Pre-pandemic indicators
v. March 2020 stock market collapse
vi. Lock downs: Local & state-specific/regional/national/international
vii. Lock downs: Industry-specific impact (Healthcare vs. Restaurant/Travel)
viii. 2020 - 2021 stock market recovery: Industry-specific?
ix. 2022 stock market correction, interest rate hikes and potential recession
x. 2023 – Bank failures

b. Impact of Recent Economic Events & Stock Market

IX. Compare: Georgia and New York Governor's COVID-19 Executive Orders

	New York	Georgia
Public Health State of Emergency	3/7/2020	3/14/2020
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"Pause Order"/Shelter in Place except "Essential Services"	3/20/2020	4/3/2020
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X. Compare: Georgia and New York Governor's Economic Executive Orders

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State of Emergency:		
- Economy, Supply Chain, Healthcare Infrastructure		6/30/2021 - 4/15/2022
- Healthcare	9/27/2021- 3/23/2023	
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State of Emergency: Supply Chain		
Extended as a result of the 11/1/2022 closure of a Level 1 Trauma Center: 460 beds, 100,000 ER patients		4/14/2022 - 3/11/2023 *(expired)*

XI. What we know, or don't know, today…
- a. Potential for Recession?
- b. Inflation?
- c. Interest Rates?
- d. Liquidity?
- e. Impact of continued Supply Chain Disruption?
- f. Impact of War in Ukraine? (i.e., food, oil & gas, rare earth minerals)
- g. Impact of Oil & Gas Shortage? (local/national/international)
- h. Labor Shortages and Mass Layoffs?
- i. Regulation?

XII. Primary Components of Valuation Analysis
- a. Projections of Future Performance
- b. Risk
  - i. Performance Risk – Likelihood of meeting projections
  - ii. Products
  - iii. Market
  - iv. Technology
  - v. Regulation
  - vi. Economic Risk – Impact of local, national and global economic issues on the company individually or the industry on whole
  - vii. Comparative Risk – Risk of investment in the company vs. other available investments (i.e., U.S. Treasuries, stock market)

- c. Capital Structure
  - i. Asset liquidity vs. illiquidity (e.g., intangible assets)
  - ii. Leverage
  - iii. Amount and timing of payments (current and future)
  - iv. Covenants and other restrictions
  - v. Access to financing
  - vi. Existence of Contingent Assets/Liabilities (for solvency analysis)
  - vii. Guarantees

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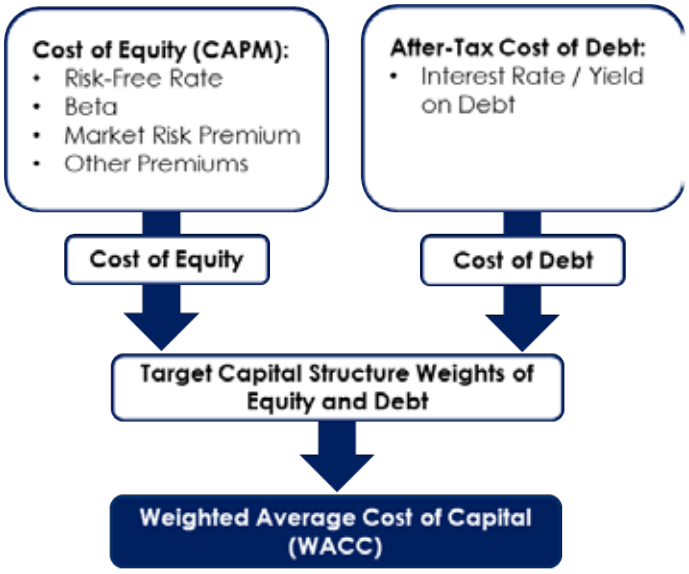
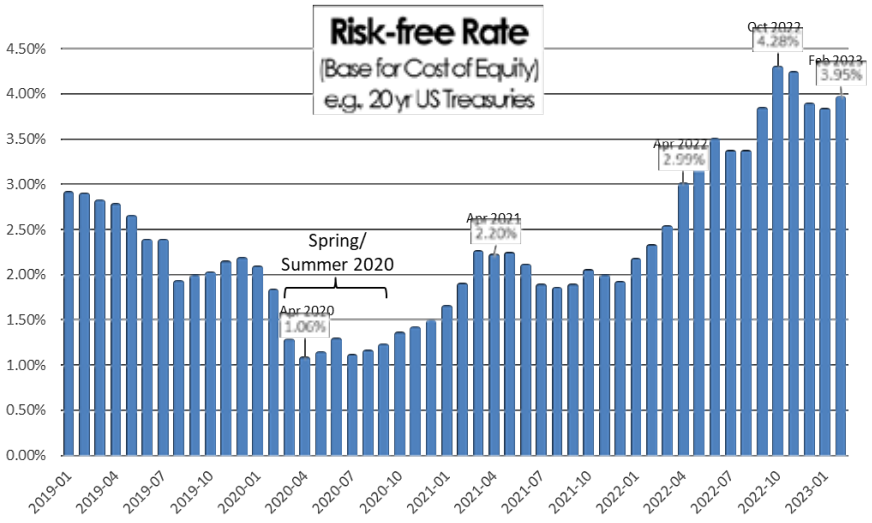
d. Comparable Company Transactions
e. Benchmark Performance Data

XIII. Incorporation of Risk & Capital Structure into the WACC
a. Changes in the Risk-Free Rate and related changes in Cost of Debt
b. Are historical measures of Systematic Risk (Beta) and Market Risk meaningful?



XIV. Foundations of Risk:
a. Costs of Equity & Debt



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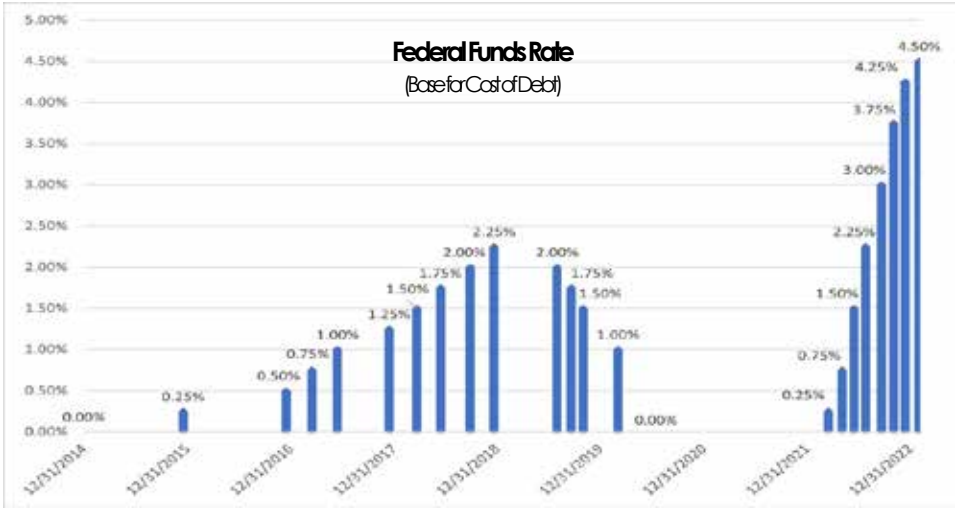

b. Risk
    i. Assessment of Risk Reflected in Projections & WACC
        1. If so, was the discount rate used to calculate the present value of those cash flows normalized in order to prevent double-counting.
        2. Do the projections reflect management's best estimate of the impact of recent economic and market changes on the business?
        3. Tailored Brands projections already reflected the impact of COVID-19 on the business. Management stood by its projections throughout the bankruptcy, stating they represented the best estimate of its performance going forward
        4. Using an increased Beta as of March 2020 would result in an inappropriate increase in the WACC and consequently a reduced value
        5. Risk is effectively double-counted
        6. Do projections consider changes in markets, technology, and/or supply and distribution channels? Are the changes temporary or permanent?
        7. Example: Projections made after March 2020 by brick-and-mortar retailers reflected a dramatic dip in response to market changes resulting from the COVID-19 pandemic.
        8. In stark contrast, many e-commerce retailers projected steady growth.

XV. Relevant References/Resources [ABI articles attached to this handout]:
a. Shaked, Dr. Israel, Orelowitz, Brad, and Dionne, Paul. "**The Cost-of-Capital Dilemma: Valuation During Abnormal Market Conditions**." ABI Journal. Alexandria, VA: American Bankruptcy Institute, April 2021. [article attached to this handout]
b. Shaked, Dr. Israel, and Orelowitz, Brad. "**Understanding Retail Bankruptcy**." ABI Journal. Alexandria, VA: American Bankruptcy Institute, November 2017. [article attached to this handout]
c. Shaked, Dr. Israel, Orelowitz, Brad, and Dionne, Paul. "**Role of Uncertainty in Determining a Distressed Company's Fate**." ABI Journal. Alexandria, VA: American Bankruptcy Institute, October 2014. [article attached to this handout]

Value & Cents

By Dr. Israel Shaked and Brad Orelowitz[1]

Understanding Retail Bankruptcy

Dr. Israel Shaked
The Michel-Shaked Group; Boston

Brad Orelowitz
The Michel-Shaked Group; Boston

Dr. Israel Shaked is the managing director of The Michel-Shaked Group and a professor of finance and economics at Boston University Questrom School of Business. Brad Orelowitz, CPA is a senior vice president with the firm and has more than 25 years of experience in finance and accounting.

Over the past year, newspapers and financial websites have been full of articles discussing the distress happening with retail companies. The number of store closures and employee layoffs is increasing every week. This year, the number of distressed retail companies has been far greater than any other year in recent history. For example, a select list of doomsayer articles on retail distress includes:

- "Retail Distress Shows No Sign of Abating, Record Store Closures Anticipated";[2]
- "The Retail Bubble Has Now Burst: Which Retailers Are in the Most Trouble?";[3]
- "The Running List of 2017 Retail Apocalypse Victims";[4]
- "2017 Retail Bankruptcies Are Piling Up (and There's No End in Sight)";[5]
- "22 Retailers That Are at Serious Risk of Bankruptcy";[6]
- "Moody's: Number of Distressed Retailers Tops Total During Financial Crisis";[7]
- "From a Risk-of-Bankruptcy Standpoint, the Retail Business Is the New Oil and Gas";[8]
- "Rise of Amazon Leaves Even More Retailers in Intensive Care";[9] and
- "Retail Is Crumbling: This Data on the Industry's Health Hasn't Been this Bad Since Great Recession."[10]

Surprisingly, this retail distress does not reflect the state of the U.S. economy. The unemployment rate is at a 16-year low, housing prices have increased steadily since 2011, and the stock markets have been hitting record levels this year.

Reasons for Financial Distress

There are two primary reasons for the financial distress. First, there is an obvious shift in consumption patterns away from brick-and-mortar stores to online stores. Department stores nationwide are losing ground to online retailers. For example, the U.S. Commerce Department reported that department store sales for December 2016 declined by 7.2 percent over the prior year and experienced 23 consecutive months of year-over-year declines. In contrast, non-store retailers (including internet and catalog sales) gained 10.4 percent over the prior December, and experienced double-digit gains in six months of the prior year.[11]

Further, quarterly retail e-commerce sales for the second quarter of 2017 increased by 16.2 percent over the second quarter of 2016. Retail sales excluding e-commerce sales increased by only 3.1 percent over this time period. In contrast, for 31 consecutive quarters, quarterly year-over-year e-commerce sales have increased by an average of 15.2 percent. Over this same time period, retail sales excluding e-commerce companies have increased by an average of 3.6 percent.[12]

The second reason causing financial distress is the level of debt at the retailer. In general, retail companies typically have lower levels of debt than most other industries. However, this does not tell the full story.

Retail companies have the fixed commitment of leases. Lease agreements for retail stores are typically operating leases in which the lessor transfers the right to use the property to the lessee. At the end of the lease agreement, the property is returned to the lessor. There is no asset or liability recognized on the lessee's balance sheet, and the lessee deducts the full operating lease payment on its income statement.

On the other hand, in a capital lease, the risks of ownership are transferred to the lessee. At the end of the lease, the lessee owns the property. In this lease, the lessee recognizes the asset and the liability on the balance sheet, and deducts depreciation and the interest component of the lease payment (if the lease life exceeds 75 percent of the life of the asset, ownership transfers at the end of the lease, there is an option to purchase the asset at the end of the lease at a bargain price, and the present value of the lease payments is greater than 90 percent of the fair-market value of the asset).

When analyzing the fixed commitments of a debtor, it is irrelevant whether the leases are capital or operating leases. This is an accounting distinction on whether to capitalize or expense the lease. However, all stakeholders have to understand that from economic and credit-risk perspectives, the dis-

1 Dr. Shaked also served for 20 years as a coordinating editor for the *ABI Journal* and is a co-author of *A Practical Guide to Bankruptcy Valuation, Second Edition* (ABI 2017), available for purchase at store.abi.org.
2 *ABL Advisor*, June 22, 2017.
3 Douglas A. McIntyre, 24/7 Wall St., April 18, 2017.
4 Corinne Ruff and Ben Unglesbee, RetailDive.com, July 5, 2017.
5 Daniel B. Kline, *The Motley Fool*, May 19, 2017.
6 Brad Tuttle, Time.com, June 13, 2017.
7 Kevin McCoy, *USA Today*, June 9, 2017.
8 Tonya Garcia, MarketWatch, March 9, 2017.
9 Matt Egan, CNN Money, March 9, 2017.
10 Kaya Yurieff, TheStreet, March 5, 2017.
11 Jordan Yadoo, "Retail Sales Figures Bear Out America's Storefront-to-Online Shift," Bloomberg, Jan. 13, 2017, *available at* bloomberg.com/news/articles/2017-01-13/retail-sales-figures-bear-out-america-s-storefront-to-online-shift (last visited Sept. 21, 2017).
12 U.S. Census Bureau, Monthly and Annual Retail Trade, Latest Quarterly E-Commerce Report, *available at* census.gov/retail/mrts/www/data/excel/tsadjustedsales.xls (last visited Oct. 4, 2017).

tinction is irrelevant, as the company in both types of leases has a fixed obligation that must be met. Even though operating leases do not appear on the balance sheet, it is critical to account for these fixed obligations when analyzing a company's creditworthiness.

A common rule-of-thumb method of analyzing leasehold commitments is to multiply the current rent by eight to provide a rough estimate of capitalized leases. An analyst can then add this estimated amount to the on-balance-sheet debt. This serves as a proxy for total debt.

These excessive levels of debt (as well as the pressure from online retailers) are changing the retail landscape. In 2017, the number of retail bankruptcies has been substantially higher than in previous years. There are also many retailers facing distress, and as indicated in Table 1, they are closing record numbers of stores in 2017. The list is current as of September 2017; however, the number of store closures varies by source, and these estimates are changing frequently.

Furthermore, consider the following list of rating agencies' opinions, as shown in Table 2. The struggles facing these retailers have led to an overall deterioration in credit rating.

In general, these companies have excessive debt and/or are facing stiff competition from Amazon and other successful online retailers. Retail distress as a result of a high level of leverage is not new. For example, consider the classic case of Macy's.

Retail Distress Is Not a New Phenomenon

On Oct. 21, 1985, the senior management of R.H. Macy & Co. Inc. announced a plan to take the retailer private in a $3.58 billion leveraged buyout (LBO). Macy's operated 83 stores in 12 states containing approximately 22.3 million square feet of store space and employed more than 54,000 workers. The proposal, the first LBO proposal for a major retailer, offered shareholders $70 per share, an amount that represented about 19 times the 1985 earnings and 2.7 times book value. Following the announcement, the stock, which had closed at 47-and-1/8th the previous day, surged 16-and-1/8th per share to close at 63-and-1/4th. In making the buyout announcement, Macy's Chair/CEO Edward S. Finkelstein and President/COO Mark S. Handler indicated that their new management group would include "an unusually large number" of Macy's executives. In fact, the desire to retain top-management talent was one of the major reasons for the buyout proposal. Equally important was management's desire to free itself from the pressures of the short-term performance that is typically required in a public company. At the time of the announcement, details of the financing structure were not yet finalized.

Two months after the initial buyout news, financing difficulties forced the management group to lower its offer to $68 per share. The company's board approved this proposal the following month.

From 1980-84, Macy's net operating margins and profit margins were significantly better than its peer groups, averaging 11.2 versus 7.2 percent and 4.9 versus 3.4 percent, respectively. Furthermore, Macy's sales per square foot, a rough measure of productivity, averaged $137 during this five-year period, compared to an average of $108 for the peer group. Macy's management attributed the company's historical growth and profitability to strategies of store expansion and modernization, innovative merchandising, productivity and cost control, and management development. Under Finkelstein's stewardship, Macy's emerged to become one of the nation's most successful department store chains. Its management was considered one of the best in the industry, and its expansion program was considered highly successful.

However, the LBO placed a significant debt-repayment burden on the company. Prior to the LBO, Macy's debt-to-equity ratio was 0.14:1 (for every dollar of equity, the company had 14 cents of debt). Following the LBO, this ratio increased to 10:1. In other words, for every dollar of equity, the company had $10 of debt. And this was *before* considering the fixed commitments of its leases.

Prior to the LBO, Macy's Beta (*i.e.*, Macy's stock volatility relative to the overall market) was 1.10. Following its LBO, Macy's Beta, reflecting its new level of debt, was 6.15. This is an extremely high level of market risk, and any downturn in the market is exacerbated by a company's high level of debt.

Following the LBO, the company improved operationally. However, with debt levels as significant as Macy's were, there was very little margin to weather any decline in financial performance. Macy's filed for bankruptcy in January 1992, during the first recession following its LBO.

Three decades after Macy's LBO, excessive debt is still plaguing retailers. In 2005, Toys "R" Us was taken private by Kohlberg Kravis Roberts, Bain Capital Private Equity and Vornado Realty Trust. Before its LBO, its debt on the balance sheet was $2.3 billion. With an EBITDA of more than $800 million, its ratio of debt-to-EBITDA was under 3x. At the end of 2016, its debt was approximately $4.8 billion, with

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Table 1

Company	Store Closings	Company	Store Closings
RadioShack	1,000	Gordmans Stores	106
Ascena Retail Group	667	Michael Kors	100
Payless Shoe Source	512	Staples	70
rue21	400	Macy's	68
Gymboree	350	Perfumania	64
The Limited	250	Abercrombie & Fitch	60
Family Christian	240	G-III Apparel Group	60
hhgregg	220	Guess Inc.	60
Gap Inc.	200	Vitamin World	51
Bebe Stores	180	Gander Mountain	30
Sears and Kmart	180	True Religion	27
Wet Seal	171	Eastern Mountain Sports	27
Crocs	160	American Eagle Outfitters	25
Game Stop	150	Bob's Stores	21
J.C. Penney	138	Tailored Brands	11
BCBG Max Azria	120	Neiman Marcus	10
American Apparel	110	**Total Closings**	**5,838**

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EBITDA dropping to a little more than $600 million. Its debt-to-EBITDA ratio soared to 7.6x. Similarly, its interest-coverage ratios (EBITDA divided by interest — a measure of how easily a company can pay its interest expense) decreased from over 6x prior to its LBO to 1.4x in 2016. Toys "R" Us filed for bankruptcy in September 2017. When accounting for its lease obligations, the ratio of total debt (including an estimate for capitalized operating leases)-to-EBITDAR (earnings before interest, taxes, depreciation, amortization and rent) almost doubles between the LBO and the end of 2016.

Are Retailers Good LBO and Dividend-Recapitalization Candidates?

One wonders whether retailers in general are good LBO and dividend-recapitalization candidates. In their investment banking book, Rosenbaum and Pearl discuss the ideal LBO target:

Characteristics of a Strong LBO Candidate:

- Strong Cash Flow Generation;
- Leading and Defensible Market Positions;
- Growth Opportunities;
- Efficiency Enhancement Opportunities;
- Low Capex Requirements;
- Strong Asset Base; [and]
- Proven Management Team.[13]

While the authors routinely observe many retail LBOs, retail is not the ideal LBO candidate. For example, retail is cyclical, so strong cash-flow generation is not consistent. Brick-and-mortar retailers are facing tremendous market pressure from online retailers, which dilutes market share and impacts growth opportunities. Retailers with multiple locations require capex for store improvements, which are usually an ongoing (and expensive) process. Furthermore, retailers do not have a strong asset base. Typically, their only asset of any value is inventory, as they lease their stores. While many retailers do have intellectual property, this is usually not sufficient collateral for an LBO. Therefore, retailers are not ideal targets for an LBO.

Nevertheless, the retail industry has long been a favorite industry for private-equity (PE) investors. Over the past several years, PE firms have invested in thousands of deals. A select list of PE involvement in distressed retailers is shown in Table 3.

13 Joshua Rosenbaum and Joshua Pearl, *Investment Banking: Valuation, Leveraged Buyouts and Mergers & Acquisitions*, p. 168 (John Wiley & Sons 2009).

Table 2

	Moody's			S&P			
Entity	Date	Rating	Rating Note	Date	Rating	Rating Note	Outlook
Charlotte Russe Holding Inc.	05/25/17	Caa1	Downgrade	02/06/17	CCC+	Downgrade	Negative
Charming Charlie LLC	12/22/16	Caa1	Downgrade	02/10/17	CCC+	Downgrade	Negative
Claire's Stores Inc.	10/03/16	Ca	Downgrade	10/04/16	CC	—	Negative
				08/18/16	CC	Downgrade	—
				05/11/16	CCC-	—	Negative
Cole Haan LLC	05/11/17	Caa1	Downgrade				
David's Bridal Inc.	09/19/16	Caa1	Affirm	03/24/17	CCC+	Downgrade	Negative
J.Crew Group Inc.	07/18/17	Caa2	Reinstated	07/14/17	CCC+	Upgrade	Negative
				06/14/17	CC	Downgrade	Negative
				12/13/16	CCC-	Downgrade	Negative
Neiman Marcus Group Inc.	03/15/17	Caa2	Downgrade	06/30/17	CCC	Downgrade	Negative
				02/09/17	CCC+	Downgrade	Negative
Nine West Holdings Inc.	01/19/17	Caa3	Downgrade	05/12/17	CCC-	Downgrade	Negative
	08/26/16	Caa2	Downgrade	08/26/16	CCC	Downgrade	Negative
Quiksilver Inc.				06/28/17	CCC+	Downgrade	Negative
Sears Holding Corp.	01/20/17	Caa2	Downgrade				
TOMS Shoes LLC	07/17/17	Caa2	Downgrade	08/15/17	CCC+	Downgrade	Negative
True Religion Apparel Inc.	07/07/17	WR	Withdrawn	08/07/17	NR	Withdrawn	Not Rated
	07/06/17	Ca	Affirm	07/05/17	D	Downgrade	—
	01/13/17	Ca	Downgrade				
Vince Holding Corp.	06/22/17	Caa2	Downgrade				
	04/20/17	Caa1	Downgrade				
	10/28/16	B3	Downgrade				

Historically, retailers have been attractive targets for PE firms for a number of reasons. Many of the retailers targeted by PE firms are household names. For these companies, it is easier to convince lenders as to the company's long-term viability. Through dividend recapitalizations, PE firms are able to limit their downside risk.

In *Payless ShoeSource*, a case in which the authors were involved, the company's leverage was tripled at the time of the LBO.[14] Moreover, only four months following the LBO, a dividend of $225 million was paid to the company's PE owners, almost as much as their equity investment just four months earlier. The full amount was financed by the issuance of new debt, which greatly reduced their downside risk. A year later, the company borrowed an additional $145 million to declare a dividend of approximately $127 million. These three transactions, the LBO and the two dividend recapitalizations, backed by solvency opinions, increased the company's debt from $126 million to $706 million in only 17 months. However, not one single penny of the new borrowing went to the company's benefit, as the loan proceeds went to selling shareholders and the company's PE owners, and to cover the transaction costs. All of this was done at a time when Payless's same-store sales (a measure of growth in stores that have been open for more than one year) was declining. This left Payless with very little equity cushion to weather the storm in bad times.

14 All information regarding Payless ShoeSource (or any other company mentioned in this article) is strictly from publicly available data sources.

Table 3

Entity	Private-Equity Firm
Charlotte Russe Inc.	Advent International Corp.
Charming Charlie LLC	TSG Consumer Partners LLC
	THL Credit Group LP
	Hancock Park Associates Inc.
Claire's Stores Inc.	Apollo Global Manangement LLC
	Tri-Artisan Capital Partners LLC
Cole Haan LLC	Apax Partners (UK) Ltd.
David's Bridal Inc.	Clayton Dubilier & Rice LLC
	Leonard Green & Partners LP
	AlpInvest Partners BV
	Crescent Capital Group
	Hartford Mezzanine & PE Group
	Stockwell Capital LLC
	TPG Growth LLC
Eddie Bauer LLC	Golden Gate Private Equity Inc.
J.Crew Group Inc.	Leonard Green & Partners LP
	NB Alterative Advisers LLC
	TPG Capital LLC
Neiman Marcus Group Inc.	Ares Private Equity Group
	Canada Pension Plan Investment Board
	Pantheon Ventures (UK) LLP
	aPriori Capital Partners LP
	Leonard Green & Partners LP
	TPG Capital LLC
	Warburg Pincus LLC
Nine West Holdings Inc.	Sycamore Partners Management LP
	CNL Fund Advisors Co.
Payless Holdings LLC	Golden Gate Private Equity Inc.
	Blum Capital Partners LP
TOMS Shoes LLC	Bain Capital Private Equity LP
True Religion Apparel Inc.	TowerBrook Capital Partners LP
Vince Holding Corp.	Sun Capital Partners Inc.

Note: Certain PE firms have already exited their positions on the list.

When a retailer retains an investment bank to explore an LBO, the investment bank typically approaches multiple potential investors, including strategic investors and financial investors. This also attracts the interest of multiple PE firms, and a bidding war ensues. Therefore, it is often the case that the price paid is high. This high price results in an equity investment from the PE firms and a large amount of debt from lenders. As a result, the PE firms are under pressure to realize returns as soon as possible. This can be done through an exit (*e.g.*, an IPO or a sale). An IPO and a sale are complicated and lengthy processes.

A dividend is the easiest way to get a return on investment. However, if a company does not have the liquidity to pay the dividend, it can do a dividend recapitalization (borrowing funds to declare out as dividends) with support from banks and capital markets.

The Dividend-Recapitalization Puzzle

The puzzle is, if this is so risky, why is this done? There are multiple stakeholders at these companies, such as PE firms and other equityholders, lenders, management, employees, landlords and vendors. As previously discussed, the PE firms and equityholders minimize their future risk through dividends. Lenders have client relationships with PE firms. They earn significant fees from these firms, and typically syndicate the loans, thereby reducing their risk. Management often has an equity stake in the company post-LBO, and benefits as the PE firms and equityholders benefit. However, at risk are employees, landlords and vendors, all of whom have had no say in dividend recapitalizations.

Potential Preemptive Measures

Management and financial advisors are in a continuous search for preemptive measures that will minimize the likelihood of distress. A proactive management team can mitigate some of these risks by continuously analyzing store profitability and cost-cutting measures. Management should attempt to close the less-profitable stores as soon as their lease agreements allow.

It is important for management to understand the risks associated with dividend recapitalizations and communicate these risks to stakeholders (including PE firms). There is no fair consideration in these transactions, and they expose key players such as significant shareholders, lenders and board members to fraudulent conveyance claims. abi

Value & Cents

By Dr. Israel Shaked, Brad Orelowitz and Paul Dionne[1]

The Cost-of-Capital Dilemma

Valuation During Abnormal Market Conditions

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In a bankruptcy-valuation dispute, a common methodology employed by valuation professionals is the discounted cash flow (DCF) method. One of the key inputs into a DCF is the discount rate, typically represented by the weighted average cost of capital (WACC). The importance of the discount rate, and the sensitivity of valuation conclusions to even small changes in the discount rate, requires increased scrutiny of discount-rate assumptions by all parties to the dispute.

In normal times, it is important for a valuation professional to bring substantial support for the assumptions and inputs into his/her discount-rate calculation. However, during periods of abnormal market conditions, such as the COVID-19 pandemic, it becomes even more imperative for valuation professionals to substantiate their assumptions and ensure that inputs are normalized.

Overview of WACC

The WACC, or discount rate, represents a company's cost of financing and it is calculated by multiplying the cost of equity by the percentage capitalization that is equity, and adding to that product the after-tax cost of debt multiplied by the percentage of the capitalization that is debt. A company's cost of equity is the return necessary to compensate equity investors for the risk associated with ownership. Typically, a valuation professional employs the capital asset pricing model to calculate a cost of equity for the subject company. The formula to determine the cost of equity using the capital asset pricing model is as follows:

$Ke = Rf + \beta(Rm - Rf) + Rs$ where:

- Ke = the cost of equity;
- Rf = the risk-free rate;
- β = the Beta, or measure of systemic risk;
- (Rm – Rf) = the equity risk premium; and
- Rs = other premiums that represent the expected return necessary in excess of the overall market, typically related to firm size.

The *risk-free rate* is the interest rate that an investor can expect to earn on an investment with zero risk. This interest rate is typically represented by the yield on U.S. Treasury bonds.[2]

Beta measures the historical volatility of a company's stock price relative to the volatility of the overall market. A beta of one indicates that the company exhibits, on average, the same volatility as the overall market. A beta greater than one generally indicates that the company is more volatile in comparison to the market. For example, a beta of 1.1 indicates, on average, that the stock price of a company is expected to rise by 1.1 percent for every 1.0 percent increase in the overall market, and fall by 1.1 percent when the market goes down by 1.0 percent. On the other hand, a beta of less than one indicates that an increase or a decline of 1.0 percent by the market is expected to be associated with a less-than-1.0 percent change in the stock price. Beta does not measure the total risk of the company, but rather its stock price volatility relative to the volatility of the overall market.

The equity risk premium is the return of the overall market less the risk-free rate. To estimate the equity risk premium, valuation experts generally use the supply-side long-term equity risk premium or the historical long-term equity risk premium.[3]

Valuation professionals typically also add company-specific risk premiums to account for any additional risks associated with the subject company. This is often represented by a *size premium*. Generally, a size premium is determined using deciles based on market capitalization or other metrics, such as revenue, earnings, number of employees, etc.[4]

The subject company's *cost of debt* represents its cost to raise debt financing. To determine an appropriate cost of debt for the subject company, a valuation professional can review the interest rate on the subject company's most recent debt issuance, yields on comparable bond indices, or yields maturity on comparable peer companies' debt.

Calculating WACC During Abnormal Times

During periods of abnormal market activity, such as the COVID-19 pandemic, inputs used in a WACC calculation, such as beta or the risk-free rate, can become skewed due to the unusual nature of the event. It is important for a valuation professional to understand the impact that an abnormal market event has on a company's WACC. Further, it is essential for a valuation professional to deter-

1 Dr. Shaked is also co-author of *A Practical Guide to Bankruptcy Valuation, Second Edition* (ABI 2017), available for purchase at store.abi.org.

2 In going-concern valuations, valuation experts typically use longer-term treasuries, such as the 10- or 20-year U.S. Treasury.

3 Although it is not the only source, a common source used by valuation professionals to obtain an equity-risk premium is the Duff & Phelps Cost of Capital Navigator.

4 One common source for size premium data is the Duff & Phelps Cost of Capital Navigator.

mine to what extent the cash-flow projections of the subject company incorporate the impact of COVID-19.

COVID-19 has severely affected many businesses around the world. Many restaurants, retailers and movie theaters have been forced to close their doors. Although the impact of COVID-19 on certain companies and industries has been substantial, it is reasonable to assume that the negative effects of the pandemic are not going to last forever. A valuation professional needs to consider this carefully when performing going-concern valuations of companies during COVID-19.

For example, the DCF methodology projects cash flows for the subject company for more than 20 years (discrete period plus terminal value). Specifically, the terminal value, which calculates the value of the subject company in perpetuity, accounts for all of its cash flows following the discrete period. Therefore, the DCF methodology accounts for cash flows long after the COVID-19 pandemic ends. If the subject company's cash-flow projections already reflect the impact of COVID-19, increasing or decreasing the subject company's discount rate (due to the pandemic) could result in a double-counting of the pandemic's effect. As a result, a valuation professional might unreasonably double-penalize the subject company's value.

Valuation Approaches During COVID-19

The two primary approaches to determining the company's going-concern value are market and income. Generally, the market approach consists of analyzing comparable publicly traded companies that are reasonably comparable to the subject company ("CompCo"), and comparing actual transactions of similar businesses to the subject company ("CompM&A"). The income approach is most often represented by the DCF methodology.

The CompCo approach calculates operating multiples using a reasonably comparable peer group to the subject company. The subject company's enterprise value can then be determined by applying the multiples of the peer companies to the operating metric of the subject company. If the valuation analysis is performed in the midst of a pandemic, then the multiples of the peer companies already reflect this impact and the market's perception of how it is going to affect those businesses in short and long term. Therefore, a valuation of the subject company using the CompCo approach already reflects the impact of COVID-19.

Similarly, the CompM&A approach calculates operating multiples using transactions where the target (acquired) companies are reasonably similar to the subject company. The subject company's enterprise value can be determined by applying the multiples of the transactions to the subject company's operating metric. Transactions that occurred during COVID-19 are relevant because they reflect the buyers' view on the impact of COVID-19 on the target company's business. However, transactions from the period prior to COVID-19 might not be relevant, as they will not reflect the market's perception of the pandemic's impact.

The impact of COVID-19 on the DCF methodology is not as straightforward as the CompCo and CompM&A. As previously discussed, a valuation professional needs to be wary of the potential for double-counting the impact of the COVID-19 pandemic. First, a valuation professional must analyze the subject company's projections to determine whether they already reflect the effects of COVID-19 on the business in the short-term and over the long-term. If the subject company's projections reflect management's best estimate of the impact of COVID-19 on the business, the discount rate used to calculate the present value of those cash flows should be normalized in order to prevent double-counting. Overall, the DCF methodology requires more subjective judgment by a valuation professional to determine how to properly reflect the effects of COVID-19 in the analysis.

Impact of COVID-19 on a Subject Company's Beta

As previously discussed, beta measures systematic risk and the volatility of a company's stock relative to the market. However, beta is not a measure of the company's total risk. The concept most misunderstood is that a company can be very volatile, hence the standard deviation (and variance) of its stock returns might be very high, yet it might have a beta of zero. This is the case with a highly volatile stock whose volatility is not correlated or driven by the market's overall volatility. As a result of COVID-19, a company's beta could increase or decrease. The question then becomes: Is this increase or decrease in a company's beta caused by the abnormal market activity from COVID-19 representative of the company's systematic risk in perpetuity?

In the next section, two recent bankruptcies in which the authors performed valuation and provided expert testimony will be discussed. These case studies provide two examples of how the COVID-19 pandemic affected the betas of the peer companies. In the case of *Tailored Brands*, the beta of its peer group increased, while in the case of *Chesapeake Energy*, the beta of its peer group decreased.[5]

Case Study: Tailored Brands

Retailer Tailored Brands, the owner of Men's Wearhouse and Jos. A. Bank, filed for bankruptcy on Aug. 2, 2020, in the U.S. Bankruptcy Court in the Southern District of Texas, citing the unprecedented impact of COVID-19 on its business.[6] Projections for Tailored Brands, prepared by management, were released to the public on Oct. 7, 2020.[7] As shown in Exhibit 1, management anticipated a negative earnings before interest, taxes, depreciation and amortization (EBITDA) in 2020, and a positive EBITDA of $84 million in 2021. These projections were significantly lower than the company's historical performance in 2019 and its projected performance for 2022-24.

Clearly, the projections for Tailored Brands already reflected the impact of COVID-19 on the business, and

5 *In re Tailored Brands Inc.*, Case No. 20-33900 (MI) (Bankr. S.D. Tex.); *In re Chesapeake Energy Corp.*, Case No. 20-33233 (DJ) (Bankr. S.D. Tex.).
6 "Tailored Brands Executes Restructuring Agreement to Strengthen Financial Position," Press Release (Aug. 2, 2020).
7 Tailored Brands Form 8-K as of Oct. 7, 2020.

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throughout the bankruptcy management stood by its projections, stating they represented the best estimate of its performance going forward. This begs the following question: Should the discount rate for Tailored Brands now be higher because of COVID-19, even though it is clear that the pandemic's impact is already reflected in the company's projected cash flows?

Taking a closer look at the components of Tailored Brands' discount rate, it is clear that the abnormal market volatility as a result of COVID-19 had an unusual impact on its peer companies' betas. As shown in Exhibit 2, the median unlevered beta of Tailored Brands' peer companies increased from 0.73 as of Dec. 31, 2019 (pre-pandemic), to 1.17 as of the valuation date, Oct. 19, 2020 (in the midst of the pandemic).[8] Thus, an increase in beta from 0.73 to 1.17, all else being equal, would result in an inappropriate increase in Tailored Brands' discount rate, which would result in a lower concluded value.

Case Study: Chesapeake Energy Corp.

On June 28, 2020, Chesapeake filed for bankruptcy in the U.S. Bankruptcy Court for the Southern District of Texas. Its projections were provided for the next 50 years and were developed by management in the midst of the COVID-19 pandemic. Moreover, these projections were in part based on the price of oil at the time the projections were developed, which already reflected the impact of COVID-19. Thus, management's projections for

8 Oct. 19, 2020, was the date of the authors' expert report in the Tailored Brands bankruptcy.
9 Source: FactSet.

Exhibit 1: Tailored Brands Historical vs. Projected EBITDA

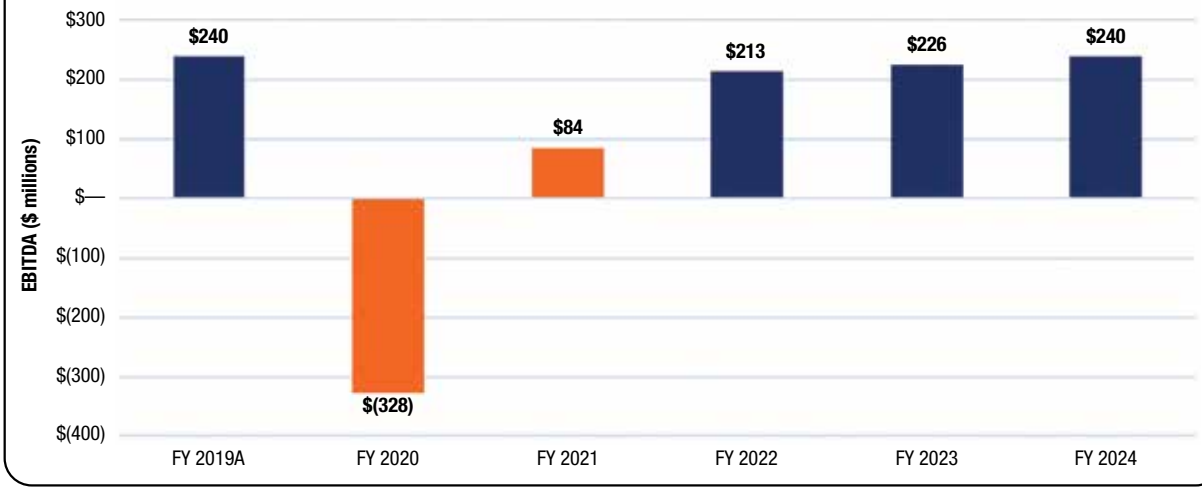

Exhibit 2: Tailored Brands Peer Companies' Betas as of Dec. 31, 2019, and Oct. 19, 2020

	As of Dec. 31, 2019		As of Oct. 19, 2020	
Company Name	Levered Beta	Unlevered Beta	Levered Beta	Unlevered Beta
Abercrombie & Fitch Co. Class A	0.99	0.86	1.50	1.19
American Eagle Outfitters Inc.	0.82	0.82	1.16	1.00
Buckle Inc.	0.73	0.73	1.16	1.16
Carter's Inc.	0.93	0.84	1.17	0.95
Cato Corp. Class A	0.45	0.45	0.65	0.65
Children's Place Inc.	0.67	0.59	1.61	1.06
Gap Inc.	0.73	0.64	1.58	1.32
Tilly's Inc. Class A	0.62	0.62	1.73	1.60
Urban Outfitters Inc.	0.74	0.74	1.54	1.48
Zumiez Inc.	1.50	1.50	1.55	1.55
	Median	**0.73**	**Median**	**1.17**

Chesapeake also reflected the impact of COVID-19. As it is clear that the projections for the company reflected the impact of COVID-19 over the next 50 years, the question becomes: Is it appropriate to use the (observed) discount rate, which is temporarily skewed (whether upward or downward) due to COVID-19, to value Chesapeake in perpetuity? The answer should be "no." A DCF is a stream of long-term cash flows discounted to the present value at the WACC.

Given that Chesapeake's cash flows already reflect the abnormal event (COVID-19), using an abnormal WACC would be a clear double-counting. Contrary to the case of Tailored Brands, the betas of Chesapeake's peer companies decreased as a result of COVID-19. As shown in Exhibit 3, the median-levered beta of Chesapeake's peer companies decreased from 0.72 as of Dec. 31, 2019 (pre-pandemic), to 0.49 as of the valuation date, Nov. 9, 2020 (in the midst of the pandemic).[9] Thus, a decrease in beta from 0.72 to 0.49, all else being equal, would result in an inappropriate decrease in Chesapeake's discount rate, which would result in a higher concluded value.

Conclusion

As shown in the *Tailored Brands* and *Chesapeake* case studies, abnormal market activity caused by unforeseen events (such as the COVID-19 pandemic) can impact companies in different ways. For example, the beta of Tailored Brands' peer companies increased as a result of COVID-19, while the beta of Chesapeake's peer companies decreased. As the projected cash flows for both of these companies already reflected the impact of COVID-19, it was important to normalize their discount rate inputs. Whether it is valuing a company during COVID-19 or other abnormal events within a finite period, it is essential for a valuation professional to determine to what extent the subject company's cash-flow projections reflect the impact of the abnormal event. If the projections reflect the effects of the abnormal event, a valuation professional needs to carefully consider the impact of the abnormal event on the subject company's discount rate and, if needed, use a normalized WACC. If a valuation professional does not properly include the changes in the subject company's discount rate, he/she runs the risk of double-counting the effects of the abnormal event and concluding on a value that is incorrectly higher or lower than the best estimate of the subject company's fair value. abi

Exhibit 3: Chesapeake Peer Companies' Betas as of Dec. 31, 2019, and Nov. 9, 2020

	As of Dec. 31, 2019		As of Nov. 9, 2019	
Company Name	Levered Beta	Unlevered Beta	Levered Beta	Unlevered Beta
Cabot Oil & Gas	0.68	0.62	0.68	0.61
Comstock Resources	2.15	0.60	1.03	0.36
EQT Corp.	1.40	0.85	0.49	0.24
Marathon Oil	1.41	1.08	1.48	0.98
Murphy Oil	1.20	0.80	1.98	1.12
Range Resources	1.33	0.64	0.92	0.37
	Median	**0.72**	**Median**	**0.49**

Value & Cents

By Dr. Israel Shaked and Brad Orelowitz

Role of Uncertainty in Determining a Distressed Company's Fate

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When analyzing a distressed company, one needs to consider numerous factors in order to determine whether the company should reorganize or liquidate. A distressed company on the verge of bankruptcy typically faces many different types of uncertainties that are dependent upon uncertain events and scenarios. Uncertainty is defined as a state of having limited knowledge where it is impossible to exactly describe the existing state, a future outcome or more than one possible outcome. These factors generally affect the valuation of the distressed company.

Uncertainty means different things to the different stakeholders in a distressed company. For example, uncertainty to employees may be very different from uncertainty to creditors. This article will discuss uncertainty from the perspective of the distressed company.

For many decades, academics have tried to quantify and evaluate investors' attitudes with respect to uncertainty. In its simplest form, assume that potential investors are presented with two options. The first option offers a 50 percent chance of a payout of $100 and a 50 percent chance of a payout of zero. The second option guarantees a payout of $40 with certainty. The academic studies found that the vast majority of investors are risk-averse and thus are willing to accept $10 below the expected value of $50. The $40 is referred to as a "certainty equivalent" of the uncertain investment with the two possible outcomes.

Bankruptcy is similar in that the uncertainty is very high and stakeholders have to choose among options with differing degrees of uncertainty. As a company becomes increasingly distressed, stakeholders need to consider whether the company will be worth more dead than alive. If dead, one needs to consider the likelihood of recovering a significant amount in liquidation, given the uncertainty. In assessing these options, the concept of the certainty equivalent must be taken into account. For example, consider the following bankruptcy and distressed-company cases. Herein, we focus on types of uncertainty and their impact on the actions to be taken.

Foreign Competition

A U.S.-based textile manufacturer provided uniforms for police departments and military organizations. For many years, the orders poured in and the margins were very healthy. U.S. police and military personnel were required to buy uniforms made in the U.S. However, Chinese manufacturers flooded the market and provided textiles at a significantly lower cost than the domestic manufacturer could. At that point, budgetary considerations trumped patriotic reasoning, and the restriction to buy U.S.-made uniforms was relaxed.

In this case, the domestic manufacturer could not compete with the foreign competition. The threat was clear, significant and irreversible. The Chinese manufacturers' market share increased rapidly, while the domestic manufacturer's losses piled up. Sales decreased, profits evaporated and, most importantly, the domestic manufacturer had negative cash flow (*i.e.*, spent more money than it took in) each month. As there was no chance of regaining the market share and the domestic manufacturer was already in default of its loan agreements, the only option was to liquidate the business. They could not waste any time, as they were expending more resources every day.

Regulatory Changes

In the early 1990s, there were very few riverboat casinos in Mississippi. A newly formed casino company was able to obtain a new casino license, and it borrowed millions of dollars to build a new facility. However, within three or four years, the gaming commission approved more than 30 new licenses. There was a rush to get operational as soon as possible to beat out the competition. Only six months following the opening of its new casino in Tunica, Miss., the casino filed for bankruptcy.

Many of the new gaming licenses were issued in the Gulf Coast region, and in some of the larger cities in the state. As soon as these casinos opened, the competition pulled gamers away from Tunica. Revenue and profitability decreased, cash flows were significantly lower than those projected at the time of the borrowing, and the Tunica casino was unable to service its large debt load due to the uncertainty resulting from the regulatory changes in the region. Once additional gaming licenses enabled the increased competition, the casino's only options were to scale down the business and restructure its debt, or shut down. The casino could not service its debt. Thus, given this type of regulatory uncertainty, the possibility of this company surviving was remote.

Economic Cycles

Cyclical companies are companies that are susceptible to changes in the level of economy-wide activity. These firms are usually exposed to cyclical risk, over which they have little control. Net income is usually highly volatile for these companies, especially during extended economic downturns.

Consider the residential homebuilding industry. The profitability of companies in this industry is highly dependent upon local economies. In addition, as unemployment rises, the pool of potential buyers decreases. Mortgage rates also influence the performance of homebuilders. One such case involved a manufacturer of chain-link fences that was in business for more than 80 years. The company had a loyal customer list and was able to weather the economic cycles in the construction industry over the decades. However, the company borrowed a large sum of money shortly before a recession. With this extra leverage, the company was not strong enough to withstand the latest recession. Although the business was viable and had a strong customer base and good products, it struggled with negative cash flow.

This type of distressed company is often reorganized and emerges with a lower level of debt. However, the bank insisted on liquidation, even though it was clear to the other stakeholders that the uncertain economy-wide activity was a transitory rather than a permanent condition. This is a classic example of a bank preferring the certainty equivalent.

Technological Changes

A startup technology company was at a very early stage of product development and had raised funds through debt and equity. However, there was very little substantial and proven intellectual property, so the technological uncertainty was very high. The company tried to modify its product several times, raising millions of dollars in each round of financing. Essentially, the company operated in a startup phase for almost a decade. By the time it had developed a commercially viable product, it had lost its first-mover advantage and other competitors had entered the market.

Not surprisingly, the company subsequently failed. Liquidation was the only real alternative, as the company had more than $100 million in debt with no tangible or intangible assets and very few customers.

Changing Competitive Landscape

An intensified competitive landscape tends to shrink the margins of weaker competitors, and a strong leader often dictates the course of the industry. In order to compete, the weaker competitors require significant resources. However, distressed companies do not have such resources to fight back.

For example, consider the home-improvement retail industry in the late 1990s. Home Depot was expanding at a rate of 100 stores per year through investments of more than $1 billion per year. At the time, Home Depot was the largest customer to more than 6,000 of its vendors. Consequently, competitors' margins shrank, resulting in several weaker competitors being forced to liquidate. Reorganization was not a viable alternative.

Similarly, many small retailers and mom-and-pop stores have been forced to close as once larger, big-box retailers moved into their regions. These smaller stores do not have the resources or vendor relationships to compete with the multi-national chain stores. Therefore, the future of these smaller stores is highly uncertain.

> **When stakeholders assess whether to downsize, reorganize or liquidate, they need to consider the nature and permanency of the uncertainty.**

New Product/New Market

A defense contractor manufactured products made from high-strength metals. A company executive, who was an avid golfer, decided to branch out into manufacturing shafts for golf clubs. Sports equipment in general, and golf equipment in particular, is highly competitive. Marketing costs are typically very high, and breaking into this market with a new product requires a tremendous investment in launching the product.

The company required half a dozen rounds of financing, with multiple product changes. The relatively stable defense work was also neglected while the company executive worked on his hobby. Needless to say, the company failed. Changing products and markets while in distress increase the probability that a company will fail, and a liquidation is a more likely outcome than restructuring.

Commodity Prices

Companies within the airline industry face numerous uncertainties that affect their ability to remain competitive and profitable, so it is no wonder that many of these companies have failed in the past. An airline's performance is sensitive to changes in oil prices. Airlines spent almost $50 billion on fuel in 2013 — nearly double what they spent just 10 years before.

There is concern that the current conflict in Iraq could affect global oil supplies, a concern that caused oil prices to rise in June 2014 to their highest level in almost nine months. As a result of this oil price increase, the stock prices of all major U.S. airlines declined. Even though hedging is a possibility, limited resources prevent many airlines from pursuing a hedging strategy.

Jet fuel constitutes approximately one-third of an airline's total expenses, even higher than labor and retirement-benefit costs. Most U.S. airlines operate on very thin margins. In fact, the airline industry is expected to make less money than the profit generated by the oil companies selling the fuel that the airlines consume. Therefore, any hike in oil prices tends to have a significant effect on an airline's bottom line.

The first reaction following an oil price increase is to try to pass these costs onto consumers. However, due to the competitive nature in the industry, an airline risks decreasing occupancy levels on a particular route if it prices itself above its competitors.

But it does not end there. Following an oil price increase and the resulting decreased profitability, an airline may

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need additional sources of funds to get through these hard times. The two typical sources of funds are issuing equity or raising debt. As a result of the lower stock price, issuing equity becomes more expensive, and risk-averse investors might choose not to invest in an airline during these times. Lenders may also choose not to lend to airlines when they are not as profitable, as the airline might not be able to service the debt. Furthermore, the decreased profitability might cause covenant violations or a default on existing lending facilities.

With lower oil prices, airlines are profitable and viable businesses. Volatile oil prices, the inability to differentiate services and raise prices, and the often-strong unions lead to a high overall level of uncertainty, often resulting in bankruptcy.

Seasonal Businesses

Seasonal businesses are faced with a difficult problem: making enough money during the peak season to survive the rest of the year. For example, theme parks in the northeast U.S. are typically only open from late spring to early fall (often between Memorial Day and Labor Day). Similarly, ice cream stores may only do well in warmer months. While many costs may decrease during the off-season, fixed costs will usually remain the same (*e.g.*, facility costs, insurance, utilities and financing costs).

Many retail stores are also seasonal. Jewelry stores may generate up to 40 percent of their annual revenue in the last six weeks of the year. Hallmark holidays such as Valentine's Day, Mother's Day and Father's Day have tried to smooth the revenue generation. However, a bulk of retailer jewelry sales are holiday gifts at the end of the year. In order to gear up for the season, these retailers need to increase inventory levels and spend money on marketing, costs that are in anticipation of the upcoming busy period. Retailers increase their borrowings to fund this, but the margin of error is unfortunately very small. Lenders give retailers the push to get through the good times, but many retailers file for bankruptcy shortly after experiencing a relatively disappointing holiday period.

The uncertainty of running a business with the hope of a strong season to get the business through the next year results in many bankruptcies. This type of bankruptcy cannot easily be hedged or diversified away.

Conclusion

A thorough analysis of the types of uncertainties and their potential impact enables stakeholders to decide whether to give the company a chance to be reorganized and keep operating as a long-term viable, going-concern entity, or alternatively, to promote a liquidation. As illustrated in this article, there are numerous forms of uncertainty. When stakeholders assess whether to downsize, reorganize or liquidate, they need to consider the nature and permanency of the uncertainty. While certain companies can (at least partially) hedge their risk and thereby soften the impact of unexpected detrimental events, some uncertainties are unavoidable — and their impact may be permanent. abi

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