AMERICAN BANKRUPTCY INSTITUTE
JOURNAL
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Value & Cents

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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

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.

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

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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

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

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 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?

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.

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.

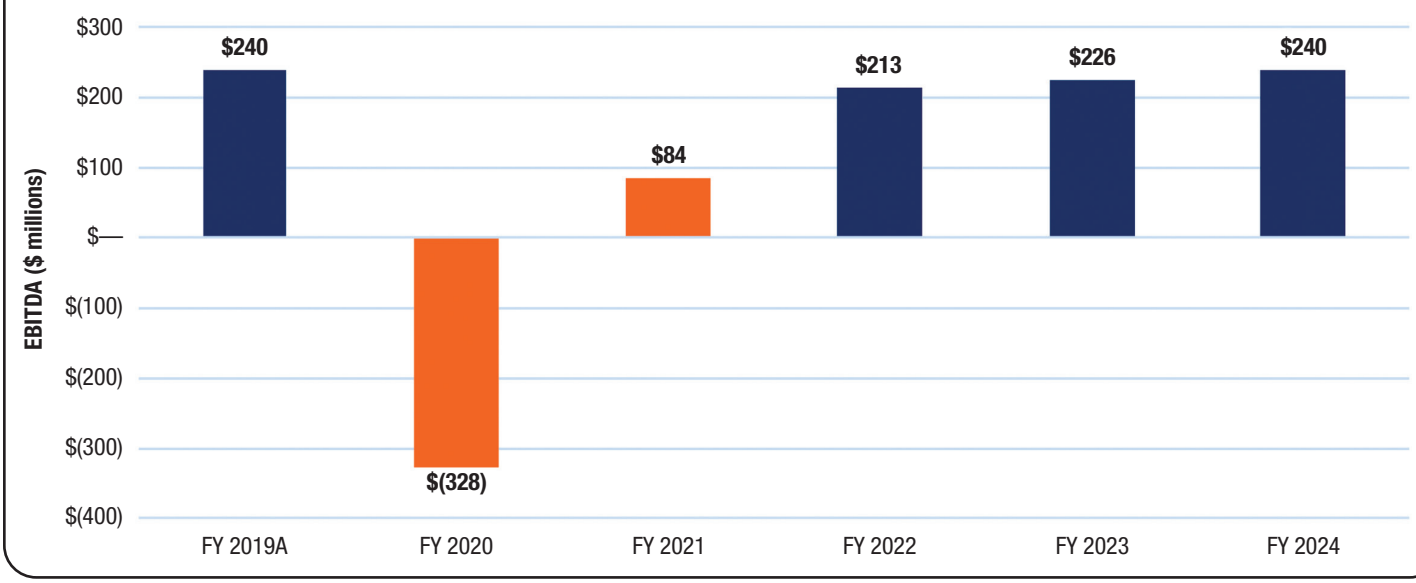
> **Whether ... valuing a company during ... abnormal events within a finite period, it is essential ... to determine to what extent the subject company's cash-flow projections reflect the impact of the abnormal event.**

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 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

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

Exhibit 1: Tailored Brands Historical vs. Projected EBITDA



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

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9 Source: FactSet.

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**

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**