

BVUpdate™ - February, 2014 (BVUpdate)A Business Valuation Library Publication, www.BVLibrary.com**Guest Article****Determining a Distressed Debtor Company Discount Rate (Part 2)**

By Michael Pakter

Determining a Distressed Debtor Company Discount Rate (Part 2)

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This is Part 2 of a two-part article.¹ The first part (published in the January 2014 issue of Business Valuation Update) discussed valuations of distressed debtor companies based on discounted cash flows and considered the impact of the date and stage of distress. This part describes how the financial analyst derives the cost of capital for a distressed debtor company.

The cost of capital represents the required return that must be earned if the value of the entity at issue is to remain unchanged.² Cash flows are discounted at the cost of capital to determine the value of the emerging entity. A debtor company's capital structure may consist of common equity, preferred equity (if any), and debt (long term and short term).

Each of these capital components has an associated cost. To compute a debtor company's cost of capital, it is necessary to compute the blended cost of its capital structure. Use of the weighted average cost of capital is appropriate when the entire enterprise or invested capital of the business is being valued.

The weighted average cost of capital takes into account both the cost of the debt and the cost of the equity, each weighted by the market value of that individual capital component. The debt and equity weighting used in the calculation of the weighted average cost of capital are based on market values (not book values) as the cost of capital should measure the cost of issuing securities (and these are issued at market value). The weights that are used should be those that are planned or targeted over the projection period.

Deriving the cost of equity. The cost of equity of a distressed (or reorganized) debtor company is the implicit rate of return necessary to attract investors to purchase the debtor company's stock. It is the return that must be earned on new projects to leave the value of the shareholders' equity unchanged.³ The debtor company's cost of equity can be determined using the capital asset pricing model.

The capital asset pricing model is used to develop the debtor company's cost of equity based on portfolio management theory. The capital asset pricing model determines the debtor company's cost of equity by establishing the following:⁴

The risk-free rate,⁵ generally the rate on long-term Treasury bonds. The financial analyst should correspond the period of the Treasury bonds with the debtor company's projection period.

Beta,⁶ a measure of the stock's volatility relative to an average stock. The financial analyst should consider that the debtor company's historical beta values may have limited use in bankruptcy proceedings and should be carefully evaluated. The financial analyst should look to betas of similarly sized companies within the industry, taking care to understand whether those companies have or have not been reorganized and restructured, vis-a-vis the debtor company. Because published betas reflect actual capital structure, the financial analyst should unlever and relever beta to adjust for the appropriate capital structure. The financial analyst should gain an understanding of any other unique risks present in the debtor company's unique financial structure—especially considering the stage of distress, restructuring, or reorganization.

The equity risk premium,⁷ the expected market rate of return less the risk-free rate. The financial analyst should consider whether the distressed debtor company's circumstances warrant an adjustment of the publicly available equity risk premium.

The traditional capital asset pricing model is often modified⁸ to capture the risk associated with smaller distressed debtor companies by making an adjustment for company-specific risk (i.e., for size and unsystematic risk)—alpha risk.⁹ The financial analyst should build into alpha risk the risks associated with a small-sized company¹⁰ and the specific risks associated with the company.¹¹ The latter is discussed in additional detail later in this article.

A popular alternative method to the modified capital asset pricing model, to determine a debtor company's cost of equity capital, is the build-up method.¹² The build-up method uses essentially the same components as the capital asset pricing model but applies them differently. The build-up method implicitly assumes that beta is 1.0.

It is a common practice in the build-up method to make an additional adjustment to the alpha risk as follows:

To reflect an industry risk premium—to recognize that an industry is more or less risky than the market as a whole. The financial analyst should consider the number of data points available for the industry. If the number of data points is limited, the financial analyst should consider whether the use of the industry risk premium is warranted. (An industry risk premium can be a negative number.)

To reflect a small-sized risk premium—to recognize that investors in a smaller company require extra returns for investing in that smaller company. Many financial analysts rely, for size-based risk adjustments, on the size premia analysis, based on market capitalization, that is part of the Ibbotson/Morningstar equity risk premium studies.¹³ The financial analyst should consider: (1) that even the smallest companies in the additionally subdivided 10th-decile size of those studies may have market capitalizations far greater than the subject debtor company; and (2) that the 10th-decile size may contain companies that are large but performing poorly—hence having a low market capitalization.

There are several methods to determine discount and capitalization rates. The method used by the financial analyst will depend on the information available. Using the build-up method to determine these rates involves adding rates of return and

return premiums based on the qualitative risk analysis of the distressed debtor company.

The typical build-up method for estimating the cost of equity consists of:¹⁴

- 1) A risk-free rate
- 2) A premium for risk, including any or all of these subcomponents:
 - a. General equity risk premium;
 - b. Small company risk premium; and
 - c. Company-specific risk premium (incorporating an industry risk premium, as appropriate)

The author submits that the fact that the debtor company is distressed, reorganizing, or reorganized is a factor to be taken into account primarily in the financial analyst's determination of the company-specific risk premium.

The company-specific risk premium is the component of the build-up method that is most specific to the subject debtor company and based on the financial analyst's professional judgment.¹⁵ The determination of this portion of the overall discount or capitalization rate should be based on a detailed financial analysis of the subject debtor company.

The financial analyst uses ratio analyses and common size financial statements to compare the debtor company's current performance with its past performance as well as benchmarking to compare the subject debtor company with industry and guideline company data. The financial analyst also considers nonfinancial risks such as those associated with the subject's industry, size (as measured by revenues and/or assets), depth of management (or lack thereof), operations, environmental laws and regulations, and so forth.

Dr. Israel Shaked and **Robert F. Reilly**¹⁶ note that "valuation analysts do not have established procedures for measuring company specific risk" and "there is no generally accepted formula, equation or model for quantifying the [company-specific risk premium]." Shaked and Reilly state that the company-specific risk premium is based on the [financial] analyst's informed assessment of company-specific internal and external factors that may be both financial and operational in nature, as well as both historical and prospective in nature.

The author submits that the assessment and/or determination of company-specific risk are additionally complicated by the nature, timing, and extent of the debtor company's distress and/or its involvement in actual, pending, or threatened litigation.

The author further submits that the stage of distress, reorganization, and/or restructuring is an additional consideration in determining the company-specific risk premium. Professor Newton notes¹⁷ that the extent of the restructuring of a specific debtor company's operations typically creates greater risk than a plan of reorganization that simply modifies the financial structure of the business. The risks of major strategic and operational changes to the business may be tantamount to the risks of a startup entity.

Research indicates that “[a]ny such company specific risk premium is applicable during the time the company is in distress, as the premium reflects the added risk that plans to work out of the distressed situation simply will fail.”¹⁸

The publications and training materials of the National Association of Certified Valuation Analysts include the following factors to be considered in determining the company-specific risk premium: competition, financial strength, management ability and depth, profitability and stability of earnings, national economic effects, and local economic effects.¹⁹ Clearly the nature, timing, and extent of a debtor company’s stage of distress and/or reorganization have an impact on most if not all of these factors.

Warren Miller²⁰ suggests using a competitive advantage/strategic analysis structure to determine the company-specific risk premium. Miller groups into four categories the company-specific risk factors to be considered in a strengths, weaknesses, opportunities, and threats (SWOT) analysis based on the groundbreaking strategic planning and analysis work of Michael Porter.

In his textbook, *Understanding Business Valuation (4th edition)*, **Gary Trugman**²¹ presents a comprehensive discussion of the factors that financial analysts should consider in determining the company-specific risk premium. Trugman presents a compendium of factors that various financial analysts have suggested with respect to determining the company-specific risk premium.

Trugman presents three categories of factors. The first category relates to risk factors such as economic, market, and regulatory risk. The second category relates to nonfinancial factors such as location of the business and barriers to entry into the market. The third category relates to company-specific factors such as depth and quality of management.²²

Financial analysts should consider each of these quantitative and qualitative factors when judgmentally selecting the appropriate company-specific risk premiums.

Deriving the cost of debt.²³ The rate that would generally be used for the cost of debt is the long-term yield currently being demanded by bondholders over the number of years in the projection period.²⁴ Debt includes the current portion of long-term debt, any interest-bearing short-term debt, and long-term debt.

The cost of debt is the debtor company’s interest expense. The interest rate selected should be the current market rate. However, since that rate is not generally available for distressed companies, it must be determined from alternative sources.

Prof. Newton identifies three methods of establishing the cost of debt for a distressed debtor company.²⁵

The first method is to determine the cost of debt from the debtor company’s bond rating. The financial analyst would determine the debtor company’s default risk as measured by its bond rating and then determine the current interest rate of debt with similar default risk, which should be consistent with the financial condition of the debtor company based on a comparative analysis of its average ratios.

Alternatively, the financial analyst can determine the interest rates paid most recently by the debtor company on its borrowings. The financial analyst should consider that smaller companies might have a higher cost of debt than larger companies.²⁶

The second method is to determine the cost of debt from the default spread bond rating. The financial analyst would determine the spread between low-quality and high-quality debt. Because of default risk, the true cost of capital is the yield-to-maturity on corporate bonds less the expected default loss. When the economy is poor, the default spread widens. The financial analyst's conclusions still should be consistent with the relative distressed financial condition of the debtor company.

The third method is to determine the cost of debt from comparable companies. The financial analyst would estimate the bond rating of a privately held company through a comparison to guideline comparable public companies. The financial analyst selects the most comparable guideline companies based on appropriate quantitative and qualitative factors. The financial analyst's conclusions still should be consistent with the relative distressed financial condition of the debtor company.

Conclusion. Financial analysts should recognize that the Bankruptcy Court has noticed that valuation of assets "is not an exact science and has inherent vagaries."²⁷ Financial analysts have the opportunity to exercise their professional judgment within a structured methodology when they determine the proper discount rate to be applied to a debtor company's cash flows for business valuation purposes.

Unfortunately, despite the widespread use by financial analysts of a company-specific risk premium in a build-up or capital asset pricing model, there is limited academic research on quantification of any company-specific risk premium, which generally remains in the realm of the financial analyst's judgment.²⁸ If true for average, "run-of-the-mill" companies, then how much more so for distressed, reorganizing, or reorganized debtor companies?

The author submits that the determination of the discount rate of a distressed, reorganizing, or reorganized debtor company in general—and the company-specific risk premium in particular—may be the most significant of those inherent vagaries. The financial analyst's response, therefore, should be an in-depth study of the nature, timing, and extent of the debtor company's distress, reorganization, or restructuring and its impact on the company-specific risk premium.

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Growing Opportunities in Bankruptcy Valuations

As bankruptcies have become more complex and bankruptcy proceedings have become more contentious, the scope of valuation analyst professional services has expanded.

Many possibilities. There is an extensive scope of services that valuation analysts can provide within the bankruptcy discipline. These services include the valuation of debtor businesses, business ownership interests, securities, and intangible assets. These services also include forensic analysis, such as forensic accounting, financial investigations, litigation support services, and expert witness testimony. Finally, these services include independent financial advisory opinions, such as transaction fairness opinions, adequate-consideration opinions, reasonably equivalent value opinions, reasonableness of plan of reorganization opinions, and other financial opinions.

Valuation analysts assess if and when debtor companies enter the zone of insolvency. Valuation analysts also perform solvency and insolvency analyses for purposes of fraudulent transfer, preference payments, and other claims. In addition, valuation analysts estimate the value of creditors' collateral, including debtor company tangible assets, intangible assets, and securities.

Valuation analysts may help to identify cash-generating business or asset sale opportunities, and they opine on the fairness of the proposed sale price. Debtor company business and asset valuations are an important component of securing debtor-in-possession financing. Valuation analyses indicate whether various transactions involving debtor assets or securities protect the interests of the debtholders or equityholders.

Valuation analysts may also help develop a plan of reorganization, assess the reasonableness of a plan of reorganization, and quantify the

income tax and financial accounting implications of a plan of reorganization.

Know your assignment. The analyst should understand and document all of the elements of the bankruptcy valuation assignment. The elements of the valuation assignment are typically described in the statement of the purpose and objective of the bankruptcy valuation. Before the start of the engagement, the analyst should understand the following elements of the bankruptcy valuation:

- The valuation subject (what debtor businesses, assets, or securities are the subject of the analysis);
- The subject ownership interest (this is typically, but not always, a fee simple ownership interest);
- The appropriate standard of value (this is typically, but not always, fair market value);
- The appropriate premise of value (this is typically, but not always, value in continued use as a going concern); and
- The appropriate valuation date (unless purely determined by law(s), the analyst should understand why the selected date is relevant to the bankruptcy proceeding).

These elements of the valuation are usually provided to the analyst by the client (or by the legal counsel) and are typically documented in the analyst's engagement letter.

(Source: "Top 10 Analyst Guidelines for Bankruptcy Valuations," which is an excerpt from the book, *A Practical Guide to Bankruptcy Valuation*, by Robert Reilly (Willamette Management Associates) and Dr. Israel Shaked (The Michel-Shaked Group). The full excerpt is available as a free download at www.bvresources.com, in the Free Resources section.)

¹ The author gratefully recognizes the training and materials provided by and the textbook written by Grant W. Newton, professor emeritus of accounting at

Pepperdine University in Malibu, Calif., and executive director at the Association of Insolvency and Restructuring Advisors, and acknowledges that significant portions of this article rely extensively on materials extracted from Volume 1 of *Bankruptcy and Insolvency Accounting—Practice and Procedure*, by Professor Newton.

2 This section, and subsequent paragraphs, extracted from the Newton textbook, page 579, Section 11.13.

3 This section, and subsequent paragraphs, extracted from the Newton textbook, page 582.

4 Risk-free rates, betas, and equity risk premiums are publicly published, including by Morningstar/Ibbotson, Merrill Lynch, and other financial service firms.

5 Extracted from the Newton textbook, page 583.

6 Extracted from the Newton textbook, page 583.

7 Extracted from the Newton textbook, page 584.

8 Extracted from the Newton textbook, page 585.

9 Assistance in determining a suitable alpha may be found in publications by Morningstar/Ibbotson, Duff & Phelps, and other financial service firms.

10 Professor Newton's analysis on page 586 appears to suggest that the small size portion of alpha risk may vary from 1% to 6%.

11 Company-specific risks include risk factors that are often interrelated including small company (size), key person dependence, key supplier dependence, customer concentration, changing technology, regulatory change, pending litigation, and forecast uncertainty (achievability).

12 Extracted from the Newton textbook, page 587.

13 Extracted from *The Financial Valuation and Litigation Expert*, Issue Number 35, February/March 2012, page 16, "Current Issues in Developing the Cost of Capital," by William Quackenbush.

14 Extracted from *Cost of Capital in Litigation*, by Shannon Pratt and Roger Grabowski, page 26.

15 Extracted from *Understanding Business Valuation*, 4th edition, by Gary Trugman of Trugman Valuation Associates; Fort Lauderdale, Fla., page 39.

16 Extracted from *A Practical Guide to Bankruptcy Valuation*, authored by Dr. Israel Shaked and Robert Reilly, page 19.

17 Extracted from the Newton textbook, page 587.

18 Extracted from the Newton textbook, page 588, where Newton sources to Pratt and Grabowski who, in turn, source to Gilson, Hotchkiss, and Ruback. Also, see footnote 73.

19 Extracted from the Shaked and Reilly textbook, page 30.

20 Extracted from the Shaked and Reilly textbook, page 30.

21 Extracted from the Shaked and Reilly textbook, page 32.

22 Extracted from the Shaked and Reilly textbook, pages 32-33.

23 The calculation for the cost of preferred stock is similar to that of debt other than the absence of a maturity date and the non-tax-deductibility of dividends. Extracted from the Newton textbook, page 582, Section (B) Cost of Preferred Stock.

24 Extracted from the Newton textbook, page 580.

25 The three sources discussed below are all extracted from the Newton textbook, Chapter 11 Section (A) Cost of Debt.

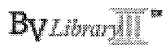
26 Extracted from the Newton textbook, page 581 regarding footnotes 66-68 sourcing to Shannon Pratt and Roger Grabowski, *Cost of Capital*, 3rd ed., page 52.

27 Extracted from the Newton textbook, page 559, regarding footnote 18 sourcing to *Savloff v. Continental Bank*.

28 Extracted from the Pratt and Grabowski textbook at page 32.

Last update: 1/22/2014 10:25:28 AM
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Article #13052



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(503) 291-7963

Accessed: Tuesday, 9/2/2014 9:02:32 AM.
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