

# Cost of Capital in Appraisal and Fairness Cases

Gilbert E. Matthews, CFA

## Introduction

The cost of capital is a central issue in judicial business valuations in statutory appraisal, stockholder oppression, and “entire fairness” cases. The Delaware courts have effectively set the standards for valuations related to corporate disputes because Delaware law is widely accepted on corporate legal issues. This chapter primarily discusses Delaware Court of Chancery and Delaware Supreme Court opinions involving the discounted cash flow (DCF) method and its crucial component, the cost of capital. Most of the Delaware decisions discussing cost of capital have come from statutory appraisal cases, and the Court does not differentiate in its approach to cost of capital in fairness cases.

It should be noted that some Delaware valuation decisions—and most other states’ published valuation decisions—contain neither an explanation of the court’s methodology nor its calculations. A federal appellate court decision under Missouri law commented:

It is unfortunate that, after performing such a well-reasoned and thorough review of the record, the district court was not more explicit in elaborating how it reached its final calculation of price per share. Regardless, the district court is not required to provide explicit detail or mathematical precision in fair value cases [emphasis added], since “the very nature of most cases precludes proof of value and damage with the precision of mathematical computation.” It is also permissible for a district court to arrive at a determination of fair value that is not advocated by any of the experts.<sup>1</sup>

State appellate court decisions seldom address these details. Moreover, there are very few published state trial court decisions outside of Delaware.

## Discounted Cash Flow in Delaware Law

In *Weinberger v. UOP, Inc.*, the Delaware Supreme Court decided that a determination of fair value<sup>2</sup> “must

<sup>1</sup>*Swope v. Siegel-Robert, Inc.*, 243 F.3d 486, 494–5 (8th Cir. 2001), citing *Phelps v. Watson-Stillman Co.*, 293 S.W.2d 429, 432 (Mo. 1956).

<sup>2</sup>Delaware’s statutory standard of value for dissenting stockholder actions (as in most other states) is “fair value.” Fair value for statutory appraisals is

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include proof of value by any techniques or methods which are generally considered acceptable in the financial community.”<sup>3</sup> It added that “elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered” in appraisals under Delaware law.<sup>4</sup> It is in this decision that the Supreme Court first approved the use of the DCF method in a Delaware appraisal case. It pointed out that the acquiring company’s officers had used the DCF method in evaluating UOP’s earnings potential.

Since *Weinberger*, Delaware courts have adopted the DCF method as their preferred method of valuation.<sup>5</sup> A 2005 decision stated:

The DCF model of valuation is a standard one that gives life to the finance principle that firms should be valued based on the expected value of their future cash flows, discounted to present value in a manner that accounts for risk. The DCF method is frequently used in this court and, I, like many others, prefer to give it great, and sometimes even exclusive, weight when it may be used responsibly.<sup>6</sup>

While DCF analyses have become the dominant approach in appraisal proceedings since *Weinberger*, the ultimate selection of a valuation framework remains within the court’s discretion. In fact, the Court of Chancery has rejected valuations based on the DCF method on several occasions for various reasons, primarily because of the quality of the projections.<sup>7</sup> The Delaware courts continue

### Continued

the value of an entity as it is being run, with no control premium and no discount for lack of marketability or minority interest. See DEL. CODE ANN. Tit. 8, § 262 (h).

<sup>3</sup>*Weinberger v. UOP, Inc.*, 457 A.2d 701, 713 (Del. 1983), a seminal “entire fairness” case.

<sup>4</sup>*Id.*

<sup>5</sup>See, e.g., *Grimes v. Vitalink Comm. Corp.*, 1997 Del. Ch. LEXIS 124 (Aug. 26, 1997) at \*3 (“[The] discounted cash flow model [is] increasingly the model of choice for valuations in this Court.”); *Gholl v. eMachines, Inc.*, 2004 Del. Ch. LEXIS 171 (July 7, 2004) at \*20 (“This [DCF] method is widely accepted in the financial community and has frequently been relied upon by this Court in appraisal actions.”); *Henke v. Trilithic Inc.*, 2005 Del. Ch. LEXIS 170 (Oct. 28, 2005) at \*20 (citing *Gholl*).

<sup>6</sup>*Andaloro v. PFPC Worldwide, Inc.*, 2005 Del. Ch. LEXIS 125 (Aug. 19, 2005) at \*35.

<sup>7</sup>*Harris v. Rapid-American Corp.*, 1990 Del. Ch. LEXIS 166 (Oct. 2, 1990) at \*17–18, \*22 (speculative nature of forecasts) *aff’d in part and rev’d in part on other grounds, LeBeau v. M.G. Bancorp., Inc.*, 1998 Del. Ch. LEXIS 9 (Jan. 29, 1998), at \*36 (the Court could not rely on DCF valuation of either expert), *aff’d*, 737 A. 2d 513 (Del. 1999); *Bomarko, Inc. v. International Telecharge, Inc.*, 794 A.2d 1161 (Del. Ch. 1999) at 1185 (unsupported projections); *aff’d* 766 A.2d 437 (Del. 2000); *Gray v. Cytokine Pharmaceuticals, Inc.*, 2002 Del. Ch. LEXIS 48 (Apr. 25, 2002) at \*26 (unreliable projections, terminal value high percentage of total value); *Doff & Co., Inc. v. Travelocity.com, Inc.*, 2004 Del. Ch. LEXIS 75 (May 21, 2004) at \*32 (unreliable projections).

to use other valuation methods, principally the guideline company method,<sup>8</sup> but they do not value operating companies based on asset value.<sup>9</sup> A recent decision expressed a preference for using more than one approach; Chancellor Chandler stated, “If a discounted cash flow analysis reveals a valuation similar to a comparable companies or comparable transactions analysis, I have more confidence that both analyses are accurately valuing a company.”<sup>10</sup>

### Capital Asset Pricing Model

The Capital Asset Pricing Model (CAPM) is the method by which the Court of Chancery most often determines the cost of capital in a DCF method.<sup>11</sup> CAPM was first introduced in the 1990 *Technicolor* decision.<sup>12</sup> Since then, experts in most Delaware appraisal cases have used the CAPM to calculate the weighted average cost of capital (WACC) for their DCF analyses, and subsequent decisions show that the Court of Chancery is comfortable using it.

The Court has elected to use the CAPM even in situations where future results are highly speculative. In one case, it rejected a 35% to 45% cost of equity based on “a survey of venture capitalist [*sic*] firms” in favor of an approximately 21% CAPM-based rate.<sup>13</sup> In valuing another speculative venture, the Court accepted a 30% discount rate calculated using the CAPM and rejected a 17.7% rate that the Court believed inadequately reflected the company’s risk.<sup>14</sup> When cash flows are speculative, the Court may allow the use of a venture capital rate. In a case appraising a small biotech company, the Court used a discount rate of 50% based on a report by the investment banker who was an advisor in the transaction.<sup>15</sup>

<sup>8</sup>For a discussion of Delaware appraisal decisions, see Gilbert E. Matthews, “A Review of Valuations in Delaware Appraisal Cases, 2004–2005,” *Bus. Val. Rev.* (Summer 2006): 44.

<sup>9</sup>*TV58 Limited Partnership v. Weigel Broadcasting Co.*, 1993 Del. Ch. LEXIS 146 (July 22, 1993) at \*8, citing Shannon P. Pratt, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 2d ed. (Irwin, 1989), p. 106 (“The notion that a business interest is worth the value of its underlying assets is basically fallacious in most cases, at least for an operating company.”)

<sup>10</sup>*In re Hanover Direct, Inc. Shareholders Litigation*, 2010 Del. Ch. LEXIS 201 (Sept. 24, 2010).

<sup>11</sup>Both experts performed a DCF analysis in the first Delaware appraisal case after *Weinberger*, but neither expert used a discount rate based on CAPM. Both used arbitrary rates: one expert chose a discount rate range of 20% to 25%, the other chose 15% to 20%, and the court chose to use the midpoint, 20%. *Cavalier Oil Corp. v. Harnett*, 1988 Del. Ch. LEXIS 28 (Feb. 22, 1988) at \*59.

<sup>12</sup>*Cede & Co. v. Technicolor, Inc.*, 1990 Del. Ch. LEXIS 259 (Oct. 19, 1990) (“*Technicolor* 1990”) at \*92–100, *rev’d on other grounds*, 634 A.2d 345 (Del. 1993). This case spawned 17 Chancery and Supreme Court decisions over a 20-year span.

<sup>13</sup>*Gilbert v. MPM Enterprises, Inc.*, 709 A.2d 663, 672–3 (Del. Ch. 1997), *aff’d*, 731 A.2d 790 (Del. 1999).

<sup>14</sup>*Ryan v. Tad’s Enterprises, Inc.*, 709 A.2d 682, 703 (Del. Ch. 1996), *aff’d*, 693 A.2d 1082 (Del. 1997).

<sup>15</sup>*Gray* at \*31–33. Prior to the transaction, “the parties decided to save money by asking Merrill Lynch to value the stock of both companies, without opining as to fairness.” *Gray* at \*14.

### Components of Weighted Average Cost of Capital

Delaware law requires that an appraisal be based on information known or knowable at the valuation date. All inputs into the WACC should therefore be based on market information as of the valuation date.<sup>16</sup> Inputs to the WACC are discussed in the following pages.

#### Risk-free rate

Delaware accepts the 20-year Treasury rate as the measure of the risk-free rate. The risk-free rate is rarely a matter of dispute. In fact, only one Delaware decision has addressed this issue. In a 2004 decision, the Court rejected the 30-year U.S. government bond yield as the risk-free rate and stated that “using the 20-year U.S. government bond rate is more reasonable under the circumstances and in keeping with the accepted practice.”<sup>17</sup> However, in a non-Delaware appraisal case, the U.S. District Court in Nevada based the risk-free rate on 5-year U.S. government bond yield at the time the transaction closed.<sup>18</sup>

#### Cost of equity

Until a few years ago, the Delaware decisions that used the CAPM to calculate the cost of capital most frequently used an equity risk premium (“ERP”) of 7.0% to 7.2%. The Court of Chancery and other courts relied on experts who used the older and more widely accepted ERP estimates of 7.0% listed in the *SBBI* historical data (the “Historic ERP”).<sup>19</sup>

In 2003, however, highly regarded valuation experts and academics began to question the automatic use of the Historic ERP. Shannon Pratt wrote that he was “now convinced that the long-term arithmetic average general equity risk premium (currently 7.0%) is too high.”<sup>20</sup> Pratt, discussing the results of recent empirical research

<sup>16</sup>See, e.g., *Gilbert v. MPM Enterprises, Inc.*, 1998 Del. Ch. LEXIS 60 (Apr. 24, 1998) at \*5, *aff’d*, *Gilbert*, 731 A.2d 790; *Cede & Co. v. JRC Acquisition Corp.*, 2004 Del. Ch. LEXIS 12 (Feb. 10, 2004) at \*6–7.

<sup>17</sup>*Cede & Co. v. MedPointe Healthcare, Inc.*, 2004 Del. Ch. LEXIS 124 (Sept. 10, 2004) at \*69.

<sup>18</sup>*Steiner Corp. v. Benninghoff*, 5 F.Supp.2d 1117, 1133–35 (D. Nev. 1998).

<sup>19</sup>See, e.g., *Swope* at 493 (“Empirical evidence from Ibbotson’s includes a long-term equity risk premium representing incremental rates of return realized on large capitalization common stocks over the risk free rate historically reported from 1929 [*sic*] to 1996.”); *Cede & Co. v. Technicolor, Inc.*, 2003 Del. Ch. LEXIS 146 (Dec. 31, 2003) (“*Technicolor* 2003”) at 177 (7.2%), *aff’d*, 884 A.2d 26 (Del. 2005); *Lane v. Cancer Treatment Centers of America*, 2004 Del. Ch. LEXIS 108 (July 30, 2004) at 43 (7.1%); *Andaloro* at \*57 (7.0%); *Delaware Open MRI Radiology Associates v. Kessler*, 898 A.2d 290, 339 (Del. Ch. 2006) (experts used 7.2% and 7.0%, respectively).

<sup>20</sup>Pratt, “Valuers Should Lower Equity Risk Premium Component of Discount Rate,” *Bus. Val. Update* (Nov. 2003): 1.

published by Roger Ibbotson and Peng Chen in 2003,<sup>21</sup> as well as work conducted by Roger Grabowski and others, stated that these results suggested that the ERP is actually “about 1.25 percentage points lower than the historical estimates.”<sup>22</sup>

The Court of Chancery began to accept lower ERPs derived from the Fama-French (FF) 3-factor model. In 2004, Vice Chancellor Strine rejected a 7.3% premium determined by the Historic ERP and accepted instead a 4.5% equity premium derived from the FF model. Relying on the alternate estimate, he stated:

Although the Fama-French three-factor CAPM model is not wholly accepted, neither is the original CAPM itself. By better factoring in the real risks of leverage, the Fama-French model captures useful data that contributes to a more reliable and real-world cost of capital.<sup>23</sup>

Shortly thereafter, Vice Chancellor Noble cited this language when he employed the Fama-French model’s estimate in determining ERP:

In calculating the risk premium, [petitioner’s expert] used the relatively new research by Fama and French to find a value of 4.5%. In contrast, [respondent’s expert] employed the older and more widely accepted practice of using the Ibbotson Associates data and used a value of 7.3%. The Company’s main argument against the use of the Fama and French research is that because it is “brand-new” and “still under significant academic debate” it cannot satisfy the standard that a valuation methodology be “generally considered acceptable in the financial community,” as required by *Weinberger v. UOP*.

The mere fact that it is new does not make this research unreliable or outside of the Weinberger standard. A valuation such as this is built on assumptions that will always be under debate or attack in the academic community.<sup>24</sup>

His decision rejected the equity risk premium based on the historic *SBBI* data and accepted the lower cost of equity capital based on FF.<sup>25</sup> The FF lower ERP was also used in a 2006 decision that gave equal weight to both the FF estimate and the Historic ERP.<sup>26</sup>

Vice Chancellor Strine centered on the debate over how to calculate ERP in the recent and important 2010 *Global GT* decision.<sup>27</sup> He sided with the petitioners by rejecting a 7.1% ERP based on *SBBI* historical data and

accepting instead an ERP of 6.0%. He made his decision based on the petitioner’s expert’s teaching experience, the relevant academic and empirical literature, and the supply side ERP reported in the 2007 Ibbotson Yearbook.<sup>28</sup>

The Vice Chancellor pointed out that the petitioners had substantial support in the professional and academic valuation literature for arguing that the continued use of the simple historic ERP is unjustifiable and that there are “persuasive reasons [that] support a lower forward-looking real return on equity than the return found in the historical data.”<sup>29</sup>

Acknowledging that “the debate is not nearly so stark,” he remarked that “[e]ach technique depends to a certain extent on taking some combination of past data and using it to predict a necessarily uncertain future.”<sup>30</sup> He noted that petitioner’s expert had relied upon the fact that

Ibbotson and his co-authors have themselves developed an alternative model to forecast the long-term expected equity return because of their view that the historic approach wrongly assumes that the relationship between stocks and bonds observed in the past would remain stable into the future. . . . The supply side estimate that Ibbotson publishes uses the Ibbotson historical sample from 1926 to the present, but estimates which components of the equity risk premium are driven by the price-to-earnings ratio of a stock, and which components are driven by expected earnings growth. The supply side rate assumes that actual returns to equity will track real earnings growth, not the growth reflected in the price-to-earnings ratio.<sup>31</sup>

Vice Chancellor Strine went on to state that the surveys cited by petitioners’ expert suggested that current academic thinking would put the ERP closer to 6.0% than to 7.1%. He commented,

[T]o cling to the Ibbotson Historic ERP blindly gives undue weight to Ibbotson’s use of a single data set. 1926 . . . has no magic as a starting point for estimating long-term equity returns. . . . [V]ery well-respected scholars have made estimates in peer-reviewed studies of long-term equity returns for periods much longer than Ibbotson, and have come to an estimate of the ERP that is closer to the supply side rate Ibbotson himself now publishes as a reliable ERP for use in a DCF valuation. For example, Professor Jeremy Siegel has examined the period from 1802 to 2004 and come up with an ERP of 5.36%. Likewise, Professors Eugene Fama and Kenneth French considered the period from 1872 to 2000, and calculated an average ERP of 5.57%.<sup>32</sup>

<sup>21</sup>Robert G. Ibbotson & Peng Chen, “Long-Run Stock Returns: Participating in the Real Economy,” *Fin. Analysts J.* (Jan./Feb. 2003): 88, 94.

<sup>22</sup>Pratt, “Valuers Should Lower Equity Risk Premium Component of Discount Rate” at 1. Pratt “urged his readers who still use an ERP of 7% to immediately make a downward adjustment to reflect recent research results,” *Id.* at 6.

<sup>23</sup>*Union Illinois 1995 Inv. Ltd. Partnership v. Union Financial Group, Ltd.*, 847 A.2d 340, 363 (Del. Ch. 2004).

<sup>24</sup>*MedPointe Healthcare* at \*69–70.

<sup>25</sup>*MedPointe Healthcare* at \*72.

<sup>26</sup>*PNB Holding* at \*114.

<sup>27</sup>*Global GT LP v. Golden Telecom, Inc.*, 993 A.2d 497 (Del. Ch. 2010), *aff’d*, \_\_\_ A.3d. \_\_\_ (Del. 2010).

<sup>28</sup>*Id.* at 514.

<sup>29</sup>*Id.* at 516, n.114, citing Jeremy J. Siegel, “Perspectives on the Equity Risk Premium,” *Fin. Analysts J.* (Nov./Dec. 2005): 70.

<sup>30</sup>*Id.* at 514.

<sup>31</sup>*Id.* at 515.

<sup>32</sup>*Id.* at 516, citing Michael Devaney, “Will Future Equity Risk Premium Decline?,” *J. of Fin. Planning* (Apr. 2008): 47; Jeremy J. Siegel, “Perspectives on the Equity Risk Premium,” *Fin. Analysts J.* (Nov./Dec. 2005): 63; and Eugene F. Fama & Kenneth R. French, “The Equity Premium,” *J. of Fin.* (April 2002): 638.

Additionally, the Vice Chancellor stated that “the literature also suggests that the ERP for companies operating in foreign markets [such as Golden GT] is, if anything, lower than the Historic ERP for a domestic company.”<sup>33</sup>

Determining the cost of equity continues to be a major disagreement among valuation experts. Vice Chancellor Strine recognized this controversy when he carefully set out his reasons for no longer following an approach—Historic ERP—which “ha[d] met with the approval of this court on prior occasions.”<sup>34</sup> Elaborating, he said:

Ibbotson’s reasoning comports with the strong weight of professional and academic thinking, which is accurately represented by [petitioner’s] view that the most responsible estimate of ERP is closer to 6.0% than 7.1%. . . . [W]hen the relevant professional community has mined additional data and pondered the reliability of past practice and come, by a healthy weight of reasoned opinion, to believe that a different practice should become the norm, this court’s duty is to recognize that practice if, in the court’s lay estimate, the practice is the most reliable available for use in an appraisal. In reaching this conclusion, I give heaviest weight to the published literature, but also find the admittedly squishier academic survey data supportive. Although that data is far from perfect, it does reveal that the weight of academic thinking at our nation’s finest finance departments places the ERP much nearer to [petitioner’s expert]’s estimates than [respondent’s]. For all these reasons, I adopt petitioner’s ERP of 6.0%.<sup>35</sup>

Although coming to the conclusion that, in this case, there was solid academic and professional thinking supporting the lower ERP, Vice Chancellor Strine fully realized that any estimate of ERP remains just an estimate based on uncertainty. He appropriately leaves to the valuation profession the final responsibility for resolving the debate: “[T]he relevant academic and professional community and not this court should develop the accepted approach.”<sup>36</sup>

**Cost of debt**

In an appraisal, the acquirer’s cost of debt is not relevant because the entity being valued is the company as it existed prior to the transaction. Thus, the appropriate cost of debt for determining cost of capital is the company’s borrowing cost before it was acquired.<sup>37</sup>

<sup>33</sup> *Id.* at 517.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.* at 517–8.

<sup>36</sup> *Id.* at 517.

<sup>37</sup> See, e.g., *Hintmann v. Fred Weber, Inc.*, 1998 Del. Ch. LEXIS 26 (Feb. 17, 1998) at \*17; *In Re Emerging Communications, Inc. Shareholders Litigation*, 2004 Del. Ch. LEXIS 70 (May 3, 2004) at \*61; *MedPointe Healthcare* at \*41, \*53; *In Re United States Cellular Operating Company*, 2005 Del. Ch. LEXIS 1 (Jan. 6, 2005) at \*60. In a non-Delaware appraisal where the experts based the yields of similarly rated debt, the court accepted this approach (*Albert Trostel & Sons Co. v. Notz*, 2010 U.S. Dist. LEXIS 108778 (E.D. Wisc., Sept. 28, 2010)).

There is one apparent exception to this rule that is not, in fact, actually an exception: the Chancery Court’s use of the acquirer’s cost of debt in *Technicolor 2003*. The Supreme Court directed the Chancellor to appraise Technicolor based on the acquirer’s business plan because the acquirer had begun implementing its changes to Technicolor shortly after it had taken control through a 1982 tender offer and prior to the 1983 squeeze-out merger.<sup>38</sup> Because the entity being valued was Technicolor under the new business plan which became operative *after* the tender offer (but before the squeeze-out), not the old business plan *prior* to the tender offer, the Chancellor ruled that it was not appropriate to use Technicolor’s pre-tender offer borrowing cost. He decided that Technicolor’s cost of debt at the time of the squeeze-out merger was the interest rate being paid on the acquirer’s debt.<sup>39</sup>

When the Court of Chancery computes a company’s WACC, it normally tax-effects the cost of debt based on the company’s marginal corporate tax rate.<sup>40</sup> The procedure for S corporations, which do not pay corporate tax, differs: in one situation where the Court appraised an S corporation in 1991, it did not tax-effect the cost of debt.<sup>41</sup> The Court of Chancery took the same position in a 1992 valuation case.<sup>42</sup> However, it is unlikely to take the same position in the future; in a 2006 case valuing a debt-free S corporation, the Court tax-effected earnings based on taxes payable by shareholders.<sup>43</sup>

For a company that could deduct only a portion of its debt for U.S. taxes, a federal court prorated the tax effect:

[D]ebt is not as valuable to Steiner as to other companies, due to the fact that only 62% of its interest expense functions as a shield. . . . At least 62% of interest expense would serve as a tax shield, so debt should have some value to Steiner.<sup>44</sup>

\* \* \*

No one [who testified] attempted to show that, although Steiner does have limited deductibility of its interest

<sup>38</sup> *Cede & Co. v. Technicolor, Inc.*, 684 A.2d 289, 300 (Del. 1996). The company being appraised was not Technicolor as it existed at the time of the tender offer, but as it existed at the time of the squeeze-out merger under its new management, excluding the acquisition debt. The cost of debt determined by the court was applied only to Technicolor’s pre-acquisition debt.

<sup>39</sup> *Technicolor 2003* at \*177–178.

<sup>40</sup> See, e.g., *id.* at \*178 (“Using the 46% tax rate agreed upon by both experts, the resulting after-tax cost of debt is 7.54%.”)

<sup>41</sup> *In Re Radiology Associates, Inc. Litigation*, 611 A.2d 485, 492 (Del. Ch. 1991).

<sup>42</sup> *MacLane Gas Company Limited v. Enserch Corporation*, 1992 Del. Ch. LEXIS 260 (Dec. 9, 1992) at \*51–2.

<sup>43</sup> *Delaware Open MRI* at 330.

<sup>44</sup> *Steiner* at 1126.

expense, it is some percentage other than 62%. Thus we find that, in effect, Steiner can only deduct 62% of its interest expense. The WACC formula must consequently be adjusted by multiplying Steiner's tax rate of 43% by 62% before inserting it into the WACC formula.<sup>45</sup>

When the Court of Chancery was faced with the issue of how to tax-effect the cost of debt of a company with tax-loss carryforwards, it applied a 40% rate to an 8% cost of debt, reasoning

NOLs are to be calculated after applying the Code's other deductions, and any deductions for interest payments would allow the Company to save its NOLs for subsequent years. Based on the foregoing, the Court will apply a 4.8% after-tax cost of debt.<sup>46</sup>

### Capital structure

Once the cost of debt is determined, the court must determine the amount of debt to which it applies. For calculating WACC in appraisal cases, the Delaware courts consistently favor using the company's actual capital structure at the valuation date, rather than a hypothetical capital structure based on industry norms.<sup>47</sup> As stated in 1998:

[Respondent's expert] weighted FWI's cost of debt and equity in accordance with FWI's actual capital structure on the date of the merger: 98% equity and 2% debt. As with all other areas of business valuation, this Court prefers to use a company's actual information when possible, unless it is shown that the actual information would yield unreliable results.<sup>48</sup>

The debt incurred in the transaction leading to the appraisal cannot be considered part of the debt of the acquired company.<sup>49</sup>

The Court rejected a debt-free target capital structure that the defendant's expert based on similar companies when the company being appraised actually had a leveraged structure. On the other hand, it did not accept the plaintiff's expert's assumption that the control shareholder would have rolled over the leveraged subsidiary's existing debt perpetually:

The minority stockholders had no right to benefit from PFPC's access to preferred financing from [parent] and then turn around and demand that [parent] not receive a full repayment of principal and interest.<sup>50</sup>

<sup>45</sup> *Id.* at 1135.

<sup>46</sup> *Gholl* at \*49.

<sup>47</sup> See, e.g., *In Re Radiology Associates* at 493; *MedPointe Healthcare* at \*67 ("While [petitioner's expert] may well be correct that [sic] an 80/20 capital structure would be typical for a company of this nature, Carter-Wallace's traditional aversion to debt could be expected to continue.")

<sup>48</sup> *Hintmann* at \*18.

<sup>49</sup> *Technicolor 2003* at \*169 ("The [amount of] debt used to acquire the company cannot be figured into the calculation when determining Technicolor's long-term debt.")

<sup>50</sup> *Andaloro*, 2005 Del. Ch. LEXIS 125 at \*54.

The Vice Chancellor assumed repayment of debt at maturity, and discounted the debt to present value at a 13.5% equity rate.<sup>51</sup>

In contrast to Delaware, a U.S. District Court Judge applying Nevada appraisal law did not accept the company's actual capital structure:

[W]e are not precluded from using the industry average, as Steiner contends, because the existing Steiner management has "no plans" to change the capital structure.

... [W]hile assuming that the particular capital structure envisioned by a specific investor will be implemented after the merger would not be appropriate, considering changes that market actors would assume on average in placing a rational value on the company would. Using Steiner's actual debt to equity ratio, which has been established as a result of the particular needs and desires of the Steiner family, would be as improper as using the specific capital structure of any other particular investor. ... The market places a value on how it expects a company to perform in the future. And over time, market participants will expect a company to move to its optimal position in terms of variables like debt structure ...

... [T]he 20%/80% ratio used by [plaintiff] is not the actual industry average. Rather, it is significantly lower. ... The market would thus expect a capital structure for Steiner to incorporate more than 4% debt, although not as much as the actual industry average. Therefore, we will use the 20%/80% ratio.<sup>52</sup>

The valuation standard for entire fairness in Delaware differs from the appraisal standard. Although Delaware uses the company's own capital structure in appraisal cases, it typically looks at optimal capital structure in fairness cases. In fairness cases, the Court considers acquisition value and gives weight to what a potential acquirer might pay. Thus, in a 1994 fairness case, the Court accepted a WACC that was computed using "an 'optimal' debt/equity structure."<sup>53</sup>

Although the amount of debt is normally determinable from a company's financial records, the value of the equity is not in the financial records, but is indeed the very basis of the litigation. This problem of indeterminate equity has rarely been discussed in Delaware decisions, and it appears that experts have used either the book value of equity or the transaction price to determine the debt/equity ratio. However, a 2004 decision does examine the issue of circularity in determining the equity portion of capital structure:

The difficulty is both that [defendant's expert's] assumed \$10.38 per share "enterprise value" and [plaintiff's expert's] assumed \$41.16 per share "enterprise value" are identical

<sup>51</sup> *Id.* at \*55.

<sup>52</sup> *Steiner* at 1125-26.

<sup>53</sup> *Wacht v. Continental Hosts, Ltd.*, 1994 Del. Ch. LEXIS 171 (Sept 16, 1994) at \*17.

to the ultimate “fair value” that each expert determined for ECM. Those values exemplify the ultimate circularity inherent in WACC. . . . [T]he Court is unable to adopt the “enterprise value” assumed by either expert with any degree of confidence.

. . . [T]he only sensible way (in the Court’s view) to avoid the circularity in this case is to use an enterprise valuation of ECM that is not litigation-driven. On this record, the only such valuation is the \$ 27.84 per share value . . . that the RTFC determined and actually used for purposes of financing the Privatization. Having no better or more reliable information, the Court adopts that value for purposes of determining the percentage of ECM’s capital structure represented by long term debt and by equity on the merger date.<sup>54</sup>

Interestingly, no decision discusses the fact that the cost of equity itself is a function of the capital structure. For any given company, the cost of equity will be lower with an unleveraged structure and greater if it is highly leveraged.<sup>55</sup>

### Beta

The Court of Chancery accepts the concept that the equity risk premium must be adjusted for an appropriate beta. When shares of a company being valued are publicly traded in an active market, customary practice is to determine beta by reference to the company’s own market prices. However, if a company is private or if it is thinly traded, the Court will look at the betas of guideline publicly traded companies.<sup>56</sup> The Court wrote in 1998 that using “the median beta of comparable companies . . . is the customary method of determining a beta for a privately held company.”<sup>57</sup> However, in 2006, Vice Chancellor Strine expressed concern about determining beta for private companies based on the betas of guideline public companies:

I am chary about concluding that corporations that issue illiquid securities for which beta—a measure of covariance of the company’s trading price with overall market prices—is indeterminable have a lower cost of equity than publicly-listed corporations whose durability is reflected in a trading history producing a reliable beta. The real world capital markets seem to reject that odd notion.<sup>58</sup>

<sup>54</sup>*Emerging Communications* at \*67–68. The issue of circularity was subsequently addressed in relation to the size premium in *In Re Sunbelt Beverage Corp. Shareholder Litigation*, 2010 Del. Ch. LEXIS 1 (Jan. 5, 2010), which is discussed below.

<sup>55</sup>See Pratt and Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 4th ed. (John Wiley & Sons, 2010), Chapter 7, for a discussion on the relationship between leverage and the cost of equity.

<sup>56</sup>*Gotham Partners, L.P. v. Hallwood Realty Partners, L.P.*, 855 A.2d 1059, 1077 (Del. Ch. 2003) (“Given what Gotham itself contends was an ‘inefficient’ market in the Partnership’s units . . . , the judgment that the Partnership’s published beta was out of line strikes me as reasonable.”)

<sup>57</sup>*Hintmann* at \*14.

<sup>58</sup>*PNB Holding* at \*113 n. 149.

The period during which beta is determined should exclude dates on which the market was influenced by the transaction which led to the appraisal. In *Technicolor 1990*, Chancellor Allen rejected a beta of 1.7 based on the company’s market prices in a period which included the tender offer through which control was purchased and instead adopted a beta of 1.27, based on Technicolor’s pre-tender market prices.<sup>59</sup> On remand 13 years later, Chancellor Chandler adopted a beta of 1.6 based on the single month preceding the squeeze-out merger, reasoning that the beta for earlier periods reflected prior management’s business plan that the Supreme Court had ruled was not applicable under the facts of the case.<sup>60</sup>

The Court generally prefers betas based on longer time periods:

[Petitioner’s expert] calculated a beta of .62 based on a period beginning six months after JR Cigar’s IPO. [Respondent’s expert] calculated a beta of .67 based on a period beginning a week after the IPO. Neither period is presumptively valid. A longer period of time . . . is generally preferred. A five-year period, longer than the period used by either expert, is the most common.<sup>61</sup>

A 2005 decision gave equal weight to two-year betas and five-year betas of guideline companies. For both periods, it gave greater weight to betas of companies deemed to be more comparable.<sup>62</sup>

The use of a “predictive beta” from Barra was rejected by Vice Chancellor Strine in 2010. He observed, “No neutral academic support for the predictive power of the Barra beta has yet been published.”<sup>63</sup> The Vice Chancellor explained his reservations about the Barra model:

[T]he Barra forecasting model is proprietary, and cannot be reverse-engineered. The Barra predictive beta, which is a forecast of a stock’s future looking beta using past data, is based on a thirteen-factor model, but the weight given to each of the factors is not publicly available. In fact, Barra has used three different versions of its model without explaining why or what changes have been made, and it is not apparent whether Barra retroactively updates its past beta calculations . . . The only thing [petitioner’s expert] knows about the model is that it lists certain valuation-relevant factors, including factors relevant to the historical beta such as volatility, leverage, and trading activity, and throws them in a stew pot in undisclosed proportions to come up with an outcome.<sup>64</sup>

However, he added:

<sup>59</sup>*Technicolor 1990* at \*96–97.

<sup>60</sup>*Technicolor 2003* at \*174. Using this very short period for determining beta was unique to the facts and judicial history of the protracted litigation.

<sup>61</sup>*JRC Acquisition* at \*39 n. 94, citing Pratt, *Cost of Capital: Estimations and Applications*, 2d ed. (John Wiley & Sons, 2002): 82.

<sup>62</sup>*Andaloro* at \*57–60.

<sup>63</sup>*Global GT LP* at \*67.

<sup>64</sup>*Global GT LP* at \*65–66.

I wish to emphasize that I do not reject the Barra beta for use in later cases. . . . If the Barra beta is to be used in appraisal proceedings, a more detailed and objective record of how the Barra beta works and why it is superior to other betas must first be presented.<sup>65</sup>

The Court's view as to whether to use "raw beta" or "adjusted beta" is unsettled. In 1998 Vice Chancellor Steele stated that he had not heard testimony that explained to his satisfaction the reasons why raw beta should be adjusted, and wrote:

Based on the remaining evidence in the record, I conclude that "raw" beta should be used to calculate the discount rate. Although "adjusted" beta may be appropriately used in future cases when supported by a record subject to the crucible of cross-examination, I find that petitioner did not meet his burden to prove why "adjusted" beta should be used in this case.<sup>66</sup>

Six years later, however, Chancellor Chandler questioned the use of a raw beta and instead utilized an adjusted beta:

Petitioner suggests that [the company's] raw beta is more appropriate than the adjusted beta. Petitioner's own expert did not use the raw beta, probably because doing so is inaccurate. Betas based on observed historical data are more representative of future expectations when they are adjusted.<sup>67</sup>

In 2010 Vice Chancellor Strine did not accept a Bloomberg adjusted beta, commenting that "no reliable literature or evidence was presented to show that the beta of a telecom company like Golden, which operates in a risky market [Russia], will revert to 1.0."<sup>68</sup> Instead, he looked at industry betas:

According to the Ibbotson telecom (SIC 4813) beta, which gives the beta values for approximately 50 telecom companies that are traded in the United States including Golden, the median industry beta as of December 2007 was 1.45, and the SIC composite beta was 1.24. . . . Golden was a much larger, less levered company than the median company on the Ibbotson SIC 4813 list and, therefore, the composite beta of 1.24 is more appropriate than the median beta of 1.45.<sup>69</sup>

The Court concluded, "I find that a beta that gives 2/3 weight to the Bloomberg historic raw beta of 1.32 and 1/3 weight to the 1.24 industry beta is the best approach to this DCF analysis."<sup>70</sup>

<sup>65</sup> *Global GT LP* at \*68–69.

<sup>66</sup> *Gilbert*, 1998 Del. Ch. LEXIS 60 at \*9.

<sup>67</sup> *JRC Acquisition* at \*39 n. 96, citing Pratt, *Cost of Capital*, 2d ed.: 89.

<sup>68</sup> *Global GT*, 993 A.2d 497, 523.

<sup>69</sup> *Global GT*, 993 A.2d 497, 523.

<sup>70</sup> *Global GT*, 993 A.2d 497, 524.

When beta is determined based on guideline companies, it is important to consider the risks of those guideline companies relative to the subject company. It may be appropriate to adjust the selected beta to reflect the incremental risk when the court does not incorporate a company-specific risk premium and when the subject company is smaller and more vulnerable than the guideline companies.<sup>71</sup> The Court of Chancery adopted this approach in a 1996 case:

The plaintiffs' expert relied primarily upon a New York Stock Exchange-traded company that had a beta of 2.2. . . . The plaintiff's expert derived Cell Tech's beta of 2.0 from this "comparable" company's beta of 2.2, thereby suggesting that Cell Tech involved lower risk than did the "comparable" company. The comparison is factually unsupported.<sup>72</sup>

\* \* \*

The defendants calculated a discount rate of 26.5% using the CAPM. The defendants' expert explained that on the basis of his experience, he considers 30% to be more appropriate, given the risks associated with Cell Tech.<sup>73</sup>

\* \* \*

I recognize that the defendants' 30% discount rate is unusually high, but the record demonstrates that Cell Tech, at the time of the Merger, was an unusually risky investment. . . . Accordingly, I adopt 30% as the appropriate discount rate. . . .<sup>74</sup>

In another case, the Court rejected a market beta of 0.63 for thinly traded limited partnership units and accepted defendant's expert's beta of 3.35.<sup>75</sup> The Court then ruled that the 3.35 beta subsumed other adjustments to the cost of equity:

What I believe unreasonable, though, is compounding that substantial adjustment to beta—based on firm specific characteristics of the Partnership—with the further addition of small company and specific company adjustments. Although such adjustments have been accepted in certain decisions of this court involving different circumstances, I find them to be inappropriate here. The adjustment to beta alone was sufficient to account adequately for those factors.<sup>76</sup>

### Industry risk premium

In corporate valuation cases, courts have rarely discussed the concept of adjusting the cost of equity by

<sup>71</sup> See, e.g., Matthews, "Errors and Omissions in DCF Calculations: A Critique of Delaware's Dr. Pepper Appraisal," *Bus. Val. Update* (October 2007): 9.

<sup>72</sup> *Ryan*, 709 A.2d 682, 703.

<sup>73</sup> *Id.*, n. 26.

<sup>74</sup> *Id.* at 704.

<sup>75</sup> *Gotham Partners* at 1077.

<sup>76</sup> *Id.*

applying an industry risk premium. The only extensive discussion was in a decision by Vice Chancellor Strine that treated a negative industry risk premium as a proxy for a private company's beta:

More important, I regard [plaintiff's expert's] consideration of the lower industry risk for companies like Delaware [Open MRI] Radiology to be a fair proxy for beta in a circumstance when beta cannot be measured directly. Under the CAPM, the equity risk premium is not used in isolation to estimate the subject company's cost of capital. Rather the equity risk premium is adjusted by an estimate of the systematic risk of the subject company reflected by its actual or estimated beta. The industry return data that [plaintiff's expert] uses is an acceptable substitute for that adjustment in this situation when a beta cannot be estimated. [Plaintiff's expert] testified that the negative risk premium he employed was consistent with market return data from Ibbotson's indicating that investments in a health care industry business present less market risk than average.<sup>77</sup>

### Size premium

Courts have often considered the application of a size premium in calculating the cost of equity. A small company premium was first applied in Delaware to a cost of equity calculation in a 1991 decision.<sup>78</sup>

In 1999 the Court of Chancery wrote, "This Court has traditionally recognized the existence of a small stock premium in appraisal matters."<sup>79</sup> The role of a testifying expert is to demonstrate whether the size premium is appropriate in a given situation and, if so, the amount of the premium.<sup>80</sup> The Court stated in 2004:

There is finance literature supporting the position that stocks of smaller companies are riskier than securities of large ones and, therefore, command a higher expected rate of return in the market. Our case law also recognizes the propriety of a small firm/small stock premium in appropriate circumstances. The issue, therefore, is not whether a small firm/small stock premium is permissible theoretically, but whether the defendants have shown that a premium of 1.7% is appropriate in this particular case. The Court concludes that the defendants have made that showing.<sup>81</sup>

An Alabama appraisal case also accepted a size premium for calculating a discount rate. The court accepted the defendant's expert's testimony as to both a "micro-capitalization risk premium" of 3.5% (because "[t]he

typical small company has a higher degree of investment risk than a similar, but larger company") and a "company size premium" of 4.35% ("[s]ince a small, closely held company is usually restricted to narrower markets than publicly-traded companies, an additional small company premium is warranted").<sup>82</sup> Similarly, a Maine court rejected a 0.5 beta based on betas of companies in the same industry because it was not adjusted to reflect the issuer's small size.<sup>83</sup>

The Court may decide, however, that based on facts and circumstances, a size premium should not be applied:

In these circumstances, I cannot conclude that it has been persuasively shown that the statutory fair value of Technicolor stock would more likely result from the inclusion of a small capitalization premium than from its exclusion. In this circumstance, I conclude it should not be considered.<sup>84</sup>

In a very recent 2010 case, Chancellor Chandler raised another issue with regard to determining the size premium. He termed it the "issue of circularity," which arises from the fact that the selection of a size premium is a function of the assumed value of the enterprise:

[A] discounted cash flow analysis both values the size of a company (and thus points to the appropriate Ibbotson premium to use) and relies on the appropriate Ibbotson premium to determine the value of the company. This process is circular; which should come first, the valuation of the company or the selection of the Ibbotson risk premium?<sup>85</sup>

He criticized defendant's expert for his "methodologically problematic" argument:

[He] goes as far as to say that because his selection of a 5.78% premium results in a valuation that places Sunbelt in the tenth decile—the decile with a corresponding premium of 5.78%—I should take this as evidence that the 5.78% premium is appropriate. I cannot accept this asserted mathematical proof and proposed flow of causality.<sup>86</sup>

The Court concluded that it was appropriate to use the weighted average of the *SBBI* (Ibbotson) size premiums for the two deciles into which the subject company's value might fall:

According to Ibbotson, the 3.47% premium is a weighted balance between the ninth-decile premium of 2.65% and the tenth-decile premium of 5.78%. Given the uncertainty in Sunbelt's own value and whether Sunbelt falls on the

<sup>77</sup> *Delaware Open MRI* at 340.

<sup>78</sup> *In Re Radiology Associates*, 611 A.2d 485, 490.

<sup>79</sup> *ONTI, Inc. v. Integra Bank*, 751 A.2d 904, 920 (Del. Ch., 1999). See also, e.g., *Hintmann* at \*14 ("This Court has accepted the addition of small stock premia."); *Delaware Open MRI* at 340 ("The expert's inclusion of a small stock premium is consistent with a good deal of academic and practitioner thinking about CAPM.")

<sup>80</sup> *ONTI* at 921.

<sup>81</sup> *Emerging Communications* at \*71.

<sup>82</sup> *Ex parte Baron Services, Inc.*, 874 So.2d 545, 552 (Ala. 2003).

<sup>83</sup> *In re Valuation of Common Stock of Penobscot Shoe Company*, 2003 Me. Super. LEXIS 140 (May 29, 2003) at \*98–100.

<sup>84</sup> *Technicolor* 1990 at \*99.

<sup>85</sup> *Sunbelt Beverage* at \*41.

<sup>86</sup> *Id.* at \*43.

smaller or larger side of the line between the ninth and tenth deciles, I believe it is more appropriate to select 3.47%, a small-firm risk premium that accounts for the possibility that the company is on either side of the line and that Ibbotson itself seems to have applied to all firms within (or between) the ninth and tenth deciles.<sup>87</sup>

The Court of Chancery understands that the size premium measures risk is not measured by beta, and recognizes that the concepts of beta and the small company premium are distinct:

[T]he size premium is not dependent on the beta of the firm. In fact, it is because the beta does not capture all the systematic risk that a size premium is included. “Even after adjusting for the systematic (beta) risk of small stocks, they outperform large stocks.”<sup>88</sup>

An additional issue is that the Court must consider whether to use size premiums based on data starting in 1926 or starting at a later date. In one case, the Court weighted the historical premium data for various periods:

Thus, it seems to me that a small stock premium exists, but just as the difference in returns over sixty-nine years is much greater than that over other, perhaps equally valid periods of time. . . . I think the better approach is to weight the more recent results more heavily than the older ones. To accomplish that, I will take the returns over the past 14, 28, 42, 56, and 69 years and average them, generating a weighted return over the past 69 years for both the smallest quintile and the entire NYSE universe of stocks. This will have the effect of weighting the most recent period five times as much as the first period, the second most recent period four times as much as the earliest, and so on. I believe this to be a more accurate method of determining the existence and magnitude of any small stock premium.<sup>89</sup>

The application of the size premium to foreign businesses was discussed in a 2006 Court of Chancery decision. The Vice Chancellor reviewed the academic literature and concluded:

The general weight of the scholarship, in summary, seems to be that the small-size premium might well apply in the same way as in the U.S. in more highly developed foreign markets, and would not apply to the same extent, or at all, in newly developing markets.<sup>90</sup>

### Company-specific risk premium

The Chancery Court has expressed skepticism as to the use of a company-specific risk premium in computing WACC:

<sup>87</sup> *Id.* at \*44.

<sup>88</sup> *JRC Acquisition* at \*39, citing Pratt, *Cost of Capital*, 2d ed. at 82.

<sup>89</sup> *ONTI* at 922. The valuation date was in 1995, so that the periods started in 1981, 1967, 1953, 1939, and 1926, respectively.

<sup>90</sup> *Gesoff v. IIC Industries Inc.*, 902 A.2d 1130, 1161 (Del. Ch. 2006).

The calculation of a company specific risk is highly subjective and often is justified as a way of taking into account competitive and other factors that endanger the subject company’s ability to achieve its projected cash flows. In other words, it is often a back-door method of reducing estimated cash flows rather than adjusting them directly. To judges, the company specific risk premium often seems like the device experts employ to bring their final results into line with their clients’ objectives, when other valuation inputs fail to do the trick.<sup>91</sup>

The Court has accordingly declined to apply a company-specific risk premium on several occasions, stating its view that company-specific risk premiums cannot be included without “fact-based evidence produced at trial” by expert testimony that persuades the Court to accept the adjustment.

Vice Chancellor Steele,<sup>92</sup> in a 1998 Delaware decision, was the first to discuss extensively the rejection of a company-specific risk premium. Although he did note that this premium could occasionally be appropriate, he concluded, “Respondent has failed to carry its burden of proving the appropriateness of adding a 3% company specific risk premium.”<sup>93</sup> He explained:

An investment specific premium may be appropriate to account for risks not captured in the equity risk premium and the small size premium. Unlike those two premia, which are commonly determined by reference to the published results of empirical research, a company specific risk premium “remains largely a matter of the analyst’s judgment, without a commonly accepted set of empirical support evidence.” Thus, the factors relied upon in assessing an investment specific premium should be carefully explained to the Court. As with all aspects of a party’s valuation for purposes of section 262, the proponent of a company specific premium bears the burden of convincing the Court of the premium’s appropriateness.<sup>94</sup>

The company-specific risk premium was rejected again in a 2004 decision:

By adding a second incremental premium to ECM’s cost of equity to account for the risk of size, [defendant’s expert] appears to have performed a mechanical exercise, rather than make a nuanced, textured judgment. Accordingly, the Court determines that the defendants have not established a credible justification for their incremental “supersmall” firm premium, and declines to add that premium to the cost-of-equity.<sup>95</sup>

<sup>91</sup> *Delaware Open MRI* at 339.

<sup>92</sup> Now Chief Justice of the Delaware Supreme Court.

<sup>93</sup> *Hintmann* at \*20.

<sup>94</sup> *Id.* at \*18–19, citing Pratt, Robert F. Reilly, and Robert P. Schweih, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 3d ed. (Irwin, 1996), 164. Section 262 is the section of the Delaware Corporation Law relating to appraisals.

<sup>95</sup> *Emerging Communications* at \*76.

Rejection of this premium persisted in a 2006 case, in which defendant's expert applied company-specific risk premiums to each constituent business of the subject company. The Court of Chancery stated "[O]ur courts have not applied company-specific risk premia without fact based evidence produced at trial on which to base that discount."<sup>96</sup> It then concluded, "In this case, the court finds that the defendants did not carry their burden of proving the appropriateness of company-specific premia for IIC constituent companies."<sup>97</sup>

In the latest denial of a company-specific premium, the Court, in the 2010 *Sunbelt Beverage* decision, reiterated the rule regarding the evidentiary burden for accepting a company-specific risk premium. The Chancellor said:

Defendants offer three primary justifications for including a company-specific risk premium: (1) the at-will termination of supplier agreements that prevails throughout the wholesale alcohol distribution industry; (2) the competition Sunbelt faces from specific players such as Southern Wine & Spirits; and (3) the level of optimism contained in Sunbelt's management projections.

I conclude that none of these justifications merits inclusion of a company-specific risk premium for Sunbelt. The first and second justifications clearly relate to the industry as a whole, rather than specifically to Sunbelt.<sup>98</sup>

Defendants thus have failed to meet their evidentiary burden to demonstrate to me that it was riskier for Sunbelt to rely on its specific management projections than it is for all companies to rely on management projections. . . . I do not believe a company should be able to manufacture justification for a company-specific risk premium (and all the quantitative uncertainty accompanied therewith) simply by adjusting its management projections such that there is a heightened risk in relying on those projections, no matter how unique that risk-thirsty practice may be to the company.<sup>99</sup>

The Court further stated, "It is important for any proposed company-specific risk premium to be based on a specific financial analysis, so that the Court can verify both the propriety of including the risk premium and the appropriate level of the premium."<sup>100</sup> This explicit instruction regarding the necessity for both factual evidence and specific financial analysis is a warning to any expert that without these two essentials, the Court is unlikely to accept a company-specific risk premium.

It should be noted, however, that the Court accepted a company-specific risk premium in a 1999 decision in which Chancellor Chandler reviewed the prior status of this adjustment in Delaware. He found that "the party

seeking to add the premium," who bore "the burden of showing that the premium [was] appropriate," had "only partly met that burden."<sup>101</sup> Noting that no beta had been calculated by the experts, he explained, "I am willing to accept that the addition of a company-specific premium is appropriate *in the absence of beta* [emphasis added]."<sup>102</sup> He reviewed the six factors that respondent's expert listed in support of the premium, and concluded that since the expert's valuation "does not state how much impact on the company specific premium each of these factors has, I will estimate that they are approximately equal; therefore, because I have eliminated half of them, I reduce [defendants' 3.4%] company specific risk premium by an equal amount, to 1.7%."<sup>103</sup>

In contrast, in a 1994 Delaware decision in a fairness case, the Court criticized the plaintiff's expert for *not* using a company-specific premium.<sup>104</sup> The Court rejected certain factors that defendant's expert considered in support of a 5% company-specific premium and accepted other factors, ruling that "an appropriate premium is 3%, based on the other factors considered by [defendant's expert] in determining the target rate of return, such as pending litigation . . . and the competitive environment in which Continental operated."<sup>105</sup> On balance, the reluctance of the courts to accept company-specific premiums means that the expert who includes this premium in his calculation of WACC may expect a strong challenge on the stand. However, as discussed in the following section, the company-specific risk premium is acceptable in the build-up method.

### Build-Up Method

Most expert testimony in Delaware has used CAPM for calculating cost of capital, but the Court has sometimes utilized the build-up method for calculating it. The Delaware Court of Chancery explicitly rejected the build-up method in a 1998 decision, stating that "[t]he CAPM would seem to be more useful than the 'build up' method because it offers more complete information."<sup>106</sup> It has, however, been accepted in later decisions,<sup>107</sup> and in *Delaware Open MRI* in 2006, the Court not only explicitly accepted the build-up method, but also provided the rationale for doing so and also for accepting a company-specific risk premium in that case. Observing that the

<sup>96</sup> *Gesoff* at 1158.

<sup>97</sup> *Id.* at 1158.

<sup>98</sup> *Sunbelt Beverage* at \*47.

<sup>99</sup> *Id.* at \*49–50.

<sup>100</sup> *Id.* at \*50.

<sup>101</sup> *ONTI* at 920.

<sup>102</sup> The Chancellor noted that in *Gilbert*, "Vice Chancellor Steele applied . . . a beta . . . with the beta perhaps acting as a surrogate company specific risk premium." *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> *Wacht* at \*13.

<sup>105</sup> *Wacht* at \*21.

<sup>106</sup> *Hintmann* at \*16.

<sup>107</sup> *Gholl* at \*47, \*49; *Henke*, 2005 Del. Ch. LEXIS 170 at \*40.

build-up method could reluctantly be accepted as a substitute for CAPM, it wrote:

[N]ot all public companies have a sufficient public float for trading in their shares to provide a reliable beta for use in calculating their cost of capital, forcing a resort to the use of data from the industry or so-called comparable companies. . . .

The experts in this case have used the proxy [for CAPM] that has found the most favor among professional appraisers: the so-called “build-up model.” The build-up model begins with the core factors considered by CAPM, a risk-free rate and an equity premium rate. From there, however, the build-up model begins to diverge from CAPM. Under the build-up method, beta is not considered. A size premium, used consistently with the practice of most current users of CAPM in the appraisal and valuation context, is de rigueur under the build-up model. *Much more heretical to CAPM, however, the build-up method typically incorporates heavy dollops of what is called “company-specific risk,” the very sort of unsystematic risk that the CAPM believes is not rewarded by the capital markets and should not be considered in calculating a cost of capital.* [italics added]<sup>108</sup>

The build-up method has seldom been discussed in other jurisdictions. However, in a Missouri appraisal case in federal court, the decision discussed both experts’ use of the build-up method and applied it.<sup>109</sup> A Vermont decision accepted a discount rate calculated using the build-up method; it criticized respondent’s expert’s CAPM calculation that was inconsistent with his CAPM inputs as dissenters’ expert in another Vermont case.<sup>110</sup>

### Additional Points

The Delaware courts have considered two additional and unrelated points that should be noted by valuation experts: (1) the mid-year convention is acceptable, and (2) DCF valuations using CAPM should not be adjusted for a minority discount.

The mid-year convention has been explicitly used in DCF calculations in every Delaware case where the Court stated that a testifying expert had used it.<sup>111</sup> Several other jurisdictions have also accepted the mid-year convention.<sup>112</sup>

The Delaware courts recognize that DCF analyses based on discount rates derived either using CAPM (from *SBB* data or the FF 3-factor model) or the build-up

method should not be adjusted for an implied minority discount. The Court of Chancery first rejected this adjustment in 1991<sup>113</sup> and, except for one anomalous exception,<sup>114</sup> it has continued to reject adding a control premium to DCF valuations. A 2001 decision cited Shannon Pratt’s reasoning for not permitting the discount:

Some analysts believe that the income approach always produces a publicly traded minority basis of value because the Capital Asset Pricing Model (CAPM) and the buildup model develop discount and capitalization rates from minority transaction data in the public markets. This is a very common and highly flawed conclusion. *There is little or no difference in the rate of return that most investors require for investing in a public, freely tradable minority interest versus a controlling interest.*<sup>115</sup>

### Role of the Expert

Testifying experts need to be familiar both with pertinent valuation literature and relevant case law regarding cost of capital and related issues. This base of knowledge will not only help experts assist the judge, but will also protect them in cross-examination.

Even when experts are well-qualified, the courts often express skepticism as to testimony regarding discount rates. Vice Chancellor Strine writes:

Testimonial feuds about discount rates often have the quality of a debate about the relative merits of competing alchemists. Once the experts’ techniques for coming up with their discount rates are closely analyzed, the court finds itself in an intellectual position more religious than empirical in nature, insofar as the court’s decision to prefer one position over the other is more a matter of faith than reason.<sup>116</sup>

This citation illustrates why an expert fails to serve the judge and the client by acting as a partisan in court. Testifying experts are most valuable when they can inform and educate the judge to understand, and then hopefully adopt, the reasoning underlying the expert’s report, testimony, and methodologies.

<sup>113</sup>*In re Radiology Associates* at 494 (“The discounted cash flow method purports to represent the present value of Radiology’s cash flow. . . . The discounted cash flow analysis, as employed in this case, fully reflects this value without need for an adjustment.”)

<sup>114</sup>The Court added a 20% control premium (based on “control premia paid for publicly-held companies”) to a DCF valuation in *Hintmann* at \*31. In contrast, the Court has frequently added a premium to guideline company valuations to offset a supposed “implicit minority discount.” This adjustment has, however, been questioned by some legal and valuation commentators. See, e.g., Lawrence A. Hamermesh and Michael L. Wachter, “The Short and Puzzling Life of the ‘Implicit Minority Discount’ in Delaware Appraisal Law,” *156 U. Pa. L. Rev.* (2007): 1; Matthews, “Misuse of Control Premiums in Delaware Appraisals,” *Business Valuation Review* (Summer 2008): 107.

<sup>115</sup>Pratt, *Business Valuation Discounts and Premiums* (Wiley, 2000), p. 30, cited in *Lane* at \*118.

<sup>116</sup>*Delaware Open MRI* at 338.

<sup>108</sup>*Delaware Open MRI* at 338–9.

<sup>109</sup>*Swope* at 493–498 and 503.

<sup>110</sup>*In re Shares of Madden*, 2005 Vt. Super. LEXIS 112.

<sup>111</sup>See, e.g., *Hintmann* at \*16; *PNB Holding* at \*105.

<sup>112</sup>See, e.g., *Steiner* at 1136; *U.S. Inspect, Inc. v. McGreevy*, 57 Va. Cir. 511, 524 (2000); 2000 Va. Cir. LEXIS 524 (Nov. 7, 2000) at \*28; *Matter of Murphy v. United States Dredging Corp.*, 2008 N.Y. Misc. LEXIS 9900, (N.Y. Supr., May 19, 2008) at \*\*52, *aff’d in part and rev’d in part on other grounds*, 74 A.3d 815 (N.Y. App. 2010).

Sometimes the court merely needs help in understanding technical issues. For example, one Vice Chancellor appears to have misunderstood the definition of deciles:

[Defendant] asserts [in its brief] that “the Ibbotson yearbook clearly states that the capitalization cut-off between deciles 10a and 10b is \$48,345,000. That is, all companies with market capitalizations of \$48,345,000 or less fall within decile 10b, while companies with market capitalizations greater than \$48,345,000 but no greater than \$84,521,000 fall within decile 10a.” This is not what the Ibbotson Associates yearbook says. Rather, it merely provides that the largest company within decile 10b has a market capitalization of \$48,345,000 and the company with the largest capitalization within decile 10a has a market capitalization of \$84,521,000. There is no indication of whether a company with a market capitalization of less than \$48,345,000 may nonetheless fall within decile 10a or even decile 9 given certain characteristics.<sup>117</sup>

The Court’s misunderstanding of deciles demonstrates the importance of articulate testimony by an expert witness to explain concepts to a judge. If an experienced Delaware Vice Chancellor can be confused by a basic statistical concept, experts testifying in other jurisdictions where judges are usually less familiar with valuation methods and literature must be clear in their testimony.

Sometimes, as Vice Chancellor Strine articulates above, the court’s fear that the judge must operate “more [from] a matter of faith than reason” is much more serious. The court’s apprehension arises from what Strine calls the “status of principles of corporate finance,”<sup>118</sup> that is, the valuation profession’s continuing but incomplete development of the academic and intellectual principles which underlie valuation methodologies. In these situations, the court does not expect the expert to cure the theoretical inadequacies. What it requests is that experts aid the judge by, in Strine’s words, “trying to come up with a proxy that takes into account concerns addressed by CAPM.”<sup>119</sup> As Strine elucidated:

Even as to public companies, there is much dispute about how to calculate the discount rate to use in valuing their future cash flows, even when one tries to stick as closely as possible to the principles undergirding the capital asset pricing model and the semi-strong form of the efficient capital markets hypothesis. Witness the serious academic debate about whether the so-called size premium received by investors in smaller public companies is a durable indicia of their greater risk, or whether there are attributes of stocks with a low book-to-market ratio that require the consideration of that factor in estimating a discount rate.<sup>120</sup>

In addition, he points out that a reliable beta cannot be calculated directly for thinly traded public companies, so that valuers are forced to employ the less desirable alternative of using guideline companies or industry data, as discussed previously in relation to the build-up model. He continues:

Situations like [Delaware Open MRI] inspire even less confidence, when experts are required to calculate a cost of capital for a very small, non-public company, for which neither of the experts has identified reliable public comparables. In this context, the ability of the experts or the court to hew literally to the teaching of the high church of academic corporate finance is essentially non-existent. At best, the experts and the court can express their reverence by trying to come up with a proxy that takes into account concerns addressed by CAPM and ECMH [Efficient Capital Market Hypothesis].<sup>121</sup>

### Summary

The Delaware Court of Chancery is the leading court on valuation issues in corporate disputes. That court has declared its preference for the DCF method of valuation, including all elements of the expanded CAPM to determine the cost of capital. It has, however, rejected the company-specific adjustment in the calculation of WACC unless there are unusual circumstances to validate it.

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<sup>117</sup>*Taylor v. American Specialty Retailing Group, Inc.*, 2003 Del. Ch. LEXIS 75 (July 25, 2003) at \*17, n. 18.

<sup>118</sup>*Delaware Open MRI* at 338.

<sup>119</sup>*Id.*

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<sup>120</sup>*Id.*

<sup>121</sup>*Id.*