VALUATION ISSUES IN SHAREHOLDER DISSENT AND OPPRESSION CASES:
The Cost of Capital in Appraisal Cases

Gilbert E. Matthews, CFA

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SUTTER SECURITIES INCORPORATED

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Introduction continued

- The cost of capital is a vital issue in DCF valuations for appraisals in shareholder dissenter actions.
- Delaware has effectively set the standards for corporate valuations.
- DCF is the preferred valuation method in Delaware.
- Delaware thus sets the standards for determining the cost of capital.
  - Valuators should be guided by Delaware approach for valuations generally, and specifically for determining cost of capital.

Introduction continued

- Most cases discussing details of methodology have come from the Delaware Court of Chancery.
- Very few published non-Delaware decisions discuss cost of capital.
  - Lower court decisions in other states are rarely published.
  - Appellate cases rarely discuss the details of valuation methodology.
  - There are few Federal District Court valuation decisions.

DCF Accepted in *Weinberger*

- Delaware Supreme Court said in 1983 that determination of fair value "must include proof of value by any techniques or methods which are generally considered acceptable in the financial community." (Weinberger, 1983)

- Delaware Supreme Court approved using DCF in appraisals, saying that "elements of future value . . . which are known or susceptible of proof as of the date of the merger . . . may be considered" in Delaware appraisals.

DCF in Delaware Law

- "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." (Andoloro, 2005)
- The Court of Chancery has rejected DCF valuations on several occasions for various reasons, primarily because quality of projections was inadequate.
- The courts continue to use other valuation methods, principally guideline company method.

CAPM in Delaware Law

- CAPM was used in Delaware in *Technicolor* (1990).
- The Court usually uses CAPM and has applied CAPM even when future results are highly speculative.
- It rejected a 35%-45% venture capital cost of equity and used a 21% CAPM-based number. (*Gilbert,* 1997)
- It accepted a 30% discount rate calculated using CAPM and rejected a 17.7% rate. (*Ryan*, 1996)
- However, for a small biotech company, the Court used the 50% that had been used by investment banker as financial advisor. (*Gray*, 2002)

Risk-Free Rate

- Delaware accepts 20-year Treasury rate as measure of the risk-free rate.
- Only Delaware decision that addressed this issue rejected 30-year Treasury yield as risk-free rate and stated that "using the 20-year Treasury rate is . . . in keeping with the accepted practice." (*MedPointe*, 2004)
- However, U.S. District Court in Nevada based risk-free rate on 5-year Treasuries. (*Steiner*, 1998)

Cost of Equity – Ibbotson

- Delaware decisions which have used CAPM to calculate cost of capital most frequently employed equity risk premium of 7.0% to 7.2% based on Ibbotson data.
- Courts have used these rates because most testimony used equity premiums based on Ibbotson data using time periods starting in 1926.
- No case discusses expert testimony using lower equity risk premiums based on shorter time periods.

Cost of Equity – Fama-French

- Fama-French method has been favorably received in recent years in limited number of cases in which experts have used it.

- In 2004 Vice Chancellor Strine rejected 7.3% equity premium and instead accepted 4.5% equity premium derived using Fama-French, stating:

> 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. (*Union Illinois*, 2004)

Cost of Equity – Fama-French
continued

- Equal weight was given to Fama-French and CAPM in more recent decision. (*PNB Holding*, 2006)
- Given growing acceptance of Fama-French model in financial community, testifying experts will likely use it more frequently in the future.

Cost of Equity – A Major Decision in 2010

- In 2010 Strine rejected 7.1% ERP based on historical data and accepted 6.0% ERP based on expert's teaching experience, relevant literature, and supply side ERP reported in the 2007 Ibbotson Yearbook. [*Global GT*, 2010]
- There are "persuasive reasons support[ing] a lower forward-looking real return on equity than the return found in the historical data."

Cost of Equity – A Major Decision in 2010 continued

- Surveys cited by expert suggested that current academic thinking would put the ERP closer to 6.0% than to 7.1%.

  > 1926 . . . has no magic as a starting point for estimating long-term equity returns. . . . [W]ell-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.

- Strine noted that ERP for companies operating in foreign markets may be lower than for a domestic company.

Cost of Equity – A Major Decision in 2010 continued

- He explained why he no longer relied on Historic ERP, which the Court had previously used.

  [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.

- Strine recognized that ERP remains an estimate based on uncertainty and leaves responsibility for resolving debate to valuation profession: "[T]he relevant academic and professional community and not this court should develop the accepted approach."

Cost of Debt

- The Court has determined that a company's pre-transaction borrowing cost is the appropriate cost of debt in an appraisal.
- The reason is that the entity being appraised is the company as it existed before the transaction.

Cost of Debt – *Technicolor*

- The one case in which pre-transaction borrowing cost was not used is not, in fact, actually an exception:
  - Technicolor was acquired in a two-step transaction, a third-party tender offer followed somewhat belatedly by a squeeze-out.
  - Therefore, it was valued under a new business plan which became operative <u>after</u> the tender offer but <u>before</u> the squeeze-out occurred .
  - Therefore, the Court did not use Technicolor's pre-tender offer borrowing cost but instead used the interest rate on the acquirer's debt. (*Technicolor*, 2003*)*

Cost of Debt After Tax

- When the Court of Chancery computes WACC for a C Corporation, it tax-effects the cost of debt based on the company's marginal corporate tax rate.
- When the Court appraised an S Corporation in 1991, it did not tax-effect the cost of debt. (*Radiology Associates*, 1991)
  - However, in a recent case valuing a debt-free S corporation, the Court tax-effected earnings based on taxes payable by shareholders. (*Delaware Open MRI*, 2006)
  - Thus, the Court is likely similarly to tax-effect S Corporation debt in the future.

Cost of Debt After Tax continued

- When there were NOLs, the Court of Chancery applied a full tax rate, because "deductions for interest payments would allow the Company to save its NOLs for subsequent years." (*Gholl*, 2004)
- When a company could only deduct part of its interest for U.S. taxes, a Federal court prorated the tax effect. *(Steiner*, 1998)

Beta

- The Court accepts the concept that the equity risk premium must be adjusted for an appropriate beta.
- When shares of the company being appraised were actively traded, customary practice is to determine beta by reference to its own market prices.
- If a company is private or if it is thinly traded, the Court looks at the betas of guideline companies.

    [Using] the median beta of comparable companies . . . is the customary method of determining a beta for a privately held company. (*Hintmann*, 1998)

The Court Questions Beta Based on Guideline Companies

- However, 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 . . . is indeterminable have a lower cost of equity than publicly-listed corporations whose durability is reflected in a trading history producing a reliable beta. (*PNB Holding,* 2006)

Beta Should Not Be Based on a Short Period

- The Court generally prefers betas based on long time periods.
- However, one decision gave equal weight to two-year betas and five-year betas of guideline companies. (*Andaloro*, 2005)
  - For both periods, the Court gave greater weight to betas of companies deemed to be more comparable.

Beta Based on Guideline Companies Should Consider Relative Risk

- Beta should be adjusted to reflect incremental risk when subject company is smaller and more vulnerable than guideline companies:

  > The plaintiff's expert derived Cell Tech's beta of 2.0 from th[e] '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. (*Ryan*, 1996)

- The Court rejected beta of 0.63 for a thinly traded limited partnership's units and used defendant's expert's beta of 3.35. (*Gotham Partners*, 2000)

Raw Beta or Adjusted Beta?

- In 1998 Vice Chancellor Steele use raw beta:

  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. (*Gilbert*, 1998)

- Later, Chancellor Chandler questioned the use of raw beta and instead utilized adjusted beta:

  Betas based on observed historical data are more representative of future expectations when they are adjusted. (*JRC Acquisition*, 2004)

Beta or Adjusted Beta? continued

- In 2010 Vice Chancellor Strine rejected an adjusted beta for a foreign company, commenting that "no reliable literature or evidence was presented" to show that the beta of a company operating in Russia would revert to 1.0. (*GT Global,* 2010)
- Instead, he looked at raw beta and industry betas.
- He 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."

Capital Structure

- In appraisal cases, Delaware uses the actual capital structure at the valuation date rather than a hypothetical capital structure based on industry norms.
  - Debt incurred in the transaction leading to the appraisal is not considered.
  - The Court rejected a debt-free capital structure when the company being appraised had a leveraged structure.
  - On the other hand, it did not accept an assumption that the control shareholder would have perpetually rolled over a leveraged subsidiary's existing debt. (*Andoloro*, 2005)

Capital Structure continued

- In contrast, a U.S. District Court applying Nevada appraisal law did not accept the company's actual capital structure, saying that it was "not precluded from using the industry average . . . [even though] . . . management has 'no plans' to change the capital structure." (*Steiner*, 1998)
- It should be noted that in fairness cases, Delaware does consider acquisition value and accepts the use of "an 'optimal' debt/equity structure." (*Wacht*, 1994)
- No decision discusses the fact that the cost of equity itself is a function of the capital structure.

Capital Structure Circularity

- A 2004 decision discussed the issue of indeterminate equity value in determining capital structure:

  [The] assumed $10.38 per share . . . and . . . assumed $41.16 per share ‘enterprise value[s]’ are identical to the ultimate ‘fair value’ that each expert determined . . . exemplify[ing] the ultimate circularity inherent in WACC.

  The only sensible way (in the Court's view) to avoid the circularity . . . is to use an enterprise valuation . . . that is not litigation-driven.
  (*Emerging Communications*, 2004)

Industry Risk Premium

- The Court has rarely discussed the industry risk premium in CAPM context.
- The only extensive discussion was by Vice Chancellor Strine when he treated a negative industry risk premium as a proxy for a private company's beta:

> Under the CAPM, 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 Mitchell uses is an acceptable substitute for that adjustment in this situation when a beta cannot be estimated. (*Delaware Open MRI,* 2006)

Size Premium

- Court "has traditionally recognized the existence of a small stock premium in appraisal matters." (*ONTI*, 1999)
  - There is finance literature supporting position that stocks of smaller companies are riskier than securities of large ones and, therefore, command higher expected rate of return in market. (*Emerging Communications*, 2004)
- Court of Chancery recognizes that concepts of beta and small company premium are distinct and that size premium measures risk that is not measured by beta. (*JRC Acquisition*, 2004)

Size Premium May Be Rejected

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

  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. (*Technicolor*, 1990)

Size Premium in Alabama Case

- Alabama appraisal decision accepted defendant's expert's size premium that used 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
  b) "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") (*Baron Services,* 2003)

Size Premium Data

- 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:

  > [T]he 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. . . . I will take the returns over the past 14, 28, 42, 56, and 69 years and average them. (*ONTI*, 1999)

Size Premium for Foreign Business

- Application of size premium to foreign businesses was discussed in 2006 Court of Chancery decision.

  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 (*Gesoff,* 2006).

Size Premium Circularity

- Court recently raised "issue of circularity" that arises because selection of a size premium is function of assumed value of enterprise:

  > [A] discounted cash flow analysis both values the size of a company . . . 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? (*Sunbelt Beverage,* 2010)

- Court decided to use weighted average of Ibbotson size premiums for the two deciles into which the subject company's value might fall.

The Court Is Reluctant to Apply a Company-Specific Risk Premium

- In past ten years, Court has usually declined to apply company-specific risk premium.
- Company-specific premiums can only be included with evidence produced at trial that persuades Court to accept adjustment. (*Gesoff*, 2006; *Sunbelt Beverage*, 2010)
- On balance, current reluctance of courts to accept company-specific premiums means that expert who uses this premium should expect strong challenge on the stand.

The Court Accepted Company-Specific Risk Premiums in the 1990s

- However, in Delaware fairness case, Court criticized plaintiff's expert for *not* using company-specific premium in calculating WACC. (*Wacht*, 1994)

- Court accepted company-specific risk premium in 1999 appraisal, noting that no beta had been calculated by the experts, and explained:

  > I am willing to accept that the addition of a company-specific premium is appropriate <u>in the absence of beta</u> [*emphasis added*]. (*ONTI*, 1999)

Build-Up Method

- Court usually rejects build-up method because CAPM "offers more complete information." (*Hintmann*, 1998)
    - However, build=up model has been accepted in some later decisions. (*Gholl*, 2004; *Henke*, 2005)
    - In contrast to its approach in CAPM, Court accepts use of the company-specific premium in applying build-up method.

Build-Up Method continued

- Court has used build-up method and company-specific premium when Beta has been unavailable:

> [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. (*Delaware Open MRI*, 2006)

- U.S District Court appraisal under Missouri law applied the build-up method. (*Swope*, 2001)

Additional Points

- Mid-year convention has been accepted in every Delaware case where Court stated that a testifying expert had used it.
  - Several other jurisdictions have also accepted the mid-year convention. (NY: *United States Dredging*, 2008; VA: *U.S. Inspect*, 2000)
- DCF valuations should not be adjusted for an implied minority discount.

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In Re ***Radiology Associates****, Inc. Litigation*, 611 A.2d 485 (Del. Ch. 1991).
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