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97000-00001-2413 | 6/23/2016 15:25:22

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2013 WL 3793896
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UNPUBLISHED OPINION. CHECK COURT RULES BEFORE CITING.

Court of Chancery of Delaware

Merion Capital, L.P., Magnetar Capital Master Fund Ltd., Magnetar Global Event Driven Master Fund Ltd., Magnetar SC Fund Ltd., Hipparchus Master Fund Ltd., Compass Offshore HTV PCC Limited, Compass HTV LLC, and Blackwell Partners LLC, Petitioners,
v.
3M Cogent, Inc., Respondent.

Civil Action No. 6247–VCP
|
Submitted: March 19, 2013
|
Decided: July 8, 2013

Attorneys and Law Firms

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MEMORANDUM OPINION

PARSONS, Vice Chancellor.

***1** This is the post-trial decision in an appraisal brought pursuant to 8 *Del. C.* § 262 and arising out of a merger in which a global technology conglomerate and its acquisition subsidiary acquired a biometrics technology company at a price of $10.50 per share. Relying upon a discounted cash flow ("DCF") analysis, the petitioners claim that each share of the biometrics company's common shares was worth $16.26 as of the merger date. By contrast, the respondent contends that the biometrics company's common shares were worth only $10.12 apiece as of the merger date. For the reasons set forth below, the Court concludes that, as of the merger date, the fair value of the biometrics company was approximately $963.4 million or $10.87 per share.

I. BACKGROUND

A. The Parties

Respondent, 3M Cogent, Inc. ("3M Cogent"), formerly known as Cogent, Inc. ("Cogent" or the "Company"), is a Delaware corporation that provides biometric [1] technology. Specifically, Cogent offers automated fingerprint identification systems ("AFIS") technology and other fingerprint biometrics solutions to government, immigration, and law enforcement agencies.

Petitioners are Merion Capital, L.P., Magnetar Capital Master Fund Ltd., Magnetar Global Event Driven Master Fund Ltd., Magnetar SC Fund Ltd., Hipparchus Master Fund Ltd., Compass Offshore HTV PCC Limited, Compass HTV LLC, and Blackwell Partners LLC (collectively, the "Petitioners"). At the time of the merger, Petitioners beneficially owned 5,835,109 shares of Cogent common stock (the "Shares"). [2] Petitioners dissented from the merger and perfected their appraisal rights.

Nonparty 3M Company ("3M") is a diversified technology conglomerate with a global presence in the following businesses: industrial and transportation; health care; consumer and office; safety, security, and protection services; display and graphics; and electro and communications. [3] 3M acquired Cogent (or the "Company") through its acquisition subsidiary, nonparty Ventura Acquisition Corporation ("Ventura").

B. Facts

1. The business

Cogent was founded by Ming Hsieh in 1990. From 1990 until 2004, Cogent operated as a private company and was profitable during that entire period. [4] Ultimately, Cogent

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went public on September 23, 2004, and thereafter was publicly traded on the NASDAQ Global Select Market under the symbol "COGT." [5] At all relevant times, Hsieh was the President, Chairman, and Chief Executive Officer ("CEO") of Cogent, and Paul Kim was the Chief Financial Officer. Before the merger, Cogent's Board of Directors (the "Board") consisted of four members: Hsieh, John Bolger, John Stenbit, and Kenneth Thornton.

2. The transaction

***2** In or around 2008, Cogent retained Credit Suisse to assist in the investigation and evaluation of potential strategic alternatives, including a sale of the Company. As part of that engagement, Credit Suisse contacted over twenty-five potential strategic and financial partners about the prospect of acquiring Cogent. [6] Cogent also retained Goldman Sachs to pursue potential strategic alternatives with NEC, a competitor of Cogent. As a result of efforts by Cogent and its advisers, in 2010, 3M, Danaher Corporation ("Danaher"), Roper Industries ("Roper"), and NEC Corporation ("NEC") expressed interest in acquiring the Company. [7]

Around that time, Cogent had direct meetings with executives of 3M in which Cogent and its advisors informed 3M that other potential suitors were in discussions with Cogent. [8] In May 2010, 3M expressed interest in pursuing a strategic transaction with Cogent at a price range of $9.25 to $10.25 per share. [9]

Shortly after 3M's verbal offer, Kim prepared financial projections for 2010–2015 (the "Five–Year Projections"). [10] Up until that time, Cogent had not prepared projections beyond one year. [11] Credit Suisse compiled the projections, but relied on information supplied by Kim, Hsieh, and Mary Jane Abalos, Cogent's vice president of finance. [12] According to Kim, the Five–Year Projections were "bottom-up" projections that did not rely on industry analysts or reports. [13]

On July 2, 2010, after further discussions and due diligence with potential acquirers, Cogent received two nonbinding indications of interest: one from 3M to acquire Cogent for $10.50 per share and the other from Danaher to acquire Cogent at a range of $10.00 to $10.50. [14] Although Roper and Danaher eventually dropped out of the process, NEC and 3M remained interested in pursuing a strategic transaction with Cogent. [15]

In August 2010, 3M submitted a nonbinding written proposal to acquire Cogent for $10.50 per share. [16] The Board met on August 15, 2010, and instructed their advisor, Credit Suisse, to inform 3M that its proposal was not acceptable and to negotiate with 3M on price and terms. [17] Cogent also leveraged the offer from 3M to pressure NEC to speed up its bid. [18] Ultimately, NEC submitted a nonbinding indication of interest to acquire Cogent within the range of $11.00 to $12.00 per share. [19] In a letter dated August 19, 2010, 3M advised Cogent that its bid would expire on August 20. [20] That day, the Board met to determine how to proceed. After considering updates on the ongoing discussions with NEC, the Board approved the negotiation of a definitive merger with 3M, rejected the condition of exclusivity requested in 3M's letter, and instructed Credit Suisse to continue discussions with NEC. [21]

Finally, on August 29, 2010, the Board held another special meeting at which it considered further updates on the discussions with NEC. [22] Based on NEC's need to complete its due diligence, the existence of antitrust and regulatory issues with NEC, and Credit Suisse's opinion that the proposed merger with 3M was fair, the Board unanimously determined that it was in the best interest of Cogent to enter into the proposed merger agreement with 3M, and resolved to recommend that the shareholders approve the merger. [23]

***3** The next day, Cogent and 3M publicly announced the merger. On September 10, 2010, 3M commenced a tender offer to acquire all of the issued and outstanding common stock of Cogent for $10.50 per share. The initial tender offer closed on October 7, 2010, after which 3M controlled a majority of Cogent's outstanding shares. Because Cogent did not have enough shares to complete a short-form merger, on October 8, 2010, 3M commenced a subsequent tender offering at the same price, $10.50 per share. On October 26, 2010, the subsequent offering closed, and 3M controlled 73% of Cogent's outstanding common shares or approximately 64.9 million common shares. On December 1, 2010 (the "Merger Date"), the stockholders of Cogent approved the merger pursuant

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to 8 *Del. C.* § 251 (the "Merger"). As a result, Cogent became a wholly owned subsidiary of 3M and thereafter was renamed 3M Cogent, Inc.

C. Procedural History

Following the Merger, Petitioners filed their Verified Petition for Appraisal on March 4, 2011. From November 28 through November 30, 2012, I presided over a three-day trial in this action. After extensive post-trial briefing, counsel presented their final arguments on March 19, 2013. This Memorandum Opinion constitutes my post-trial findings of fact and conclusions of law.

D. Parties' Contentions

Petitioners contend that the fair value of Cogent was $16.26 per share. In support of this valuation, Petitioners rely on their expert, Dr. Bernard C. Bailey, a Ph.D. in management and Chairman and CEO of Authentix Inc., a Carlyle Group portfolio company and global leader in authentication technology.[24] In valuing the Company, Bailey performed a DCF analysis, a comparable companies analysis, and a comparable transactions analysis. Bailey relied, however, only on his DCF analysis in reaching his valuation opinion because (1) Bailey believed there were no truly comparable companies or transactions to compare to Cogent and (2), to the extent there were any potentially comparable companies and transactions, he lacked sufficient data from which to draw comparisons.

3M Cogent claims that Cogent's fair value was $10.12 per share. In support of its valuation contentions, Respondent relies on the expert testimony and reports of Henry F. Owsley and Stephen M. Schiller (collectively, the "Gordian Experts"), a partner and managing director of Gordian Group, LLC ("Gordian Group"), respectively.[25] The Gordian Experts valued the Company using a DCF analysis, a comparable companies analysis, and a comparable transactions analysis, giving each analysis equal, *i.e.,* one-third, weight.

II. ANALYSIS

A. Standard

Under Section 262 of the Delaware General Corporation Law, stockholders who meet certain requirements are entitled to an appraisal by the Court of Chancery of the fair value of their shares of stock.[26] During such an appraisal proceeding, the Court of Chancery

> shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors.[27]

The Court's task is to perform an independent evaluation of "fair value."[28] "It is within the Court of Chancery's discretion to select one of the parties' valuation models as its general framework, or fashion its own, to determine fair value in the appraisal proceeding."[29] Fair value in the context of an appraisal proceeding is the "value to a stockholder of the firm as a going concern, as opposed to the firm's value in the context of an acquisition or other transaction."[30] "Only the speculative elements of value that may arise from the 'accomplishment or expectation' of the merger," that is, any synergistic value, should be excluded from a fair value calculation on the date of the merger.[31] "One of the most important factors to consider is the very 'nature of the enterprise' subject to the appraisal proceeding."[32]

***4** In an appraisal proceeding, both sides have the burden of proving their respective valuations by a preponderance of the evidence.[33] If neither party satisfies its burden, however, the Court must use its own independent judgment to determine the fair value of the shares.[34] The Court may consider "proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court."[35] Among the techniques that Delaware courts have relied on to determine the fair value of shares are the DCF approach, the

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comparable transactions approach, and comparable companies analyses. [36]

B. Merger Price as Indication of "Fair Value"

Respondent seeks to have this Court rely on the merger price as evidence of the fair value of Petitioners' shares. But, the cases that Respondent cites in support of that proposition [37] pre-date the Supreme Court's statements on this issue in *Golden Telecom, Inc. v. Global GT LP.* [38]

In *Golden Telecom,* the Supreme Court stated:

> Section 262(h) unambiguously calls upon the Court of Chancery to perform an independent evaluation of "fair value" at the time of a transaction. It vests the Chancellor and Vice Chancellors with significant discretion to consider "all relevant factors" and determine the going concern value of the underlying company. Requiring the Court of Chancery to defer —conclusively or presumptively —to the merger price, even in the face of a pristine, unchallenged transactional process, would contravene the unambiguous language of the statute and the reasoned holdings of our precedent. It would inappropriately shift the responsibility to determine "fair value" from the court to the private parties. Also, while it is difficult for the Chancellor and Vice Chancellors to assess wildly divergent expert opinions regarding value, inflexible rules governing appraisal provide little additional benefit in determining "fair value" because of the already high costs of appraisal actions. Appraisal is, by design, a flexible process. Therefore, we reject [respondent's] contention that the Vice Chancellor erred by insufficiently deferring to the merger price, and we reject its call to establish a rule requiring the Court of Chancery to defer to the merger price in any appraisal proceeding. [39]

***5** More recently, Chancellor Strine refused to give any weight to merger price, stating:

> [Respondent] makes some rhetorical hay out of its search for other buyers. But this is an appraisal action, not a fiduciary duty case, and although I have little reason to doubt [respondent's] assertion that no buyer was willing to pay Dimensional $25 million for the preferred stock and an attractive price for [respondent's] common stock in 2009, an appraisal must be focused on [respondent's] going concern value. Given the relevant legal standard, the trial record did not focus extensively on the quality of marketing [respondent] by Dimensional or the utility of the "go shop" provision contained in the merger agreement....
>
> Instead, the testimony at trial focused mostly on the question that is relevant under *Cavalier Oil* and its progeny, which is the going concern value of [respondent] as of the date of the [m]erger. In this opinion, I concentrate on answering the key questions raised by the parties relevant to determining that value, which are: (i) whether the preferred stock should be valued at the $25 million liquidation preference value or on an as-converted basis in determining the value to subtract from [respondent's] equity value to derive a value for its common stock; and (ii) the enterprise value of [respondent] as a going concern on the Merger date. [40]

Here, both sides have presented expert testimony as to the going concern value of Cogent on the Merger Date. Indeed, Respondent did not seek to use the merger price of $10.50 per share, but instead relies on the Gordian Experts' analyses to arrive at a lower price of $10.12. [41] Respondent and its experts also did not attempt to adjust the merger price to remove the "speculative elements of value that may arise from the 'accomplishment or expectation' of the merger." [42] In other words, Respondent asks this Court to rely on a merger price that it has not relied on itself and that is not adjusted to produce the going concern value of Cogent. Those deficiencies render the merger price largely irrelevant to this case. Accordingly, I focus primarily on the evidence presented by the experts as to the going

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concern value of Cogent on the Merger Date, *i.e.,* the experts' technical analyses presented in their expert reports and in their testimony at trial.

C. Which Valuation Method?

As previously indicated, Petitioners relied solely on a DCF analysis to support their argument that the fair value of a Cogent common share on the date of the Merger was $16.26. By contrast, 3M Cogent's experts gave nearly equal weight to their DCF analysis, comparable companies analysis, and comparable transactions analysis in coming to a per common share value for Cogent of $10.12.

Generally speaking, "it is preferable to take a more robust approach involving multiple techniques—such as a DCF analysis, a comparable transactions analysis (looking at precedent transaction comparables), and a comparable companies analysis (looking at trading comparables/multiples)—to triangulate a value range, as all three methodologies individually have their own limitations." [43] A comparable or market-based approach endeavors to draw inferences about a company's future expected cash flows from the market's expectations about comparable companies. [44] "[T]he utility of a market-based method depends on actually having companies that are sufficiently comparable that their trading multiples provide a relevant insight into the subject company's own growth prospects." [45] When there are a number of corporations competing in a similar industry, these methods are most reliable. On the other hand, when the "comparables" involve companies that offer different products or services, are at a different stage in their growth cycle, or have vastly different multiples, a comparable companies or comparable transactions analysis is inappropriate. [46] Therefore, I must examine the experts' respective selections of comparable companies and transactions to evaluate their reliability.

1. Comparable companies analysis

***6** The comparable companies method of valuing a company's equity involves several steps including: (1) finding comparable, publicly traded companies that have reviewable financial information; (2) calculating the ratio between the trading price of the stocks of each of those companies and some recognized measure reflecting their income such as revenue, EBIT, or EBITDA; (3) correcting these derived ratios to account for differences, such as in capital structure, between the public companies and the target company being valued; and, finally, (4) applying the average multiple of the comparable companies to the relevant income measurement of the target company, here Cogent. [47]

The Gordian Experts conducted a comparable companies analysis that began with the selection of ten companies. [48] The Gordian Experts then determined multiples by dividing the enterprise value for each company by: (i) last twelve months ("LTM") revenue and EBITDA; and (ii) estimated forward revenue and EBITDA, as determined by public filings and other publicly available information. Next, the Gordian Experts applied a range of multiples to Cogent's LTM and estimated forward revenue and EBITDA to determine an estimated enterprise value for Cogent. Ultimately, the Gordian Experts' analysis yielded an estimated enterprise value of Cogent of $296.3 million.

Here, Petitioners attack Respondent's first expert, Owsley, and his comparable companies analysis, claiming the analysis is "unreliable, unsupported and flawed." [49] Specifically, Petitioners note that the Gordian Experts' comparable companies analysis suffers from: (1) a paucity of data; (2) a selection of companies with either no profits, a different risk profile, no government-focused customer base, or no business in the biometrics industry; and (3) a generalized lack of consistent methodology.

"The burden of proof on the question [of] whether the comparables are truly comparable lies with the party making that assertion," here the Respondent. [50] I find that Respondent and its Gordian Experts have not satisfied that burden.

As an initial matter, six of the ten comparable companies the Gordian Experts identified were significantly smaller than Cogent. Those companies each had enterprise values of less than $50 million, [51] while Cogent's enterprise value was $398.5 million. [52] This Court has rejected the use of companies as comparables where those companies were significantly different in size than the appraised company. [53] That is because, as further discussed in

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Section II.D.2.d *infra* concerning the equity size premium, greater risk is typically associated with equity in a small company. [54] In that regard, it would be inappropriate to compare a company with an enterprise value of $14.7 million, as was the case with BIO–Key International, Inc., to a company, such as Cogent, with an enterprise value more than 25 times higher.

***7** Moreover, not one of those same six "comparable" companies had generated a profit. [55] At trial, Schiller, who replaced Owsley as Respondent's expert, acknowledged that the type of companies that have revenue multiples but not EBITDA multiples tend to be "companies in the early stage of their growth and maturity" and "companies that are growing rapidly." [56] In contrast, Cogent had been profitable from 1990 until 2005. [57] In that regard, Schiller acknowledged that companies that had never turned a profit "are not close comparables" to Cogent. [58]

The Gordian Experts also failed to select comparable companies from the same business or industry as Cogent. For example, five of the companies selected by Owsley had no biometrics business at all. [59] Bailey, Petitioners' expert, also notes that of the ten comparable companies selected by the Gordian Experts, only one—BIO-Key International—listed Cogent as a competitor in its annual report. [60]

Finally, the Gordian Experts' failure to identify L–1 as a comparable company to Cogent before trial causes me some concern. L–1 competed directly against Cogent in a number of markets, including the LiveScan market. [61] Indeed, Schiller admitted that L–1 "was one of the closer comparables to Cogent." [62] Nonetheless, the Gordian Experts excluded L–1 based on their mistaken belief that a roughly contemporaneous L–1 transaction had closed before the Merger. [63] Importantly, L–1 had very positive financials that probably would have increased the values generated by the Gordian Experts' comparable companies analysis. [64] In that sense, therefore, the Gordian Experts' analysis likely underestimates the value of Cogent.

Based on the problems identified in this subsection, I find the Gordian Experts' comparable companies analysis to be unreliable. Furthermore, because Respondent has not met its burden of proof to show that the selected companies are truly comparable, I accord no weight to that analysis.

2. Comparable transactions analysis

A comparable transactions analysis "involves identifying similar transactions, quantifying those transactions through financial metrics, and then applying the metrics to the company at issue to ascertain a value." [65] As with the comparable companies analysis, "[t]he utility of the comparable transactions methodology is directly linked to the 'similarity between the company the court is valuing and the companies used for comparison.' " [66]

Here, the Gordian Experts began their analysis with the selection of eighteen transactions. [67] They then calculated multiples by dividing the enterprise value (as determined by the terms of the relevant transactions) for each company involved by: (i) LTM revenue and EBITDA; and (ii) estimated forward revenue and EBITDA. [68] Next, the Gordian Experts arrived at multiple ranges by eliminating the top and bottom quartile. [69] Finally, they applied a 20% discount to the multiples they obtained to take into account the need to eliminate any control or synergy premiums. [70]

***8** Petitioners' expert Bailey criticized the Gordian Experts for using revenue multiples on the ground that they are less reliable than EBITDA multiples. At trial, Bailey explained that "it's inappropriate to use a revenue multiple as a multiple for trying to value [Cogent], because it was a very profitable cash-flow-positive company operating in a robust industry." [71]

In an expert report he submitted in another case, Owsley similarly criticized the use of revenue multiples, stating that "[w]hile it is true that many analysts regularly examine revenue multiples[,] I believe that such multiples are inherently more suspect due to their relatively higher level of variance (once low and negative earners are eliminated) than EBITDA multiples." [72] Owsley's inconsistent and contradictory positions undermine the Gordian Experts' credibility on this point, which they admitted was a "judgment call." [73] Based on these facts and Bailey's reasoning, I find that Respondent has not met

its burden of showing that the Gordian Experts' use of a revenue multiples approach is reliable. Therefore, I accord no weight to that part of Respondent's analysis.

Petitioners contend that the remainder of the Gordian Experts' comparable transactions analysis, *i.e.,* the LTM and forward EBITDA multiples, is flawed because there are insufficient data points to support any meaningful conclusions. For the thirty-six potential EBITDA multiples identified, the Gordian Experts were able to provide only eight meaningful multiples. That number is even smaller after one eliminates the first and fourth quartiles. This Court has found comparable transactions analyses that used as few as five transactions and two transactions to be unreliable.[74] Indeed, "[i]f it turns out that very few data points are available for a particular valuation multiple, that problem may lead to abandon[ing] that multiple or [ ] put[ting] relatively little weight on it."[75] The dearth of data points here undermines the reliability of the EBITDA multiples.

This conclusion is buttressed by the high dispersion of the data points the Gordian Experts did obtain. "The extent to which the valuation multiples are tightly clustered or widely dispersed tends to indicate the extent to which the market focuses on that particular valuation multiple in pricing companies in the particular industry."[76] Here, the dispersion was "extremely large."[77] For example, while the mean of the forward EBITDA multiple was 25.4x, the standard deviation was 25.1x.[78] Thus, because there are so few data points and the results are so widely dispersed, Respondent has failed to show that its EBITDA multiples analysis is reliable.

***9** For all of these reasons, I accord no weight to Respondent's comparable transactions analysis.

3. Delaware Rules of Evidence 702 and 705

Petitioners also raised an evidentiary challenge to Schiller's testimony and rebuttal report. According to Petitioners, Schiller's testimony lacks a factual basis and should be excluded under D.R.E. 702(1) and 705(b).[79] Petitioners also seek to exclude Schiller's testimony because an expert cannot act as

> a mere conduit or transmitter of the content of an extrajudicial source. An 'expert' should not be permitted simply to repeat another's opinion or data without bringing to bear on it his own expertise and judgment. Obviously in such a situation, the non-testifying expert is not on the witness stand and truly is unavailable for cross-examination.[80]

Finally, Petitioners note that an expert cannot materially change his opinions after the expert discovery cutoff.[81]

To put Petitioners' objections in context, I review briefly the background of Schiller's participation in this case. In late July 2012, Owsley unexpectedly became ill and went on medical leave.[82] In October 2012, Respondent asked Schiller to assume Owsley's role in this case by taking over the partially prepared rebuttal report and preparing himself to testify.[83] As part of that preparation, Schiller read Owsley's expert report, spoke with members of the Gordian team, and ultimately adopted Owsley's conclusions.[84] Schiller testified that he "independently assessed the validity of the judgments and conclusions of Mr. Owsley's report."[85]

On October 22, 2012, Schiller submitted a rebuttal report that reflected his conclusions and judgments.[86] Two weeks later, on November 5, Schiller sat for a deposition. At that deposition, Schiller admitted that he did not "know all the things that the team looked at as they evaluated these comparables."[87] Schiller was unable to say, among other things, whether in selecting comparable companies the Gordian team had considered whether those companies were government contractors.[88] Nor was Schiller able to identify the portion of each comparable company's business that was involved in the biometrics business.[89]

***10** At trial, Schiller admitted that he had no role in preparing Owsley's initial report, never spoke to Owsley regarding his opening report, and had not reviewed all of the materials in Appendix C of Owsley's report.[90] Schiller

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also changed some of his deposition answers to reflect work he had done after the deposition. [91]

Generally speaking, an expert can replace another expert who must drop out as a result of illness. Here, Schiller was a logical choice based on his understanding of the techniques that the Gordian Group regularly applies in its valuations. Moreover, Schiller apparently examined and relied on the judgments Owsley and his team made. Given these circumstances, I do not find Schiller's testimony inadmissible.

On the other hand, Schiller's deposition testimony demonstrated that, as to some topics, Schiller barely performed sufficient research to express an informed opinion, and instead relied heavily on the opinions and data of Owsley. Because Schiller's statements regarding the comparability of certain companies changed between his deposition and trial and Respondent provided no prior notice of that change to Petitioners, I have given no weight to Schiller's later testimony.

These problems with the evidence adduced from Schiller also undermine his reliability and credibility as a witness and create an independent basis for according Schiller's comparables analyses only minimal weight.

D. DCF Analysis of Cogent

The basic premise underlying the DCF methodology is that the value of a company is equal to the value of its projected future cash flows, discounted to the present value at the opportunity cost of capital. [92] Calculating a DCF involves three steps: (1) one estimates the values of future cash flows for a discrete period, where possible, based on contemporaneous management projections; (2) the value of the entity attributable to cash flows expected after the end of the discrete period must be estimated to produce a so-called terminal value, preferably using a perpetual growth model; and (3) the value of the cash flows for the discrete period and the terminal value must be discounted back using the capital asset pricing model or "CAPM." [93] In simpler terms, the DCF method involves three basic components: (1) cash flow projections; (2) a discount rate; and (3) a terminal value. [94] The experts in this case relied on conflicting inputs and assumptions as to all three elements of their respective DCF analyses. I now turn to those disputed inputs and assumptions.

1. Cash flow projections

***11** A primary dispute between the parties is whether the Court should rely on the Five–Year Projections prepared by Kim and Credit Suisse. Petitioners would reject management's projections and adopt two key scenarios: (1) Bailey's "Industry Growth Scenario" that assumes an industry growth rate through 2015 of 17%; and (2) Bailey's "Cash Deployment Scenario" that assumes Cogent would spend $396 million of its cash on acquisitions. [95] In contrast, Respondent urges this Court to rely on management's projections with only a few minor adjustments.

Generally, this Court "prefers valuations based on contemporaneously prepared management projections because management ordinarily has the best first-hand knowledge of a company's operations." [96] In *Gearreald v. Just Care, Inc.,* [97] however, I held that projections prepared by management "are not entitled to the same deference usually afforded to contemporaneously prepared management projections" where "management had never prepared projections beyond the current fiscal year," "the possibility of litigation, such as an appraisal proceeding, was likely," and the projections "were made outside of the ordinary course of business." [98] I also considered it relevant in *Gearreald* that the projections at issue there were prepared by directors and officers of the target company who "risked losing their positions if the ... bid succeeded and were involved in trying to convince the Board to pursue a different strategic alternative in which [they] were involved." [99]

A number of the circumstances in *Gearreald* also are present here: (1) Cogent had never prepared projections beyond the current fiscal year; [100] (2) the management projections were prepared after 3M communicated a verbal offer to Cogent, and Hsieh communicated to 3M the price at which he was willing to recommend selling; [101] and (3) the projections were prepared with significant input from Credit Suisse. [102] On the other hand, Kim had no reason to believe his job was in jeopardy, nor was he involved in any alternate bid. This

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last factor is significant because neither this Court nor the Delaware Supreme Court ever has adopted a bright-line test under which management projections that were created during the merger process are deemed inherently unreliable. To the contrary, in a number of cases Delaware Courts have relied on projections that were prepared by management outside of the ordinary course of business and with the possibility of litigation. [103] On the other hand, this Court has expressed skepticism with respect to projections prepared with the benefit of hindsight by testifying experts. [104]

***12** Moreover, Bailey's "Cash Deployment Scenario," which assumes that Cogent would have spent $396 million on potential targets and realized positive returns as a result of those acquisitions, is too speculative. The record shows that even though Cogent was open to acquiring companies and had examined more than twenty companies, "none of them fit into [Cogent's] acquisition target." [105] Furthermore, even if I were to assume that Cogent would have made an acquisition, which I am not inclined to do, I would not be willing to speculate as to the rate of return on that hypothetical acquisition, because it would amount to nothing more than mere conjecture and supposition.

Similarly, the record does not support adopting Bailey's "Industry Growth Scenario," as opposed to management's projections. [106] In his scenario, Bailey used industry growth rates to assume a compound annual growth rate ("CAGR") through 2015 of 17%, while the CAGR implicit in management's projections over the same period was only 12.1%. Notably, from 2006 to 2009, Cogent fell far short of industry growth rates in the biometrics industry. [107] Similarly, in 2010, management projected Cogent's revenues to grow by 8% (from $129.6 million in 2009 to $140 million in 2010). [108] In the first three quarters of 2010, however, Cogent had earned only $78.2 million in revenues. [109] If Cogent had maintained that pace for the final quarter of 2010, Cogent's 2010 revenues would have been just $104.3 million, [110] resulting in negative year-on-year revenue growth between 2009 and 2010.

Based on the evidence adduced at trial, Delaware's long-standing preference for management projections, and the absence of any persuasive evidence that Kim was at risk of losing his job, involved in another bid, or entangled in other extraordinary circumstances, I accept management's projections here as a reliable starting point for the DCF analysis in this case.

a. Free cash flow adjustments

In their respective DCF analyses, both Bailey and Owsley made adjustments to the free cash flows. First, Owsley deducted share based compensation ("SBC") from Cogent's projected cash flows, whereas Bailey did not. And second, Owsley increased working capital based on an assumption that Cogent would have working capital equal to 32.2% of revenues. Bailey, on the other hand, assumed that Cogent would need to retain only 22.9% of its incremental revenues as working capital. I examine each of those proposed adjustments next.

i. Treatment of SBC

Questions about the treatment of SBC often arise in this Court when fairness opinions fail to disclose whether the individual or entity rendering the opinion treated SBC as a non-cash expense in its DCF analysis. In those cases, the Court's standard practice has been to treat SBC as a non-cash expense. [111] Valuation literature also supports the view that a non-qualified stock option plan [112] is cash neutral or cash flow positive. [113]

***13** Respondent's authority to the contrary is inapposite. 3M Cogent relies on a blog post by Damodaran that states, "It is absurd to add back stock-based compensation (it is an operating expense ...)." [114] That blog post, however, deals with the reporting of operating income, not the appropriate treatment of SBC for cash flow purposes. [115] I agree with Damodaran that it makes sense to adjust earnings to take into account the dilutive effect of SBC. Respondent has made no showing in this case, however, that SBC will have any effect on the actual cash flows of the Company. Therefore, I conclude that SBC should not be treated as a cash expense here. [116]

ii. Working capital adjustment

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"Working capital is derived by subtracting current liabilities from current assets and represents the capital the business has at its disposal to fund operations." [117] Both Petitioners and Respondent included in their revenue categories—*i.e.,* current assets—"billed accounts receivable," "unbilled accounts receivable," and "inventory and contracted related costs." They both also included in their liabilities category —*i.e.,* current liabilities—"accounts payable." The parties disagreed, however, as to the proper treatment of the following asset and liability categories for purposes of their working capital adjustment: "prepaid expenses," "long-term inventory and contracted related costs," "accrued expenses," and "other liabilities."

The Gordian Experts criticized Bailey for including those accounts in his computation of working capital, describing them as "long-term" accounts and "subject to random movement." [118] At least one treatise, however, supports Bailey's view that working capital should include the disputed categories. That treatise states:

> Operating working capital equals operating current assets minus operating current liabilities. Operating current assets comprise all current assets necessary for the operation of the business, including working cash balances, trade accounts receivable, inventory, and prepaid expenses. Specifically excluded are excess cash and marketable securities—that is cash greater than the operating needs of the business. Excess cash represents temporary imbalances in the company's cash position....
>
> Operating current liabilities include those liabilities that are related to ongoing operations of the firm. The most common operating liabilities are those related to suppliers (accounts payable), employees (accrued salaries), customers (deferred revenue), and the government (income taxes payable). [119]

Rather than relying on any professional or academic valuation literature, the Gordian Experts characterize their position as a "judgment" based on their "experience in looking at many companies and many projections." [120]

***14** Bailey's approach appears to be well supported and generally accepted by the financial community. [121] The explanation proffered by the Gordian Experts for their approach, on the other hand, was essentially conclusory. Based on the strong support for his view, I adopt Bailey's approach and assume that Cogent will need working capital equal to 22.9% of incremental revenues.

b. Unlevered free cash flows

The following table reflects the projections of unlevered free cash flows that the Court intends to use in conducting a DCF analysis here. These projections incorporate the SBC and working capital adjustments discussed above.

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The preceding image contains the reference for footnote [122].

2. Cogent's cost of capital

To discount the cash flow projections for the Company to present value, the experts for both sides computed their respective weighted average costs of capital ("WACC"). The formula used to derive WACC is:

$$WACC = [K_D \text{ x } W_D \text{ x } (1 - t)] + (K_E \text{ x } W_E)$$ [123]

Where K_D = Cost of debt capital

W_D = Average weight of debt in capital structure

t = Effective tax rate for the company

K_E = Cost of equity capital

W_E = Average weight of equity capital in capital structure

Where the capital structure is 100% equity and 0% debt, as is the case here, WACC is equal to the cost of equity. [124] To calculate the cost of equity capital, the experts for both Petitioners and Respondent used the Capital Asset Pricing Model, or CAPM, which can be expressed as:

$$K_E = R_F + (\# \text{ x } R_{ERP}) + R_{ESP}$$ [125]

Where K_E = Cost of equity

R_F = Risk-free rate

\# = Beta

R_{ERP} = Equity risk premium

R_{ESP} = Equity size premium

In simpler terms, the cost of equity equals the risk-free rate plus an equity size premium plus the company's beta times the market risk premium.

***15** The following table summarizes the parties' respective inputs for WACC or cost of equity:

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In the sections that follow, I discuss, in turn, the disputes between the parties as to each of the listed variables.

a. Risk-free rate

Petitioners determined Cogent's risk-free rate using the 20–year Treasury bond yield, which was 3.80% on November 30, 2010, whereas 3M Cogent used the 10–year Treasury bond yield, which was approximately 2.96% on December 1, 2010. [126] Both sides acknowledged that either the 10–year or 20–year Treasury bond yields would be appropriate metrics for the risk-free rate. [127]

In the appraisal context, this Court has used the 20–year Treasury bond yield on numerous occasions in its calculation of the risk-free rate. [128] It does not appear from these cases, however, that the issue of a 10–year versus a 20–year bond was disputed or that the Court based its use of a twenty-year rate on professional or academic valuation literature. To the contrary, the literature suggests that the 10–year Treasury bond yield is the appropriate metric for the risk-free rate in this case. For example, Damodaran states, "we believe that using the 10–year bond as the risk-free rate on all cash flows is a good practice in valuation, at least in mature markets." [129] Another well-known treatise on valuation also suggests a 10–year time horizon. [130] And, yet another source states: "[m]any analysts use the yield on a 10–year [Treasury bond] as a proxy for the risk-free rate, although the yields on a 20–year or 30–year [Treasury bond] are also reasonable proxies." [131] Based on the referenced literature and the fact that Cogent is a mature firm—as evidenced by its history of positive cash flows—I conclude that the 10–year Treasury bond yield, *i.e.,* 2.96%, espoused by Respondent is the appropriate metric for the risk-free rate in this case.

b. Beta

***16** As a matter of valuation theory, "companies that are more unstable and leveraged, less established and financially and competitively secure, and in colloquial terms 'riskier,' should have higher betas." [132] Betas also can take into account considerations like political risk to the extent such risks are priced by the market. [133] The experts' calculations of beta diverge in significant respects and are the largest driver of the price difference in their respective DCF calculations. Petitioners advocate for a beta of 0.87, while Respondent espouses a much higher beta of 1.52. [134] In this regard, the parties clash over three main topics: (1) whether to use a 1–year Bloomberg weekly raw beta or a 2–year Bloomberg weekly adjusted beta; (2) the order of operations; and (3) whether to adjust for all cash or only excess cash.

The first issue is whether the Court should start with Bailey's 1–year Bloomberg weekly raw beta of 0.708 or the Gordian Experts' 2–year Bloomberg weekly adjusted beta of 0.67. [135] At this point, the experts agree that the Court should use an observation period of one week. They differ, however, as to the sample period and whether the beta should be adjusted or raw. [136] Bailey explained that he chose a 1–year sample period to avoid the "significant noise associated with movements in the market due to the impact of the Global Financial Crisis through the period late 2007 through early 2009." [137] Owsley, on the other hand, provided no explanation of the reasons for his selection of a 2–year sample period. Accordingly, I adopt Bailey's selection of a 1–year sample period for this case.

Turning to what I have referred to as the "order of operations" issue, both Petitioners and Respondent agree that it is necessary to adjust the beta of Cogent to reflect Cogent's large cash position. To do that, Bailey cash adjusted the Bloomberg raw beta. In contrast, the Gordian Experts cash adjusted the Bloomberg adjusted beta, which is equal to (*Raw Beta x* 0.67) + [1.00 x (0.33)]. In this context, it strikes me as inappropriate to cash adjust a market-adjusted beta because it effectively cash adjusts the market. Accordingly, I conclude that the appropriate

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number to begin the development of beta with is the 1–year Bloomberg weekly raw beta, *i.e.,* 0.708.

The process for adjusting asset beta estimates for excess cash and investments is outlined by Pratt and Grabowski:

> The assets of the guideline public companies used in estimating beta often include excess cash and marketable securities. If you do not take into account the excess cash and marketable securities, you can arrive at an incorrect estimate of the asset beta for the operating business. This will lead to an incorrect estimate of the beta for the subject company. After unlevering the beta for the guideline public companies, you adjust the unlevered beta estimates for any excess cash or marketable securities held by each guideline public company. This adjustment is based on the principle that the beta of the overall company is the market-value weighted average of the businesses or assets (including excess cash) comprising the overall firm. [138]

The formula for that adjustment is as follows:

***17** $\#_U$ *or overall company unlevered or asset beta*

= [*Asset beta for operations* x ($^{Operating\ Assets}/_{Total\ Assets}$)]

+ [*Asset beta for surplus assets* x ($^{Surplus\ Assets}/_{Total\ Assets}$)]

If we assume that cash has a beta of zero, [139] the equation is simply:

$\#_U$ = *Asset beta for operations* x ($^{Operating\ Assets}/_{Total\ Assets}$)

That equation can be restated as:

Asset beta for operations = $\#_U$ x ($^{Total\ Assets}/_{Operating\ Assets}$)

Here, Cogent's total assets were approximately $868.7 million. [140] Operating assets are calculated using the following formula:

Operating assets = total assets - surplus assets

Predictably, the parties disagree as to what proportion of Cogent's large cash reserves should be considered "surplus." Bailey treats approximately $100 million as surplus, whereas the Gordian Experts consider all of Cogent's cash, *i.e.,* $533.2 million, to be excess. At the very least, the parties agree that the $100 million the Cogent board announced it would use to execute a share buyback is excess cash. As for the remaining $433.2 million in cash, Bailey asserts that it should be treated as an operational asset because Cogent's executives signaled "to the market that Cogent intended to utilize their cash balance to support the operations of the business in order to take advantage of the significant growth opportunities in the marketplace." [141] Yet, that view of surplus cash contradicts the Pratt and Grabowski treatise upon which Bailey explicitly relied. Pratt and Grabowski define surplus assets as "[a]ssets that could be sold or distributed without impairing company operations." [142] Using that broader view and a simplifying assumption that Cogent would need $50 million in maintenance cash for operations, [143] its excess cash would be $483.2 million. [144] The operational assets of Cogent then would be just $385.5 million. [145] Thus, the ratio of total assets to operating assets would be 2.253. [146] Applying previously mentioned formula, the asset beta for operations equals the overall company unlevered or asset beta (0.708) times the ratio of total assets to operating assets (2.253) or 1.595.

***18** Empirical studies have shown that measures of risk, including beta, "tend to revert towards the mean over time." [147] Where a good set of comparables for industry betas do not exist, one can "smooth" beta by adjusting historical beta by a market beta of 1, using a 1/3 weighting factor for the market and a 2/3 weighting for the subject company's beta, in this case Cogent. [148] Here, that would result in a forward estimated beta of approximately 1.397. [149]

The Respondent also calculated beta using a peer group method, *i.e.,* a comparable companies analysis. For the

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reasons stated in subsection C above, I do not find the Gordian Experts' comparable companies analysis reliable. Accordingly, I rely solely on my calculation of a Cogent forward beta of 1.397 for purposes of determining the appropriate WACC here.

c. Equity risk premium

There is very little difference between the parties as to the appropriate equity risk premium. Bailey supports the use of a supply-side equity risk premium of 5.0% as published in the 2010 Ibbotson yearbook. [150] The Gordian Experts relied on a 5.2% equity risk premium, which they derived from multiple sources, including Damodaran and Ibbotson. [151]

Bailey cited a number of treatises and articles in support of his view that the Court should apply a supply-side equity risk premium. [152] Owsley's report, on the other hand, did not explain how he calculated equity risk premium (beyond identifying sources). [153] In addition, Schiller testified that he was unfamiliar with the distinction between a supply-side equity risk premium and a historic equity risk premium. [154]

Because Bailey demonstrated a stronger understanding of this subject and explained his methodology more convincingly, I conclude that the 5.20% equity risk premium used by Bailey is the appropriate value to use in this case. [155]

d. Equity size premium

***19** "In addition to the equity risk premium, an equity size premium generally is added to the company's cost of equity in the valuation of smaller companies to account for the higher rate of return demanded by investors to compensate for the greater risk associated with small company equity." [156] "A size premium is an accepted part of CAPM because there is evidence in empirical returns that investors demand a premium for the extra risk of smaller companies." [157] The opposing experts came to similar values in their determination of an equity size premium: 1.73% for Petitioners and 2.0% for Respondent. [158]

Bailey selected his equity size premium of 1.73% based on decile 7 of Ibbotson Associates' ("Ibbotson") 2010 yearbook, which encompasses companies with a market capitalization between $685,129,000 and $1,063,308,000. [159] The Gordian Experts, on the other hand, used Ibbotson's 2009 yearbook and adjusted Cogent's market capitalization to exclude its large cash reserves.

The Ibbotson table headings clearly state "market capitalization." [160] In addition, the relevant treatises focus on the market value of common equity and do not suggest making an adjustment to exclude cash reserves. [161] Consistent with Ibbotson's headings and the treatises, the Court of Chancery consistently has used market capitalization as the benchmark for selecting the equity size premium. [162]

Despite those authorities and Schiller's awareness that "the definition [for equity size premium] says market capitalization," the Gordian Experts chose a size premium by "look[ing] at the size of the market value less cash of Cogent." [163] That adjustment was based on Schiller's view that

> ***20** we're valuing ... Cogent absent its cash. We're not valuing Cogent in the DCF. Because the way the DCF works is, we value the cash streams the company throws off and then we add the cash on top of it. So we split the baby in two parts and look at the values of each. [164]

I am not persuaded, however, that Schiller's approach is consistent with the proper use of the Ibbotson tables. The Ibbotson tables were based on important research in 1981 by Rolf Banz, who found an empirical relationship between the *market value* of stocks and higher rates of return. [165] Put differently, the Ibbotson tables look at the statistical relationship between market capitalization and equity size premium. The Gordian Experts failed to present a convincing explanation as to why their use of a different metric—enterprise value—more accurately reflects the correlation that the equity size premium attempts to reflect.

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While some studies—notably the Duff & Phelps *Risk Premium Report*[166]—use a metric other than the market value of equity, Respondent's expert chose to use Ibbotson's Valuation Yearbook. In doing so, they effectively embraced the view that there is a relationship between market capitalization and rate of return.

Finally, the Gordian Experts' exclusion of cash is counterintuitive. The Ibbotson tables are based on the insight that smaller companies are more risky than larger companies. The Gordian Experts' exclusion of cash decreases the "size" of the company involved, thereby increasing its equity size premium. Here, that would mean that Cogent would be more risky as a result of its cash reserves. Intuitively, however, one would expect that, all other things being equal, having cash reserves, as opposed to debt, would decrease the riskiness of a company.

For all of these reasons, I adopt Bailey's selection of an equity size premium of 1.73%.

e. Calculating Cogent's WACC

As previously discussed, the equation for CAPM is:

$$K_E = R_F + (\# \text{ x } R_{ERP}) + R_{ESP}$$

Inputting my conclusions as to the risk-free rate, beta, equity risk premium, and equity size premium into that equation yields:

$$K_E = 2.96 + (1.397 \text{ x } 5.2) + 1.73 = 11.954\%$$

Based on Cogent's capital structure of 100% equity, Cogent's WACC would equal its cost of equity, or 11.954%.

f. The present value of Cogent's unlevered free cash flows

Using the WACC of 11.954%, the following table represents the present value ("PV"), as of the Merger date, of Cogent's five-year projected unlevered free cash flows:

***21** Tabular or Graphical Material not displayable at this time

The sum of the present value of the cash flows for 2010–2015 is $42 million.

3. Terminal value

"In a DCF analysis, future cash flows are projected for each year during a set period, typically five years. After that time, a terminal value is calculated to predict the company's cash flow into perpetuity."[167] "The two established methods for computing terminal value are the exit multiples model (a market approach) and the growth in perpetuity model [*i.e.,* the Gordon Growth Model]."[168] "Both approaches have been accepted by this court in the past."[169]

Both Bailey and the Gordian Experts estimated the terminal value of Cogent based on the perpetuity growth model or the Gordon Growth Model. The Gordian Experts also used an exit multiples approach that estimated a terminal value based on the multiples of enterprise value to estimated forward 2011 EBITDA for the set of comparable companies.[170]

a. The Gordon Growth Model

The Gordon Growth Model can be expressed as follows[171]:

$$TV = FCF_{t+1}/WACC - g$$

TV = Terminal value

FCF_{t+1} = Free cash flow in the first year after the explicit forecast period

$WACC$ = Weighted average cost of capital

g = Expected growth rate of free cash flow into perpetuity

To calculate terminal value using the Gordon Growth Model, the Court must select a long-term growth rate, *i.e.,* the expected growth rate of free cash flows into perpetuity. "A viable company should grow at least at the rate of inflation and ... the rate of inflation is the floor for a terminal value estimate for a solidly profitable company

that does not have an identifiable risk of insolvency." [172] But, a terminal growth rate should not be greater than the nominal growth rate for the United States economy, because "[i]f a company is assumed to grow at a higher rate indefinitely, its cash flow would eventually exceed America's [gross national product]." [173]

Relying on historical GDP and inflation data, economic analysts projections, and the growth prospects of the biometrics industry, Bailey selected a perpetuity growth rate of 4.5%. [174] The Gordian Experts, on the other hand, used a range of growth rates between 2% and 5%, and implicitly selected the midpoint of 3.5%. [175] The Gordian Experts, however, provided no analysis or explanation in support of the number they chose for the terminal growth rate. [176] Because Bailey was the only expert who sought to justify his conclusion, and his conclusion is within the range of rates identified by Respondent's expert and appears to be reasonable based on the evidence, I adopt Bailey's estimate of a 4.5% perpetuity growth rate.

***22** The parties also disagree as to whether the Court should use a two-stage or a three-stage DCF model. The Gordian Experts used a two-stage model whereby, at the end of the management projections in 2015, they estimated a single percentage figure that they would use as a proxy for Cogent's perpetual rate of growth beyond that period. Bailey, on the other hand, "gradually step [ped] down Cogent's growth rate using a linear progression over the period from 2016 through the terminal year, 2021," before applying his terminal growth percentage. [177]

"As a general matter, neither approach is inherently preferable." [178] Damodaran notes, however, that the two-stage model "is best suited for firms that are in high growth and expect to maintain that growth rate for a specific time period, after which the sources of the high growth are expected to disappear." [179] Damodaran provides two examples where this might apply:

> One scenario ... is when a company has patent rights to a very profitable product for the next few years and is expected to enjoy supernormal growth during this period. Once the patent expires, it is expected to settle back into stable growth. Another scenario where it may be reasonable to make this assumption about growth is when a firm is in an industry that is enjoying supernormal growth, because there are significant barriers to entry (either legal or as a consequence of infrastructure requirements), which can be expected to keep new entrants out for several years. [180]

The three-stage model, on the other hand, "is the most general of the models because it does not impose any restrictions on the payout ratio. This model assumes an initial period of stable high growth, a second period of declining growth, and a third period of stable low growth that lasts forever." [181] Damodaran notes that the three-stage model is best suited "for a firm whose earnings are growing at very high rates, are expected to continue growing at those rates for an initial period, but are expected to start declining gradually toward a stable rate as the firm become[s] large and loses its competitive advantages." [182]

Based on my assumptions, Cogent's earnings are expected to grow at a high rate of 11.45% for the initial period before moving to a stable growth rate of 4.5%. [183] I expect that decline will occur gradually as Cogent loses its competitive advantages in the field. Cogent is not in an industry where there are significant barriers that will disappear after 2015. Nor does Respondent identify any other reason to assume a precipitous drop-off. Accordingly, I believe that Bailey's three-stage model best reflects Cogent's expected growth over time and adopt that approach.

The following table represents my calculation of Cogent's unlevered free cash flow for the years 2016 through 2021, using a linear progression to step Cogent's growth rate down to 4.5% in 2021:

> Tabular or Graphical Material not displayable at this time

Discounting those values back to the Merger Date using the WACC of 11.954% yields the following values:

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Thus, the sum of the present values of the cash flows for 2016–2020 is $111.5 million.

***23** Finally, using in the Gordon Growth Model equation for the third and final period, a WACC of

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11.954%, a perpetuity growth rate of 4.5%, and free cash flows in 2021 of $64.4 million, I calculated Cogent's terminal value to be approximately $864 million.[184] Discounting that value using a WACC of 11.954% leads to a present value of the terminal value of $276.7 million.

b. EBITDA multiples

"Multiples approaches assume that a company will be worth some multiple of future earnings or book value in the continuing period."[185] "[A] good industry comparison is crucial if a multiplier methodology is employed."[186] Here, the Gordian Experts selected a terminal EBITDA multiple range of 6.5x to 8.5x using the companies in their comparable companies analysis. Petitioners seek to exclude Respondent's terminal multiples approach for many of the same reasons they asserted in opposition to Respondent's other market approaches. I agree with Petitioners' objections.

As discussed in Part II.C.1 *supra,* the comparable companies selected by the Gordian Experts are not sufficiently comparable to Cogent to support a reliable analysis and do not provide a good industry comparison. There are also serious evidentiary problems with Schiller's trial testimony on this subject.[187] As with the EBITDA multiples analysis of the comparable companies, here only four of the purportedly comparable companies have data from which to calculate an equity value to estimated forward EBITDA ratio.[188]

Furthermore, Owsley's report on this issue is internally inconsistent. At one point, the report states that its range of 6.5x to 8.5x is "based on ... 1st and 3rd quartile 2011 EBITDA multiples."[189] Elsewhere, the report indicates that the 1st and 3rd quartile 2011 EBITDA multiples were actually 7.5x to 9.8x.[190] At trial, Schiller defended the selection of multiples reflected in Owsley's report and described them as a "judgment call" or an "educated estimate based on what historical multiples have been adjusted for the sense that growth will have slowed to something much closer to GDP growth by that time."[191] Beyond that, however, the Gordian Experts did not provide any authorities or analysis to justify their use of an EBITDA multiples approach to determine terminal value.

For these reasons, I reject Respondent's use of terminal EBITDA multiples and instead rely solely on the Gordon Growth Model for my determination of terminal value.

4. DCF Valuation

The following table represents the Court's calculation of the valuation of Cogent using essentially Bailey's model, the aforementioned assumptions, and Cogent's cash balance of $533.2 million as of September 30, 2010[192]:

	($ millions)
PV of 2010–2015 Cash Flows	42.0
PV of 2016–2020 Cash Flows	111.5
PV of Terminal Value	276.7
Enterprise Value	430.2
Less: Net Debt	(533.2)
Equity Value	**963.4**

In sum, the equity value of Cogent as of the Merger Date was approximately $963.4 million. Assuming shares outstanding of approximately 88.6 million,[193] the price per share would be $10.87.[194]

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E. Are Petitioners Entitled to Statutory Interest at the Legal Rate?

***24** Section 262(h) of the Delaware appraisal statute provides:

> Unless the Court in its discretion determines otherwise for good cause shown, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger and the date of payment of the judgment. [195]

Nevertheless, "[a]dopting a different rate may be justified where it is necessary to avoid an inequitable result, such as where there has been improper delay or a bad faith assertion of valuation claims." [196]

Here, Respondent argues that this Court should not apply the statutory rate of interest because: (1) awarding prejudgment interest to shareholders who acquired shares after the announcement of the acquisition would be an inequitable result; and (2) Petitioners improperly delayed the resolution of this action.

1. Petitioners' post-merger acquisition of shares

3M Cogent emphasizes that Petitioners acquired shares after the Merger was announced. In such circumstances, Respondent contends, it would be inequitable to award interest at the legal rate because Delaware law disfavors the purchase of a lawsuit and statutory interest is not intended to benefit purchasers of after-acquired shares.

In *Salomon Brothers Inc. v. Interstate Bakeries Corp.,* [197] this Court addressed whether one who purchases stock after notice of a transaction is entitled to seek appraisal pursuant to 8 *Del. C.* § 262. The Court stated:

> I find nothing in the purpose or language of § 262 that would defeat [petitioner's] entitlement to an appraisal and I find nothing inequitable about an investor purchasing stock in a company after a merger has been announced with the thought that, if the merger is consummated on the announced terms, the investor may seek appraisal. [198]

In other words, Delaware law does not disfavor the purchase of shares after the announcement of a merger. Indeed, after the trial in *Salomon Brothers,* the Court awarded an 11% rate of interest to the petitioner. [199] As 3M Cogent correctly notes, however, the Court in *Salomon Brothers* did not address whether any reduction or elimination of prejudgment interest might be appropriate.

In support of denying Petitioners an award of statutory interest, Respondent avers that statutory interest was not intended to compensate shareholders who acquired their shares after the merger was announced. In *Cede & Co. v. Technicolor, Inc.,* [200] for example, the Delaware Supreme Court stated that "[t]he underlying assumption in an appraisal valuation is that the dissenting shareholders would be willing to maintain their investment position had the merger not occurred." [201] In the same vein, Respondent relies on cases that have recognized that the appraisal right was intended to protect "stockholders—who by reason of the statute lost their common law right to prevent a merger—by providing for the appraisement of their stock and the payment to them of the full value thereof in money." [202]

***25** I am mindful, however, that statutory interest also serves to avoid an undeserved windfall to the respondent in an appraisal action, who "would otherwise have had free use of money rightfully belonging to" the petitioners. [203] Even though a respondent may have been cash-rich, "the [respondent] derived a benefit from having the use of the [petitioners'] funds at no cost." [204]

In sum, the plain language of the appraisal statute calls for the payment of statutory interest unless the Court

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determines otherwise for good cause shown. Respondent, 3M Cogent, has not shown that it would be inequitable for Petitioners to receive the legal rate of interest for shares acquired after the merger. [205]

2. Petitioners' purported "delay"

Respondent next argues that the Court should refuse to award any interest for the period from April 28, 2011 to February 2, 2012 because Petitioners unreasonably delayed in prosecuting their case. Specifically, Respondent complains that Petitioners failed to respond in a timely manner to certain discovery requests, as well as to an inquiry by Respondent as to whether Petitioners intended to proceed with this case.

Petitioners counter that Respondent cannot complain about Petitioners' purported delay because Respondent itself failed to move with alacrity. On November 11, 2011, Petitioners proposed a schedule that called for a trial in April 2012. Notably, Respondent counter-offered, seeking a much later, October 2012 trial date. In January 2012, after extensive back-and-forth, I entered a stipulated scheduling order setting the trial for September 5 through 7, 2012. As a result of Owsley's unforeseen unavailability for medical reasons, I later postponed the trial until late November 2012.

For a case of this size and complexity, the trial was completed within a reasonable time period. [206] Even with some excusable delay, the trial was conducted within 20 months of the initial petition. Accordingly, I find that Respondent has not shown any unreasonable or improper delay and, therefore, deny Respondent's request to limit the award of interest on that basis.

III. CONCLUSION

***26** For the reasons discussed in this Memorandum Opinion, I find that the fair value of Cogent as of December 1, 2010 was $963.4 million or $10.87 per share.

The parties should confer to verify that the Court accurately has calculated Cogent's value based on the rulings herein and, assuming that it has, present a final judgment using an amount of $10.87 per share of Cogent, plus interest from December 1, 2010 to the date of the judgment at the statutory rate, compounded quarterly. Petitioners shall submit, on notice, a proposed form of final judgment within ten (10) business days.

All Citations

Not Reported in A.3d, 2013 WL 3793896

Footnotes

1 "Biometrics" is defined as "the measurement and analysis of unique physical characteristics (as fingerprint or voice patterns) especially as a means of verifying personal identity." Merriam–Webster's Collegiate Dictionary 124 (11th ed. 2004).

2 Unless otherwise noted, the facts are drawn from the stipulated facts section of the parties' Joint Pre–Trial Order (Feb. 4, 2013).

3 3M Co., 2012 Annual Report (10–K) at 3 (Feb. 14, 2013), *available athttp://media.corporate-ir.net/media_files/irol/80/80574/Annual_ Report2012.pdf.*

4 Tr. 427 (Hsieh). References in this form are to the trial transcript. Where the identity of the testifying witness is not clear from the text, it is indicated parenthetically after the cited page of the transcript.

5 *Id.*

6 JX 122 at 3.

7 Bolger Dep. 53–66; JX 157 at 17. In Cogent's proxy statement, NEC was "Company D," Danaher was "Company G," and Roper was "Company E."

8 JX 157 at 17.

9 *Id.* at 18.

10 JX 165. The Five–Year Projections include the latter part of 2010.

11 Tr. 404–05(Kim).

12 *Id.* at 389–90, 408–09.

13 *Id.* at 395.

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14 JX 157 at 18–19.
15 *Id.* at 19–20.
16 *Id.* at 20.
17 *Id.* at 20–21.
18 JX 157 at 20–21.
19 *Id.* at 20.
20 *Id.* at 20–21.
21 *Id.*
22 *Id.* at 23.
23 *Id.* The trading price at closing on the last trading day before the announcement of the merger was $8.92 per share.
24 *See* JX 2 Ex. 1. Bailey holds a Ph.D. in management from Case Western Reserve University, an M.B.A. from George Washington University, an M.S. in engineering from University of California, Berkeley, and an M.S. in systems management from the University of Southern California. Bailey also is a U.S. Naval Academy graduate. *Id.*
25 JX 1 app. A; JX 3 app. A. Gordian Group is a financial advisory firm specializing in complex capital raising and mergers and acquisitions activities, as well as the restructuring of financially distressed businesses. JX 1 app. A; JX 3 app. A.
26 8 *Del. C.* § 262. There is no dispute that Petitioners are entitled to an appraisal under Section 262.
27 *Id.* § 262(h); *see also Tri–Cont'l Corp. v. Battye,* 74 A.2d 71, 72 (Del.1950) ("[M]arket value, asset value, dividends, earning prospects, the nature of the enterprise and any other facts which were known or which could be ascertained as of the date of merger and which throw any light on future prospects of the merged corporation are not only pertinent to an inquiry as to the value of the dissenting stockholders' interest, but must be considered by the agency fixing the value.").
28 *Golden Telecom, Inc. v. Global GT LP,* 11 A.3d 214, 217 (Del.2010).
29 *Cede & Co. v. Technicolor, Inc.,* 684 A.2d 289, 299 (Del. 1996).
30 *Golden Telecom, Inc.,* 11 A.3d at 217.
31 *Weinberger v. UOP, Inc.,* 457 A.2d 701, 713 (Del.1983); *see also Technicolor,* 684 A.2d at 299.
32 *Rapid–American Corp. v. Harris,* 603 A.2d 796, 805 (Del. 1992).
33 *M.G Bancorp., Inc. v. LeBeau,* 737 A.2d 513, 520 (Del. 1999).
34 *Gonsalves v. Straight Arrow Publ'rs, Inc.,* 701 A.2d 357, 362 (Del.1997); *Taylor v. Am. Specialty Retailing Gp.,* 2003 WL 21753752, at *2 (Del. Ch. July 25, 2003).
35 *Weinberger,* 457 A.2d at 713.
36 *See Dobler v. Montgomery Cellular Hldg. Co.,* 2004 WL 2271592, at *8 (Oct. 4, 2004); *see also Cede & Co. v. JRC Acq. Corp.,*2004 WL 286963, at *2 (Del. Ch. Feb. 10, 2004) (utilizing the DCF approach); *Gentile v. Singlepoint Fin., Inc.,* 2003 WL 1240504, at *6 (Del. Ch. Mar. 5, 2003) (utilizing the comparable transactions approach); *Borruso v. Commc'ns Telesystems Int'l,* 753 A.2d 451, 455 (Del. Ch.1999) (utilizing the comparable company approach).
37 *Highfields Capital, Ltd. v. AXA Fin., Inc.,* 939 A.2d 34, 42 (Del. Ch.2007) ("If ... the transaction giving rise to the appraisal resulted from an arm's-length process between two independent parties, and if no structural impediments existed that might materially distort 'the crucible of objective market reality,' a reviewing court should give substantial evidentiary weight to the merger price as an indicator of fair value."); *Union Illinois 1995 Inv. Ltd. P'ship v. Union Fin. Gp., Ltd.,* 847 A.2d 340, 357 (Del. Ch.2004) ("[O]ur case law recognizes that when there is an open opportunity to buy a company, the resulting market price is reliable evidence of fair value."); *Van de Walle v. Unimation, Inc.,* 1991 WL 29303, at *17–18 (Del. Ch. Mar. 7, 1991) ("The most persuasive evidence of the fairness of the ... merger price is that it was the result of arm's-length negotiations between two independent parties, where the seller ... was motivated to seek the highest available price, and a diligent and extensive canvass of the market had confirmed that no better price was available.").
38 11 A.3d 214 (Del. 2010).
39 *Id.* at 217–18.
40 *In re Orchard Enters., Inc.,* 2012 WL 2923305, at *5 (Del. Ch. July 18, 2012) (citing *Cavalier Oil Corp. v. Harnett,* 564 A.2d 1137 (Del. 1989)), *aff'd,*2013 WL 1282001 (Del. 2013) (ORDER).
41 *See* JX 1 at 33, Ex. 13.
42 *Weinberger v. UOP, Inc.,* 457 A.2d 701, 713 (Del. 1983).
43 *Muoio & Co. v. Hallmark Entm't Invs. Co.,* 2011 WL 863007, at *20 (Del. Ch. Mar. 9, 2011), *aff'd,*35 A.3d 419, 2011 WL 6396487 (Del. 2011) (ORDER).
44 *In re Orchard Enters., Inc.,* 2012 WL 2923305, at *9 (Del. Ch. July 18, 2012).

45 *Id.*

46 *Id.*

47 *Andaloro v. PFPC Worldwide, Inc.,* 2005 WL 2045640, at *16 (Del. Ch. Aug. 19, 2005) (citing *Agranoff v. Miller,* 791 A.2d 880, 892 (Del. Ch. 2001)).

48 JX 1 at 17–18, 66–78.

49 Pet'rs' Opening Br. 40.

50 *ONTI, Inc. v. Integra Bank,* 751 A.2d 904, 916 (Del. Ch. 1999).

51 Those companies are (1) Authentec, Inc., (2) Aware, Inc., (3) BgenuineTec, (4) BIO–Key International, Inc., (5) Intellicheck Mobilisa, Inc., and (6) Precise Biometrics.

52 *See* JX 1 app. G at 69.

53 *See, e.g., In re PNB Hldg Co. S'holders Litig.,*2006 WL 2403999, at *25 n.125 (Del. Ch. Aug. 18, 2006) (rejecting comparable companies analysis where the "comparable publicly-traded companies all were significantly larger than [the subject company], with one having total assets of $587 million as compared to [the subject company's] assets of $216 million"); *Gilbert v. MPM Enters., Inc.,* 709 A.2d 663, 672 (Del. Ch. 1997) (stating that comparable companies whose "median asset value ... was nearly three times that of [the appraised company]" had "unreasonably skewed the results of this analysis"), *aff'd,*731 A.2d 790 (Del. 1999); *Rosenblatt v. Getty Oil Co,* 1983 WL 8936, at *26 (Del. Ch. Sept. 19, 1983) (rejecting analysis that used "smaller oil and gas producing companies as opposed to a major integrated company such as [the appraised company]"), *aff'd,*493 A.2d 929 (Del. 1985).

54 *See* Tr. 227–28 (Bailey).

55 *See* JX 1 at 70.

56 Tr. 598.

57 Tr. 427 (Hsieh).

58 Tr. 599 (Schiller). This comment applies to six of Respondent's ten comparable companies.

59 Tr. 615 (Schiller) ("Q. So half of your entire comparable companies analysis is based on companies which do no biometrics business at all; is that right? A. Yes. And as we have discussed, we judged that they were businesses that people would look at in a similar way to biometrics businesses.").

60 JX 4 at 8.

61 Tr. 102–03 (Bailey).

62 Tr. 604 (Schiller).

63 *Id.*

64 *Id.* at 607–08; JX 152.

65 *Highfields Capital, Ltd. v. AXA Fin., Inc.,* 939 A.2d 34, 54 (Del. Ch. 2007) (citing *In re U.S. Cellular Operating Co.,* 2005 WL 43994, at *17 (Del. Ch. Jan. 6, 2005)).

66 *Id.* (quoting *In re U.S. Cellular Operating Co.,* 2005 WL 43994, at *17).

67 JX 1 app. H.

68 JX 1 at 22.

69 *Id.*

70 Bailey did not challenge Respondent's 20% discount. Based on that implied acceptance, and this Court's previous observation that because "merger and acquisition data undoubtedly contains post-merger value, such as synergies with the acquiror, that must be excluded from appraisal value," it appears that some discount would be appropriate. *See Kleinwort Benson Ltd. v. Silgan Corp.,* 1995 WL 376911, at *4 (Del. Ch. June 15, 1995).

71 Tr. 242 (Bailey).

72 Expert Report of Henry Owsley, *In re Sponsion Inc.,* No. 09–10690, 2009 WL 8179260, at ¶ 46 (D. Del. Bank. 2009).

73 Tr. 534 (Schiller).

74 *See In re John Q. Hammons Hotels Inc. S'holder Litig.,* 2011 WL 227634, at *5 (Del. Ch. Jan. 14, 2011) ("[C]omparable transactions analysis was based on a set of only five transactions, which is too small a sample set in the circumstances of this case to draw meaningful conclusions."); *In re U.S. Cellular Operating Co.,* 2005 WL 43994, at *18 (Del. Ch. Jan. 6, 2005) ("Indeed, with that in mind, the Court found only two of the twenty transactions Harris identified actually to be comparable. Therefore, Petitioners and Harris have failed to persuade me that their approach, based on the price per subscriber acquired, is sufficiently reliable that it should be used instead of Sanders' more established approach."). *But see id.* at *18–19 (relying on an analysis of only five comparable transactions).

75 Shannon Pratt, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies* 321 (5th ed. 2008).
76 *Id.* at 322.
77 Tr. 250–52 (Bailey).
78 *Id.*; JX 4 at 15.
79 D.R.E. 702 provides in pertinent part: "... a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data...." D.R.E. 705(b) states that "An adverse party may object to the testimony of an expert on the ground that the expert does not have a sufficient basis for expressing an opinion."
80 *Pennsylvania Brandt v. Rokeby Realty Co.,* 2005 WL 1654362, at *5 (Del. Super. May 9, 2005) (quoting *Primavera v. Celotex Corp.,* 608 A.2d 515, 521 (Pa.Super.Ct.1992)).
81 *IQ Hldgs., Inc. v. Am. Comm. Lines Inc.,* 2012 WL 3877790, at *1 (Del. Ch. Aug. 30, 2012) ("For an expert to create a new analysis or materially change his opinions after the expert discovery cutoff risks trial by surprise and deprives the opposing party of an orderly process in which to confront and respond to the expert's views. Equally important, a new or materially changed analysis imposes burdens on the Court, which must attempt to evaluate the expert's opinions without the full benefits of adversarial testing.").
82 Tr. 488 (Schiller).
83 *Id.* at 488–89, 494.
84 *Id.* at 489–92.
85 *Id.*
86 *Id.* at 493; JX 3.
87 JX 179 at 42.
88 *Id.* at 44 ("Q. Is that one of the factors that was applied to identify companies, the fact that companies are government contractors? A. I believe it was, but I was not part of the team that selected these. Certainly exposure to government contracting would have struck [ ] me as an interesting metric."); *id.* at 45 ("Q. ... [I]s it the case your team identified those as comparables because their customers include the government? A. As I said, I wasn't part of the team that selected these, so I can't speculate.").
89 *See, e.g.,id.* at 45 ("Q. ... Do you know what portion of Intellicheck's business is in the biometrics industry? A. I do not."); *id.* at 46 ("Q. ... Do you have an understanding of what portion of VASCO's business was in the biometrics industry? A. I do not").
90 Tr. 494.
91 *See* JX 179 at 50 (from the deposition: "Q: Credit Suisse identified Verint Systems as a comparable company. Are you of the view that Verint Systems is not an appropriate comparable for Cogent? A: I don't have a view. I don't know Verint."); Tr. 526 (from trial: "Q: .... Why did you think Verint was not a good comparable? A. Verint would have made the cut but for the fact that they had trouble filing financial statements upon which one could rely. They had had, as I recall, a stock compensation challenge a number of years before, and they were still trying to get their house in order from an accounting perspective. We made the judgment that we should not put it in if it doesn't have numbers upon which we can rely."); *see also* Pet'rs' Opening Br. apps. A, B.
92 *See In re Orchard Enters., Inc.,* 2012 WL 2923305, at *12 (Del. Ch. July 18, 2012) (citing Richard Brealey, Stewart Myers & Franklin Allen, *Principles of Corporate Finance* 102 (9th ed. 2008); Bradford Cornell, *Corporate Valuation: Tools for Effective Appraisal and Decision Making* 102 (1993); R. Franklin Balotti & Jesse Finkelstein, 1 *The Delaware Law of Corporations & Business Organizations* § 9.45[B][1], at 9–134 (3d ed. 2009)); *see also Andaloro v. PFPC Worldwide, Inc.,* 2005 WL 2045640, at *9 (Del. Ch. Aug. 19, 2005).
93 *Andaloro,* 2005 WL 2045640, at *9.
94 *In re Orchard Enters., Inc.,* 2012 WL 2923305, at *12.
95 *See* JX 2.
96 *See Doft & Co. v.* Travelocity.com *Inc.,* 2004 WL 1152338, at *5 (Del. Ch. May 20, 2004); *see also Cede & Co. v. Technicolor, Inc.,* 2003 WL 23700218, at *7 (Del. Ch. Dec. 31, 2003) ("When management projections are made in the ordinary course of business, they are generally deemed reliable."), *aff'd in part, rev'd in part,* 884 A.2d 26 (Del.2005).
97 2012 WL 1569818 (Del. Ch. Apr. 30, 2012).
98 *Id.* at *5; *see also Technicolor,* 2003 WL 23700218, at *7 ("[P]ost hoc, litigation-driven forecasts have an 'untenably high' probability of containing 'hindsight bias and other cognitive distortions.' ").
99 *Gearreald,* 2012 WL 1569818, at *5.

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100 Tr. 405–06(Kim) ("Q. Prior to June 2010, Cogent never developed a multiyear financial model like the management projections through 2015 that Cogent disclosed in its proxy statement; right? A. I don't believe so.").

101 JX 140 at 0002722 ("Ventura [*i.e.,* Cogent] says they turned down other offer[s] @ $11; however, if 3M hits the bid—they will sell."); Tr. 63–64 (Copman) ("Q. All right. Isn't it a fact that Cogent prepared its five year projections as part of the sales process specifically in part because 3M asked them to do so? A. We asked them to do that and they did prepare it."); *id.* at 67 ("Q. ... When Mr. Hsieh communicated to you at some point that he was looking for $11 a share, that's a data point and you would have no reason to make an offer above $11 a share; right? A. Most likely not.").

102 Tr. 409 (Kim) ("Q. There was a back and forth, though, between you and Credit Suisse where Credit Suisse would ask questions and you would ask questions. It was a process where you worked together; right? A. Yes.").

103 *See, e.g.,Gilbert v. MPM Enters., Inc.,* 709 A.2d 663, 669–70 (Del. Ch. 1997), *aff'd,*731 A.2d 790 (Del. 1999) ("Petitioner asserts that the April forecast was prepared in anticipation of the merger and implies that the upcoming merger provided some reason for management deliberately to cut anticipated revenue growth and to increase [research and development] expenses.... I conclude that management was in the best position to forecast MPM's future before the merger, and finding no evidence that the April forecast included benefits to be obtained via the merger or that the April forecast represented a deliberate attempt to falsify MPM's projected revenues and expenses, I accept management's projections with minor changes to reflect MPM's actual financial results and other financial information obtained after the preparation of the projections, but before the merger."); *Union Ill. 1995 Inv. Ltd. P'ship v. Union Fin. Gp., Ltd.,* 847 A.2d 340, 350–51 (Del. Ch. 2004) (accepting management projections prepared "[d]uring the course of the sales process"); *In re Orchard Enters., Inc.,* 2012 WL 2923305, at *13 (Del. Ch. July 18, 2012) ("I adopt the fairness opinion projections because they were prepared closest to the Going Private Merger and they are therefore the best indicator of Orchard management's then-current estimates and judgments."); *Gray v. Cytokine Pharmasciences, Inc.,* 2002 WL 853549, at *4–5, *8 (Del. Ch. Apr. 25, 2002) (disregarding "litigation-driven projections" prepared by petitioner's expert in favor of projections prepared by management while an offer was pending and the company was exploring merger opportunities).

104 *See Cede & Co. v. JRC Acq. Corp.,*2004 WL 286963, at *2 (Del. Ch. Feb. 10, 2004) ("[T]his Court prefers valuations based on management projections available as of the date of the merger and holds a healthy skepticism for post-merger adjustments to management projections or the creation of new projections entirely. Expert valuations that disregard contemporaneous management projections are sometimes completely discounted.").

105 Tr. 437–39 (Hsieh).

106 *See*Harris v. Rapid–American Corp., 1990 WL 146488, at *7 (Del. Ch. Oct. 2, 1990) (rejecting analysis based on "general trends" such as "industry-wide growth rates"), *aff'd in part, rev'd in part,*603 A.2d 796 (Del. 1992); *Cede & Co. v. Technicolor, Inc.,* 2003 WL 23700218, at *3 (Del. Ch. Dec. 31, 2003) (finding it unreasonable to reject management's forecast and create "hindsight forecasts based upon the industry as a whole").

107 JX 3 ¶ 15 ("For instance, the CAGR in the biometric industry from 2006 to 2009 was 29%. By contrast, Cogent's CAGR in revenue for the same period was 8.4%.").

108 JX 165 at 6.

109 JX 153 at 2. Revenues for the first three quarters of 2009 had been $91.7 million. *Id.*

110 $78.2 x $^{4}/_{3}$ = $104.3

111 *See, e.g.,In re Celera Corp. S'holder Litig.,* 2012 WL 1020471, at *19 (Del. Ch. Mar. 23, 2012) (describing the assumption that the company's "stock-based compensation should be treated as a cash expense for purposes of its [DCF] analysis" as unusual (alteration in original)), *aff'd in part, rev'd in part,*59 A.3d 418 (Del.2012); *In re 3Com S'holders Litig.,* 2009 WL 5173804, at *3 (Del. Ch. Dec. 18, 2009) ("[I]t is plainly disclosed that Goldman treated stock-based compensation as a cash expense in its DCF Analysis. Thus, shareholders can plainly determine from reading the proxy that Goldman made a departure from the norm in conducting its discounted cash flow analysis." (citation omitted)); *Laborers Local 235 Benefit Funds v. Starent Networks, Corp.,* 2009 WL 4725866, at * 1 (Del. Ch. Nov. 18, 2009) (describing the treatment of SBC as a cash expense as a "change in norms" and the treatment of SBC as a non-cash expense as the traditional methodology).

112 Schiller did not know whether Cogent's plan was non-qualified. Tr. 616–17. The evidence shows, however, that at least one of Cogent's stock option plans was a non-qualified plan. *See* JX 10 at 55.

113 *See* Conrad Ciccotello, C. Terry Grant & Gerry Grant, *Impact of Employee Stock Options on Cash Flow,* 60 Fin. Analysts J. 2, 39 (Mar.–Apr. 2004) ("Exercise of [non-qualified stock options] actually *increases* operating cash flows.").

114 JX 1 at 14 n.40 (quoting Aswath Damodaran, *From revenues to earnings: Operating, financing and capital expenses....,* Musings on Markets (June 15, 2011), *available at http:// aswathdamodaran.blogspot.com/2011/06/from-revenues-to-earnings-operating.html*).

115 JX 4 at 24–25.

116 *See* Tr. 175–76 (Bailey).

117 *Gholl v. Emachines, Inc.,* 2004 WL 2847865, at *14 n.97 (Del. Ch. Nov. 24, 2004) (citing Shannon Pratt, *The Lawyer's Business Valuation Handbook* 422 (2000)), *aff'd,*875 A.2d 632, 2005 WL 1413205 (Del.2005) (ORDER).

118 Resp't's Answering Br. 26.

119 Tim Koller, Marc Goedhart & David Wessels, *Valuation: Measuring and Managing the Value of Companies* 137–40 (5th ed. 2010) (emphasis omitted) [hereinafter Koller et al., *Valuation*].

120 Tr. 614—15 (Schiller). In fact, Schiller admitted that he did not consult any treatises in determining what accounts needed to be adjusted. *Id.*

121 This Court has relied on the fifth edition of *Valuation* in at least two other cases. *See**In re Orchard Enters., Inc.,* 2012 WL 2923305, at *9 n.60, *17 n.111, & *19 n.122 (Del. Ch. July 18, 2013); *Global GT LP v. Golden Telecom, Inc.,* 993 A.2d 497, 513 nn.91 & 94 (Del. Ch. 2010), *aff'd,*11 A.3d 214 (Del.2010). The Court also has relied on other editions of *Valuation.**See**Regal Entm't Gp. v. Amaranth LLC,* 894 A.2d 1104, 1110 (Del. Ch. 2006). Respondent criticizes Petitioners for not offering that treatise into evidence or submitting it with their papers. In an effort to reach the correct result, however, this Court regularly relies on authoritative treatises that were not entered into evidence. *See DuPont DCV Hldgs., Inc. v. ConAgra, Inc.,* 889 A.2d 954, 962 n.14 (Del. 2005) ("The Sellers argue that Mr. Freund's book cannot be relied on as persuasive authority, because case law precludes Delaware courts from relying on books or treatises that are not introduced into evidence. However, the cases the Sellers cite stand for the proposition that courts cannot rely on *medical* books not placed into evidence. As the Buyer correctly notes, Mr. Freund's book has been relied on by this Court and the Court of Chancery as secondary persuasive authority on several occasions." (citation omitted)).

122 In calculating Cogent's fourth quarter cash flows, Bailey "subtract[ed] Cogent's year-to-date financial metrics from its 2010 projections to arrive at its 2010 cash flows for the valuation model." JX 2 at 63.

123 *See**Gholl v. Emachines, Inc.,* 2004 WL 2847865, at *12 n.79; *Lane v. Cancer Treatment Ctrs. of Am., Inc.,* 2004 WL 1752847, at *30 (Del. Ch. July 30, 2004).

124 I have not adjusted Cogent's forward capital structure because it has such a strong cash position and a proven ability to generate significant positive cash flows.

125 *See**Cede & Co. v. JRC Acq. Corp.,* 2004 WL 286963, at *8 (Del. Ch. Feb. 10, 2004) ("Under CAPM the cost of equity is equal to the risk-free rate (the yield on 20 year Treasury bonds) plus a large company equity risk premium multiplied by the specific company adjusted beta.... Added to this figure is an equity size premium.").

126 *See* JX 1 app. I n.4; JX 2 at 47–48; United States Department of the Treasury, Daily Treasury Yield Curve Rates, http:// www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2010 (last visited May 16, 2013).

127 *See* JX 2 at 48 (Bailey's Rep.: "[T]he 10–year or 20–year Treasury bond yield is used as the risk-free rate of return."); Tr. 564–55 (Schiller) ("Q. Risk-free rate of return. You used the yield on the U.S. treasury ten-year bond, as of December 1, 2010, came up with 2.95 percent. Mr. Bailey used the 20–year bond and reached actually a higher rate, 3.8 percent. Is that a judgment call or is there something to disagree with there? A. It's a judgment call.").

128 *See, e.g.,**Gearreald v. Just Care, Inc.,* 2012 WL 1569818, at *9 n.61 (Del. Ch. Apr. 30, 2012) (applying 20–year risk-free rate); *Cede & Co., Inc. v. MedPointe Healthcare, Inc.,* 2004 WL 2093967, at *18 (Del. Ch. Sept. 10, 2004) ("[U]sing the 20–year Treasury rate is more reasonable under the circumstances and in keeping with the accepted practice."); *JRC Acq. Corp.,*2004 WL 286963, at *8 ("Under CAPM the cost of equity is equal to the risk-free rate (the yield on 20 year Treasury bonds)....").

129 *See* Aswath Damodaran, *The Dark Side of Valuation* 149 (2d ed. 2010); Aswath Damodaran, *What Is the Riskfree Rate? A Search for the Basic Building Blocks,* at 10 (Dec. 2008) (unpublished manuscript), *available at* http://people.stern.nyu.edu/adamodar/pdfiles/papers/riskfreerate.pdf ("[T]his would lead to use [of] the 10–year treasury bond rate as the riskfree rate on all cash flows for most mature firms."). *But cf. id.* at 9–10 ("The duration of equity will rise for higher growth firms and could be as high as 20–25 years for young firms with negative cash flows in the initial years. In valuing these firms, an argument can be made that we should be using a 30–year treasury bond rate as the riskfree rate.").

130 Koller et al., *Valuation, supra* note 119, at 236–38 ("For U.S.-based corporate valuation, the most common proxy is 10–year government STRIPS."). *But see* Shannon Pratt & Alina Niculita, *The Lawyer's Business Valuation Handbook* 24–25 (2d ed. 2010) ("As noted earlier, the risk-free rate usually is a yield-to-maturity rate available on U.S. Treasury securities as of the effective valuation date. Analysts usually use one of three maturities: 30–day, five-year, or 20–year. These maturities are used because they are the maturities for which [Ibbotson] has developed matching general equity risk premium series.... Analysts generally prefer the 20–year maturity. They recognize that it has an element of risk called

horizon risk, or *interest rate risk,* meaning that the value of the principal will fluctuate with changing levels of interest rates, but investors generally accept this risk. The longer rates are preferable partly because they are more stable over time and less subject to short-term influences. Also, the longer maturity more closely matches the assumed long life of most businesses.").

131 Eugene Brigham & Michael Ehrhardt, *Financial Management* 347 (12th ed. 2008).

132 *Global GT LP v. Golden Telecom, Inc.,* 993 A.2d 497, 521 (Del. Ch. 2010).

133 *Id.*

134 JX 1 app. I; JX 2 at 54.

135 JX 1 app. I; JX 2 at 51. At his deposition and at trial, Schiller corrected an erroneous statement in Owsley's report that beta was calculated on a monthly basis for five years. In particular, Owsley's report conflicted with the appendix, which stated that beta was calculated on a weekly basis for two-years. JX 179 at 22–24.

136 Because the selection of adjusted versus raw beta is intertwined with the cash adjustment issue, I defer discussion of that aspect of the beta dispute until later in this section.

137 JX 2 at 51.

138 Shannon Pratt & Roger Grabowski, *Cost of Capital: Applications and Examples* 203 (4th ed. 2010).

139 *See* Pet'rs' Opening Br. 29 ("[T]he beta for cash should be zero."); Resp't's Answering Br. 32 (stating that Cogent's cash should have a beta of zero).

140 *See* JX 2 at 52–54 (multiplying average ending day price by average outstanding shares during the period).

141 *Id.* at 53.

142 Pratt & Grabowski, *supra* note 138, at 203.

143 This $50 million number is based on management's projections, which assumed a "minimum cash balance" of $50 million for the years 2010–2015. *See* JX 1 at 60. Credit Suisse adopted that assumption in the preparation of its financial analysis regarding the Merger. *See* JX 122 at 32 n.4. Finally, an examination of Cogent's historical cash balance shows that of the $533.2 million in cash and cash equivalents only $32.99 million was actual cash, with the other approximately $500.2 million being in either short term or long term investments in marketable securities. *See* JX 3 at 43; JX 153 at 3, 9.

144 $533.2 million - $50 million = $483.2 million.

145 $868.7 million - 483.2 million = $385.5 million.

146 ($868.7 million / $385.5 million) = 2.253.

147 Marshall E. Blume, *On the Assessment of Risk,* 26 J. Fin. 1, 10 (1971); *see also* Pratt & Grabowski, *supra* note 138, at 167.

148 *See* Pratt & Grabowski, *supra* note 138, at 203 ("An alternative adjustment that is used by Bloomberg and *Value Line* adjusts the historical beta to a "forward" estimated beta by averaging the historical beta estimate by two-thirds and the market beta of 1.0 by one-third."); Koller et al., *Valuation,* supra note 119, at 253 ("For well-defined industries, an industry beta will suffice. But if few direct comparables exist, an alternative is beta smoothing.").

149 $\#_{COGT} = (\# \times 1) + (^2/_3 \times 1.595) = 1.397$.

150 JX 2 at 55–56.

151 JX 1 app. I.

152 JX 2 at 55–56.

153 JX 1 app. I.

154 Tr. 630 (Schiller) ("Q. Your equity risk premium used a rate of 5 percent; right? A. Yes. Q. Your report doesn't explain how ... that [equity risk premium] was calculated, does it? A. No, it does not. Q. It doesn't explain whether it's a historic equity risk premium or a supply-side equity risk premium, does it? A. No. Q. Do you know which one it is? A. I'm not familiar with those analyses. The stuff I've seen does not draw a distinction between those two.").

155 Selection of a supply-side equity risk premium is consistent with prior decisions by this Court. *See, e.g., In re Orchard Enters., Inc.,* 2012 WL 2923305, at *19 (Del. Ch. July 18, 2012) ("I therefore find that the Ibbotson Yearbook's supply-side equity risk premium of 5.2% is an appropriate metric to be applied in valuing Orchard under the CAPM."); *Gearreald v. Just Care, Inc.,* 2012 WL 1569818, at *10 (Del. Ch. Apr. 30, 2012) ("[A]lthough experts and this Court traditionally have applied the historical equity risk premium, the academic community in recent years has gravitated toward greater support for utilizing the supply side equity risk premium."); *Global GT LP v. Golden Telecom, Inc.,* 993 A.2d 497, 517 (Del. Ch. 2010) (referring to the Court's adoption of a supply-side equity risk premium, the Court stated "when the relevant professional community has mined additional data and pondered the reliability of past practice and come, by a healthy

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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").

156 *Gearreald v. Just Care, Inc.,* 2012 WL 1569818, at *10 (Del. Ch. Apr. 30, 2012).

157 *In re Orchard Enters., Inc.,* 2012 WL 2923305, at *21.

158 JX 1 at 29; JX 2 at 57, 84 n.6.

159 JX 2 at 57; Ibbotson SBBI, *2010 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926–2009.* Cogent's market capitalization at the time of the Merger was approximately $931 million.

160 Ibbotson SBBI, *2010 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926–2009.*

161 *See, e.g.,* Pratt & Grabowski, *supra* note 138, at 233 ("Morningstar, Inc. [the parent of Ibbotson], segregates New York Stock Exchange (NYSE) stock returns into deciles by size, as measured by *the aggregate market value of common equity."* (emphasis added)); *id.* at 240 ("Traditionally, researchers have used *market value of equity* as a measure of size in conducting historical rates of return research. For instance, this is the basis of the small-company return series published in the *SBBI Yearbooks.*" (emphasis added)); James R. Hitchner, *Financial Valuation: Applications and Models* 247 (3d ed. 2011) (noting that in the *Valuation Yearbook* "Ibbotson presents index-based returns weighted on the market capitalization of each stock").

162 *See, e.g.,In re Orchard Enters., Inc.,* 2012 WL 2923305, at *21 ("The Ibbotson Yearbook divides the stock returns of public companies into deciles by size, *measured by the aggregate market value of the companies' common equity."* (emphasis added)); *Cede & Co. v. JRC Acq. Corp.,*2004 WL 286963, at *8 (Del. Ch. Feb. 10, 2004) (selecting "market capitalization" as the benchmark over "fair value implied market capitalization"); *In re Sunbelt Beverage Corp. S'holder Litig.,* 2010 WL 26539, at *11 (Del. Ch. Jan. 5, 2010) ("The Ibbotson table assumes one already knows or has an estimate of a company's market capitalization. Based on that knowledge or estimate, one can determine which decile the company falls into and then select the corresponding premium from the Ibbotson table.").

163 Tr. 565 (Schiller). Schiller also admitted that he was "not aware of any authority" that says that when looking at a company's market capitalization, it's appropriate to adjust it based on its cash. *Id.* at 631.

164 *Id.* at 566.

165 *See* Tr. 201 (Bailey) ("Those tables were developed all from seminal work that was done by Professor Rolf Banz back in 1981, in which Professor Banz did a seminal paper on adjusting the risk value of a company based upon the market value of the company."); Rolf Banz, *The Relationship Between Returns and Market Value of Common Stock,* 9 J. Fin. Econ. 3 (1981) ("The results show that, in the 1936–1975 period, the common stock of small firms had, on average, higher risk-adjusted returns than the common stock of large firms.").

166 *See* Duff & Phelps, *Risk Premium Report 2013* (18th ed. 2013).

167 *Global GT LP v. Golden Telecom, Inc.,* 993 A.2d 497, 511 (Del. Ch. 2010).

168 *Gholl v. Emachines, Inc.,* 2004 WL 2847865, at *13 (Del. Ch. Nov. 24, 2004).

169 *Id.*

170 JX 1 at 32.

171 Pratt & Grabowski, *supra* note 138, at 30–34.

172 *See Golden Telecom, Inc.,* 993 A.2d at 511; *see also Lane v. Cancer Treatment Ctrs. of Am., Inc.,* 2004 WL 1752847, at *31 (Del. Ch. July 30, 2004) ("I find [the] assumption that no growth would occur beyond the projected five-year period unreasonable; it must be assumed that [the company] would continue to grow at least at the rate of inflation.").

173 Bradford Cornell, *Corporate Valuation: Tools for Effective Appraisal and Decision Making* 146–47 (1993).

174 JX 2 at 58–60 (citing Ian Wyatt & Kathryn Byun, *The U.S. Economy to 2018: From Recession to Recovery,* Monthly Labor Review (Nov. 2009), *available at* http://www.bls.gov/opub/mlr/2009/11/art2full.pdf; Federal Reserve Bank of Philadelphia, *The Livingston Survey* (2010), *available at* http://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey/2010/livdec10.pdf).

175 JX 1 at 31–33, 50, 86.

176 Tr. 635–36 (Schiller) ("Q. And you don't have any specific explanation as to why the growth rate drops from 9.2 percent to 2 to 5 percent, do you? A. No.... Q. ... [Y]ou don't provide any analysis in connection with the opinion that you're offering to the Court as to what GDP would be in the future, do you? A. No, we don't. Q. And you didn't consult any authorities as to what terminal growth rate should be in 2015 or beyond, do you? A. No. We see these numbers often, but we didn't consult any authorities, no.").

177 JX 2 at 20.

178 *Andaloro v. PFPC Worldwide, Inc.,* 2005 WL 2045640, at *12 (Del. Ch. Aug. 19, 2005).

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179 Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 329 (3d ed. 2012).

180 *Id.* at 331.

181 *Id.* at 340.

182 *Id.* at 342.

183 Using management's projections, Bailey calculated a CAGR of 11.45% for the period 2009 through 2015. JX 2 at 21.

184 $\$64.4 / 11.954\% - 4.5\% = \sim\$864$

185 Koller et al., *Valuation, supra* note 119, at 227.

186 *Crescent/Mach I P'ship, L.P. v. Turner,* 2007 WL 2801387, at *14 (Del. Ch. May 2, 2007).

187 *See supra* Part II.C.3.

188 JX 1 at 44, 74.

189 *Id.* at 86 n.1.

190 *Id.* at 44.

191 Tr. 580, 636–37.

192 *See* JX 3 at 43; JX 153 at 3, 9.

193 There were 88.616 million shares issued and outstanding as of November 2, 2012. *See* JX 157 at 2.

194 $\$963.4 / 88.6 = \$10.87$

195 8 *Del. C.* § 262(h); *see also id.* § 262(i) ("The Court shall direct the payment of the fair value of the shares, together with interest, if any.").

196 *In re Appraisal of Metromedia Int'l Gp., Inc.,* 971 A.2d 893, 907 (Del. Ch. 2009).

197 576 A.2d 650 (Del. Ch. 1989), *appeal refused,* 571 A.2d 787, 1990 WL 18152 (Del. 1990) (ORDER).

198 *Id.* at 654.

199 *Solomon Bros. Inc. v. Interstate Bakeries Corp.,* 1992 WL 94367, at *8 (Del. Ch. May 4, 1992).

200 684 A.2d 289 (Del. 1996).

201 *Id.* at 298 (citing *Cavalier Oil Corp. v. Harnett,* 564 A.2d 1137, 1145 (Del. 1989)).

202 *Schenley Indus., Inc. v. Curtis,* 152 A.2d 300, 301 (Del.1959) (citing *Chicago Corp. v. Munds,* 172 A. 452, 455 (Del. Ch.1934)).

203 *Lane v. Cancer Treatment Ctrs. of Am., Inc.,* 2004 WL 1752847, at *36 (Del. Ch. July 30, 2004); *see also Gholl v. Emachines, Inc.,* 2004 WL 2847865, at *18 (Del. Ch. Nov. 24, 2004) ("An award of interest serves two purposes. It compensates the petitioner for the loss of use of its capital during the pendency of the appraisal process and *causes the disgorgement of the benefit respondent has enjoyed during the same period.*" (emphasis added)).

204 *Ryan v. Tad's Enters., Inc.,* 709 A.2d 682, 705 (Del. Ch. 1996), *aff'd,* 693 A.2d 1082, 1997 WL 188351 (Del. 1997) (ORDER).

205 In a footnote, Respondent argues that in the current interest rate environment—where the statutory rate of interest is more than seven times the federal discount rate—Petitioners have distorted incentives to seek appraisal. There are risks to both sides in an appraisal proceeding, however, and the applicable interest rate is only one of them. Moreover, "[i]t is beyond the province of courts to question the policy or wisdom of an otherwise valid law. Rather, [I] must take and apply the law as [I] find it, leaving any desirable changes to the General Assembly." *Sheehan v. Oblates of St. Francis de Sales,* 15 A.3d 1247, 1259 (Del. 2011).

206 *See In re Appraisal of Metromedia Int'l Gp., Inc.,* 971 A.2d 893, 907 (Del. Ch. 2009) ("For example, petitioners cannot point to unreasonable or improper delay, as this matter was tried before the Court roughly one year after the first appraisal petition was filed, a remarkably short period of time by appraisal litigation standards."). Although the Court is working to reduce the average time to trial in the future, recent appraisal actions have taken longer than this case. *See, e.g., Towerview LLC v. Cox Radio, Inc.,* 2013 WL 3316186 (Del. Ch. June 28, 2013) (39 months to trial); *Highfields Capital, Ltd. v. AXA Fin., Inc.,* 939 A.2d 34 (Del. Ch. 2007) (30 months to trial).

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