Controversial Valuation Issues in the Context of Financial Distress and Bankruptcy

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Controversy Surrounding Use of Hindsight Information

1. Summary of **professional standards** regarding hindsight and reliance on subsequent events
    a. Overarching valuation principle: **Known or Knowable**
        i. Fair market value has generally been interpreted to be based only on information that was known or knowable as of the valuation date. Therefore, consideration of subsequent events that were not known or knowable as of the valuation date that affect the fair market value is *generally* inconsistent with the fair market value standard of value.
    b. American Institute of CPAs ("AICPA"), Statement on Standards for Valuation Services No. 1 (SSVS-1).
        i. AICPA members and other CPAs are required to comply.
        ii. "**Subsequent Events.** 43. The valuation date is the specific date at which the valuation analyst estimates the value of the subject interest and concludes on his or her estimation of value. ***Generally***, *the valuation analyst should consider only circumstances existing at the valuation date and events occurring up to the valuation date. An event that could affect the value may occur subsequent to the valuation date; such an occurrence is referred to as a subsequent event. Subsequent events are indicative of conditions that were not known or knowable at the valuation date, including conditions that arose subsequent to the valuation date. The valuation would not be updated to reflect those events or conditions.* Moreover, the valuation report would typically not include a discussion of those events or conditions because a valuation is performed as of a point in time—the valuation date—and the events described in this subparagraph, occurring subsequent to that date, are not relevant to the value determined as of that date" [emphasis added].
    c. Uniform Standards of Professional Appraisal Practice ("USPAP"), Statement on Appraisal Standards No. 3.
        i. Compliance can be required (1) by law or regulation or (2) by agreement with the client or intended users.
        ii. "A retrospective appraisal is complicated by the fact that the appraiser already knows what occurred in the market after the effective date of the appraisal. *Data subsequent to the effective date may be considered in developing a retrospective value as a confirmation of trends that would reasonably be considered by a buyer or seller as of that date*. The appraiser should determine a logical cut-off because at some point distant from the effective date, the subsequent data will not reflect the relevant market. This is a difficult determination to make. Studying the market conditions as of the date of the appraisal assists the appraiser in judging where he or she should make this cut-off. *In the absence of evidence in the market that data subsequent to the effective date were consistent with and confirmed market expectations as of the effective date, the effective date*

should be used as the cut-off date for data considered by the appraiser" [emphasis added].[1]

d. "The Tax Court has been known to look at transactions after the valuation date to test the reasonableness of what the appraiser has done. While I do not agree with the notion of playing Monday morning quarterback, sometimes it is necessary. For example, getting away from the pure standard of fair market value, sometimes the courts are concerned with doing what is *fair and equitable*. If a subsequent event will assist in that regard, the courts have taken advantage of the information." – *Understanding Business Valuation*, Second Addition, Gary R. Trugman.

2. Court opinions
    a. Bankruptcy Cases
        i. There seems to be more acceptance of the use of hindsight within Bankruptcy Courts as compared to other courts.
            1. While opinions seems to vary as to the acceptable use of hindsight, elements that are weighed involve:
                a. Whether the valuation is retrospective (due to the increased complexity from the passage of months or years from the valuation date)
                b. Reasonableness of the time period between the subsequent event and the valuation date
                c. Degree to which the subsequent event was foreseeable
                d. Whether the belief that the future event would occur is reasonable as of the valuation date
        ii. Retrojection and the "Hindsight" rule
            1. Courts have recognized that valuation of a business is a subjective exercise.[2]
            2. The complexity of Insolvency determination and business valuation is magnified when the valuation date is months or even years prior the report date (e.g. fraudulent transfer actions).
            3. In such bankruptcy situations, courts have employed a method known as retrojection, based on the principle that "a condition known to exist is presumed to have existed for a reasonable period of time prior thereto."[3]
            4. Retrojection allows the debtor or trustee to reconstruct the debtor's financial situation at the time of the transfers or an earlier time by working backward through the debtor's financial transactions and cash flows. But, according to some cases, *no substantial or*

[1] *Uniform Standards of Professional Appraisal Practice,* 2014-2015 Edition (Washington, DC: The Appraisal Foundation, 2014), Statement on Appraisal Standards No. 3, p. U-74.
[2] *In re* Iridium Operating LLC, 373 B.R. 283, 344 (Bankr. S.D.N.Y. 2007).
[3] *In re* Tuggle Pontiac-Buick-GMC, Inc., 31 B.R. 49, 52 (Bankr. E.D. Tenn. 1983) (as cited in *Contested Valuation in Corporate Bankruptcy,* 2011)

radical changes in assets or liabilities between the two dates must have occurred.[4]

5. Time period between the filing of the bankruptcy petition and the transaction in question must be "reasonable."[5]
6. *Mellon Bank, N.A. v. Official Committee of Unsecured Creditors (In re R.M.L., Inc.),* 92 F.3d 139 and 156 (3d Cir. 1996):
    a. Introduction of facts known during the bankruptcy that were unknown at the time of transfer is not permitted.
    b. When evaluating the debtor's financial condition at the time of transfer, the court should look "at the circumstances as they appeared to the debtor and determine whether the debtor's belief that a future event would occur was reasonable. The less reasonable a debtor's belief, the more a court is justified in reducing the assets (or raising liabilities) to reflect the debtor's true financial condition at the time of the alleged transfer."

iii. *Gillman v. Scientific Research Products Inc. (In re Mama D'Angelo, Inc.)*, 55 F.3d 552, 555 (10th Cir. 1995).

1. "Mama D'Angelo, Inc., was in the business of making pizza. But lest the name suggest inappropriate connotations, this was not a mom and pop operation. To the contrary, this probably was the most elaborate, intricately mechanized, state-of-the-art pizza-making factory in the world. It boasted a spiral crust plant that was four stories tall with contraptions, assembly lines and conveyer belts designed to turn out topped, vacuum-packed, "fresh-but-never-frozen" pizzas at the rate of one per second. But Mama's predecessors of centuries past with their efficient, tiny wood-fired brick ovens back in la bell'italia are not turning over in their graves; this Rube Goldberg contraption that cost millions to engineer and install was a dismal failure."
2. "Incorporated in late 1987, Mama D'Angelo began operations in early 1988 with a start-up facility in West Jordan, Utah. On July 4, 1989, after successful test marketing, Mama D'Angelo closed the West Jordan facility and moved its operations to a much larger facility at the Salt Lake International Center."
3. "The new facility closed its doors October 10, 1989, approximately three months after commencing operations. This bankruptcy resulted. Mama D'Angelo filed a Chapter 11 petition on November 6, 1989. On May 10, 1990, the case was converted to a Chapter 7 case."

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[4] Hassan v. Middlesex County Nat'l Bank (*In re* Mystic Pipe & Supply Corp.), 333 F.2d 838, 840 (as cited in *Contested Valuation in Corporate Bankruptcy,* 2011)

[5] *Gilbane Bldg. Co.,*786 N.W.2d at 340; *see also* Misty Mgmt Corp. v. Lockwood, 539 F.2d 1205 (9th Cir. 1976) (as cited in *Contested Valuation in Corporate Bankruptcy,* 2011)

4. The bankruptcy court found that the debtor was not a going concern as of July 4, 1989, and thus liquidation values must be used.
5. The district court determined that the bankruptcy court's finding of insolvency was clearly erroneous because the debtor was not valued as a going concern.
6. The district court: "…without question substantial business was being conducted during the periods of time adding up to…$800,000 in business…convinces the court that even though by hind site (sic) it may be said that this was not a going concern, it in fact was at the time of the alleged preference a going concern as a matter of law."
7. 10th Circuit upheld the bankruptcy court: "We are mindful of the authority to the effect that fair valuation ordinarily must be made from the vantage of a going concern and that subsequent dismemberment should not enter into the picture…. But we 'may consider information originating subsequent to the transfer date if it tends to shed light on a fair and accurate assessment of the asset or liability as of the pertinent date.' In re Chemical Separations Corp., 38 B.R. 890, 895-96 (Bankr.E.D.Tenn.1984). Thus, it is not improper hindsight for a court to attribute current circumstances which may be more correctly defined as current awareness or current discovery of the existence of a previous set of circumstances. In this case, even Scientific's witnesses acknowledge a current 'discovery' or 'awareness' of circumstances then in existence: 'most of the problems were inherent with the original construction of the plant which, you, would have been there as of [the] day we moved into the plant,' and management had 'stuck millions upon millions of dollars fruitlessly into this facility.' Circumstances did not change between July and the November shut-down date; it simply took management a few months to 'discover' and became 'aware' of those circumstances that existed beginning in July."
8. We give substantial leeway on questions of valuation: "[T]he matrix within which questions of solvency and valuation exist in bankruptcy demands that there be no rigid approach taken to the subject. Because the value of property varies with time and circumstances, the finder of fact must be free to arrive at the '***fair valuation'*** defined in [§ 101(32)] by the most appropriate means." Porter, 866 F.2d at 357 [emphasis added].

iv. *In re Iridium Operating LLC,* 373 B.R. 283 (2007)

1. The Debtors, Iridium, developed and operated a global telecommunications system that was designed to provide voice communication and paging services anywhere in the world so long as the antenna of a subscriber's portable telephone handset or

paging unit could be positioned to make radio contact with one of Iridium's sixty-six low earth orbiting satellites.

2. Iridium's rapid decline into bankruptcy about nine months following commercial activation of its service was a business failure of epic proportions.
3. Motorola provided technical and financial support to Iridium and received progress payments aggregating to *$3.7 billion* during the four years prior to bankruptcy.
4. The Unsecured Creditors Committee (the "Committee") on behalf of Iridium sought to recover the $3.7 billion from Motorola.
5. The first phase of trial was limited to only whether Iridium was insolvent or had unreasonably small capital during the four years prior to bankruptcy.
    a. 50 trial days, 52 witnesses, 7 experts, 866 exhibits.
6. Abundant market data, contemporaneously prepared projections, analyst reports and other evidence indicated the solvency of Iridium.
7. No single factor explains why Iridium was unable to sign up anywhere near the number of subscribers and there was no consensus within the company's senior management as to why Iridium failed (not known or knowable). Even months after the commercial launch revealed how the system functioned, market participants continued to believe Iridium had the potential to become a viable enterprise that could achieve its projections.
8. [The Committee's expert's] opinions are suspect because he ignored or wrongly discarded Iridium's projections and much of the contemporaneous market research underlying those projections and *instead created his own projections for litigation purposes.*
9. **Outcome**: the Committee failed to meet its burden of proof in establishing that Iridium was insolvent or had unreasonably small capital during the relevant period.
    a. After careful deliberation, the Court is persuaded that contemporaneous market data for Iridium's publicly traded securities are both consistent with substantial enterprise value and inconsistent with insolvency. The market evidence is simply too voluminous and compelling to reach any other conclusion.
    b. The Committee's experts have been unable to account for, to adequately explain or to reconcile the abundant market data that conflicts with their opinion…They elected not to test and validate their valuation opinions by utilizing any accepted methodologies other than the discounted cash flow approach to value, and based their opinion on restated cash flow projections that were tailored for litigation

purposes well after commencement of this adversary proceeding.

c. As a result of not confronting the valuations implied by the public markets concerning the enterprise value of Iridium and other comparable companies in the mobile satellite communications industry and of dismissing the market data as inapplicable to their analysis, the Committee's experts narrowed their focus to the point that they…*diminished the usefulness and credibility of their opinions*. M. Freddie Reiss, who was the Committee's principal valuation witness, at times was also adversarial in defense of his opinions and in many instances did not give simple and direct answers to questions during cross-examination. His *"hired gun" advocacy* from the witness stand and lack of responsiveness to certain seemingly straightforward questions did not help his credibility [emphasis added].
d. With hindsight (and with what Motorola refers to as "hindsight bias"), the market value for Iridium securities during the relevant period turned out to be an unreliable indicator of future fair market value, *but that does not justify ignoring this data*. This conspicuously inconsistent data contradicts the opinions of the Committee's experts and needs to be explained and overcome…the Committee's experts have treated such data as irrelevant and have not given a satisfactory explanation for the abundant conflicting market judgments of those who were lending to or investing in Iridium during the period leading up to and immediately after commercial activation.
e. [The] failure to foresee that Iridium was ultimately doomed to fail does not mean that the original projections must have been wrong or were unreasonable when they were created.
f. A solvency analysis lacks credibility when an expert uses projections that "fly in the face of what everyone believed at that time"…Here, [the Committee's experts'] conclusions of insolvency and inadequate capital do not correlate with the market validation of Iridium's business plans and the positive value…This failure of the Committee's experts to reconcile their conclusions with the prevailing market judgment or to cast serious doubt on the reliability of that market judgment provides sufficient reason for this Court to seriously question the reliability of their opinions.

10. The solvency case, as tried by each of the Committee and Motorola, was presented as an all or nothing proposition that sought to characterize Iridium's financial condition during the

entire four-year period…Neither side elected to approach the questions of solvency and capital adequacy by parsing this four-year period into smaller blocks of time or by concentrating on discrete smaller testing periods that are relevant to a preference and fraudulent conveyance analysis, such as the ninety-day or one-year period before bankruptcy.

11. The Court recognizes, however, the very real possibility that Iridium may have been in the zone of insolvency or may have actually slipped into insolvency at some point between the date of commercial activation and the petition date…However, because of the way that the parties chose to present their theories of insolvency, the Court is unable to make any well-founded findings or conclusions as to this particular period of fairly conspicuous financial distress.
12. The Committee's experts did not even value the company as of any date later than March 31, 1997 [*over two years prior to bankruptcy*] and did not consider events subsequent to that date to be relevant to their opinion regarding Iridium's financial condition. As a result…there is no direct evidence in the record to support a finding of insolvency at any point during the financial crisis that was brewing in the months before Iridium filed for bankruptcy…Rather than speculate, the Court finds that there has been a failure to prove insolvency even during the period that Iridium's prepetition financial condition was most obviously suspect.
13. Courts in this jurisdiction may consider post petition events to some extent under certain circumstances, but reject the use of *improper hindsight* analysis in valuing a company's pre-bankruptcy assets….When determining the value of a company's assets prepetition, "it is not improper hindsight for a court to attribute 'current circumstances' which may be more correctly defined as 'current awareness' or 'current discovery' of the existence of a previous set of circumstances." Such value, however, must be determined as of "the time of the alleged transfer and not at what [assets] turned out to be worth at some time after the bankruptcy intervened."
14. While there is case law supporting the contention that a significant business failure may indicate insolvency a short time prior to filing of the bankruptcy petition...there is no case law that supports *extending that finding over a four-year prepetition period*…without other supporting evidence. The failure of a business, even a monumental failure, does not alone prove the insolvency of the business in the months and years prior to its demise [emphasis added].

15. The Committee has failed to show that there was concealment of relevant circumstances at the time of the transfers or that there was a subsequent discovery of such circumstances that must to be taken into account when determining Iridium's value. The record has shown that the market was generally aware of all relevant information regarding Iridium's system capabilities and limitations, although such awareness of the technical limitations applicable to satellite service is not equivalent to an awareness of the impact that those limitations would have upon Iridium's ability to achieve its business plan.

v. *In re Sunset Sales*, 220 B.R. 1005, 1017 (10th Cir. B.A.P. 1988)
   1. Liquidating trustee for estate of reorganized Chapter 11 debtor-coal mining company brought adversary proceeding, seeking to recover, as preferential transfers, prepetition premium and collateral payments made to insurance companies for issuance of bonds required by law to assure reclamation of lands damaged by debtor's mining operations. The United States Bankruptcy Court for the Western District of Oklahoma entered judgment in favor of trustee, and insurance companies appealed. The Bankruptcy Appellate Panel, Boulden, J., held that: *in concluding that debtor was insolvent, bankruptcy court did not err by disregarding book values of debtor's assets and instead applying trustee's actual sales price plus depreciation. Found that the most credible evidence of amount of liability was the amount actually required to be paid* [emphasis added].
   2. Opinion cited to the Mama D'Angelo case.
   3. The bankruptcy court valued the assets at $3,801,000, utilizing the price eventually received by the Trustee when the equipment was sold or the amount by which secured creditors reduced their claims in exchange for the surrender of collateral, and then adding back a substantial adjustment for economic depreciation.
   4. Finally, the bankruptcy court held that the Debtor's reclamation liability, one of the Debtor's most significant liabilities, had a fair value in excess of $1,000,000. The court again refused to apply the Debtor's book value of $432,000, stating that "[t]he most credible proof is that the liability is in the amounts required by the governmental entities for the debtor's bonds." From our review of the record, these factual findings are not clearly erroneous.

vi. *Sierra Steel*, 96 B.R. at 278, 279 n.6
   1. In documents filed with the bankruptcy court, the debtor varied the position it took regarding its solvency. In Exhibit A to the bankruptcy petition and the schedules filed on June 1, 1984, the debtor claimed to be **solvent** at the time it filed bankruptcy. The debtor claimed that it was **insolvent** in its disclosure statement

filed in September, 1984, its amended schedules filed September 8, 1987 and its amended schedules filed July 20, 1987.

2. The treatment to be accorded to two liabilities is at issue in this appeal. The question is how much, if anything, should be included in the liability side of the balance sheet for a disputed claim by Tahoe Savings & Loan Association ($300,000) arising out of the construction of the Hof–Brau Condos. The debtor treated these liabilities in an inconsistent manner in its original and amended schedules and disclosure statement; sometimes it included the alleged liabilities, sometimes it did not.
3. Debtor conceded at oral argument that it never had to and will never have to pay anything on the $300,000 claim. Given debtor's concession, and reducing the claim to its present value of zero, we cannot say that the bankruptcy court erred in determining that the $300,000 claim does not qualify as a debt.
4. Debtor contends that we should not determine the amount of the claim with the benefit of hindsight, but rather we should value the claim based upon the knowledge that existed at the time of the transfer. However, as explained above, there is no policy reason why bankruptcy judges should not be allowed to consider subsequent events in valuing assets or determining liabilities. For example, judges regularly consider the actual collection rates in valuing receivables.

b. Other Tax Court and federal cases
   i. A majority of the federal tax cases dealing with subsequent events indicate it is inappropriate to use hindsight as *direct* evidence of value as of the valuation date.[6]
   ii. However, the Tax Court and other federal courts have also opined that certain subsequent events that occur within a reasonable time after the valuation date may be appropriate to consider in valuation cases, including:[7]
      1. Subsequent events that were reasonably foreseeable by a hypothetical buyer or seller as of the valuation date. *Trust Servs. Of Am., Inc. v. United States,* 885 F.2d 561 (9th Cir. 1989).
      2. Subsequent events that prove the reasonableness of expectations of a hypothetical buyer or seller as of the valuation date. In O'Reilly, the Tax Court relied on dividends actually paid after the valuation date to corroborate an expert's projected dividends.[8]
      3. The subsequent sale of the subject ownership interest. *Scanlan* decision: "The best indicator of the value of unlisted stock often is arm's-length sales of that stock at or around the time of valuation"

[6] "Subsequent Events and Multi-Level Valuation Discounts—Ringgold Telephone Company v. Commissioner," James G. Rabe, *Gift and Estate Tax Valuation Insights,* August 2010.
[7] *Ibid.*
[8] *O'Reilly v. Commissioner*, TC Memo. No. 1994-61.

despite the fact that the stock redemption occurred more than 2 years from the valuation date."[9]

iii. The Tax Court in the *Ringgold*[10] decision criticized the taxpayer valuation analyst for failing to consider the subsequent sale to BellSouth in his analysis. As outlined in this article, the Tax Court has opined that certain subsequent events that occur within a reasonable time after the valuation date may be appropriate to consider in valuation cases. These generally include:

1. Subsequent events that were reasonable foreseeable by a hypothetical buyer or seller as of the valuation date
2. Subsequent events that prove the reasonableness of expectations of a hypothetical buyer or seller as of the valuation date,
3. The subsequent sale of the subject ownership interest, and
4. The subsequent sale of comparable ownership interests.

[9] *Estate of Scanlan v. Commissioner*, TC Memo, 1996-331.
[10] The Ringgold Telephone Company v. Commissioner, T.C. Memo 2010-103.

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Controversy Surrounding Use of Valuation Approaches

1. Overview of valuation approaches
    a. Three generally accepted approaches to valuation of business enterprise
        i. Income Approach – Based on the present value of expected future cash flow or income.
            1. Company-specific (projections based on expected for the company)
            2. Forward looking as of the valuation date, thus based on future earning capacity of the company
            3. Requires reliable projections
        ii. Market Approach – Based on valuation multiples from sales of similar companies
            1. Reflects what the market will pay for earnings of the company
            2. Requires data regarding comparable companies or transactions
        iii. Asset Approach – Based on the value of a company's assets minus liabilities.
            1. Assumes liquidation of assets, where assets are sold apart from the business enterprise, individually or in groups.
    b. Which approach is most appropriate?
        i. The applicable approach(es) determined based on facts and circumstances
        ii. While many courts have recognized the income approach discounted cash flow method as most appropriate, there are situations where either the market approach or asset approach may be more appropriate.

2. Summary of **professional standards** regarding weighting of valuation approaches in developing a conclusion of value
    a. AICPA SSVS-1
        i. .04 - In the process of estimating value as part of an engagement, the valuation analyst applies *valuation approaches* and valuation methods, as described in this statement, and uses professional judgment. The use of professional judgment is an essential component of estimating value.[11]
        ii. .21 - Valuation engagement. A valuation analyst performs a valuation engagement when (1) the engagement calls for the valuation analyst to estimate the value of a subject interest and (2) the valuation analyst estimates the value (as outlined in paragraphs .23–.45) and is free to apply the valuation approaches and methods he or she deems appropriate in the circumstances. The valuation analyst expresses the results of the valuation as a conclusion of value; the conclusion may be either a single amount or a range.[12]
    b. USPAP

[11] *Statement on Standards for Valuation Services No. 1*, 2007 (American Institute of Certified Public Accountants), par. 0.4.
[12] Ibid, par. 0.21a.

i. "Standards Rule 9-3 - In developing an appraisal of an equity interest in a business enterprise with the ability to cause liquidation, an appraiser must investigate the possibility that the business enterprise may have a higher value by liquidation of all or part of the enterprise than by continued operation as is.[13]

ii. Standards Rule 9-4 - In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must collect and analyze all information necessary for credible assignment results. (a) An appraiser must develop value opinion(s) and conclusion(s) by use of one or more approaches that are necessary for credible assignment results.[14]

iii. Standards Rule 9-5 - In developing an appraisal of an interest in a business enterprise or intangible asset, an appraiser must: (a) reconcile the quality and quantity of data available and analyzed within the approaches, methods, and procedures used; and (b) reconcile the applicability and relevance of the approaches, methods and procedures used to arrive at the value conclusion(s). Comment: The value conclusion is the result of the appraiser's judgment and not necessarily the result of a mathematical process.[15]

c. Valuation school of thought

i. A valuation opinion or conclusion of value requires *consideration* of all approaches (ie, no approach should be excluded from consideration).

ii. The approach or approaches used will depend on the facts and circumstances of the company, as well as the quality and availability of information required for the application of each approach.

iii. In order to have a reliable conclusion of value, all indications of value must be reconciled to address any inconsistencies or apparent contradictions.

3. Court Opinions

a. Bankruptcy Cases

i. **Exide Technologies 607 F.3d 957 (3d Cir. 2010)** – In this case, the expert for the Debtor opined to a range of enterprise value of $950 million to $1.05 billion, while the expert for the Creditors Committee opined to a range of $1.5 billion to $1.7 billion. Debtor's expert argued that the opposing expert placed too much reliance on the Income approach DCF method. The key point of the controversy was the extent to which the valuation of the Company should be based on future earning capacity (as reflected in the Income approach) versus current market conditions (as reflected in the Market approach).

[13] *Uniform Standards of Professional Appraisal Practice,* 2014-2015 Edition (Washington, DC: The Appraisal Foundation, 2014), Statement on Appraisal Standards No. 9, p. U-62.
[14] Ibid, p. U-62.
[15] Ibid, p. U-63

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1. *"Both experts used the same three methods to determine the Debtor's value: (i) comparable company analysis; (ii) comparable transaction analysis; and (iii) discounted cash flow. However, the end results of their valuations were far from similar."*
2. The most significant issues were regarding the weight to give to the DCF analysis, and the discount rate and terminal multiple to be used in the analysis.
3. *"The Debtor argues that in the final determination of enterprise value, Derrough accorded too much weight to his DCF analysis…"*
4. *"Courts often rely upon DCF analyses in valuing reorganized debtors. I conclude that it is appropriate to consider DCF when determining such value and no less weight should be accorded to the DCF because it relies upon projections. When other helpful valuation analyses are available as in this case, each method should be weighed and then all methods should be considered together".*
5. The Court took issue with the Debtor's adjustments to market multiples and discount rates: *"The stated purpose of Newman's numerous adjustments to the valuation methodologies were to bring value calculations in line with current market value. This is not appropriate when seeking to value securities of a reorganized debtor since the "taint" of bankruptcy will cause the market to undervalue the securities and future earning capacity of the Debtor."*
6. *"The Supreme Court has held that a reorganized debtor's value should be based upon earning capacity. 'The criterion of earning capacity is the essential one if the enterprise is to be freed from the heavy load of past errors, miscalculations or disaster, and if the allocations of securities among the various claimants is to be fair and equitable'."*
7. **Outcome:** The Court decided on a range of enterprise value of $1.4 billion to $1.6 billion.

ii. **Adelphia Recovery Trust v.FPL Group, Inc., 2011 WL 2747376 (Bankr. S.D.N.Y)** - In this case, an avoidance action, the expert for the Recovery Trust opined to an enterprise value of $2.8 billion, while FPL's expert opined to a value of $6.7 billion. The key point of controversy was whether a DCF analysis or a market approach analysis provided the most reliable indication of the value of Adelphia as of January 1999.

1. Both experts considered using the DCF method, but came to different views regarding its applicability, as the Court noted: *"But here both experts encountered difficulty using DCF analysis due to the lack of accurate and reliable management projections. For this*

reason, Tuliano declined to perform a DCF analysis. And though Shaked utilized the methodology, he declined to use management projections—both because of their unavailability and because 'any management projections that would have existed would have been based on fraudulent information, and would therefore be unreliable.' Likewise, Shaked declined to use any third-party industry analyst projections because they would have been based on Adelphia's inaccurately reported information."

2. FPL's expert applied only the market approach (comparable companies and precedent transactions), while The Recovery Trust's expert applied only the income approach (DCF method).
3. Recovery Trust's expert did not use the market approach, as he did not consider the historical financial results (which would be used in this approach) to be reliable. Instead, he used the income approach, developing *his own* projections for the Company.
4. The Court had issues with both expert's opinions: *"Upon considering the alternative approaches, I find Shaked's reliance on DCF alone to be inappropriate, and find his assumptions underlying his DCF analysis to have been too arbitrary and speculative. While Tuliano's analysis was less than perfect in several respects (as demonstrated most dramatically by a TEV in excess of Adelphia's market capitalization ("**Market Cap**") at a time when Adelphia's fraud was in existence but unknown to its investors), I find that Tuliano's methodology was superior, though as discussed below, I question several of his assumptions, and find that his use of those assumptions led to a valuation on his part that I regard as too high."*
5. "*As a matter of common sense, DCF works best (and, arguably, only) when a company has accurate projections; when projections are not tainted by fraud, and when at least some of the cash flows are positive."*
6. The Court preferred FPL's expert's use of the Market approach, specifically a multiple of value per subscriber, for two reasons: 1) the number of subscribers that Adelphia had was one of the most reliable metrics of its financial data, and 2) value per subscriber is a widely used industry benchmark, and in fact was used for the eventual sale of Adelphia's assets to Time Warner.
7. **Outcome:** The Court commented that neither expert employed an alternate valuation approach to provide a "sanity check" for their conclusion, but was more persuaded by FPL's expert's market approach. While the Court did not agree that the value of Adelphia could exceed its market capitalization, noted that even if the value was reduced by the 19% excess over Market Cap, Adelphia would have been solvent by over $3 billion.

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iii. **In re: Iridium Operating LLC, 373 B.R. 283 (2007)** – This case was an avoidance action, with a solvency analysis performed by expert for Creditors Committee. The key point of the controversy was the weight to be given to the public market valuation of the Company, which contradicted the valuation performed by the expert for the Creditors Committee.

1. Valuation based on income approach (DCF method), using projections prepared by expert.
2. Company asserts that the market capitalization of public stock is the best indication of Fair Value.
3. Court notes that, "Courts generally look at a combination of valuation methodologies to determine valuation, including: (a) actual sale price, (b) discounted cash flow method, commonly referred to as DCF, (c) adjusted balance sheet method, (d) market multiple approach, (e) comparable transactions analysis, and (f) market capitalization."
4. Court notes the Committee's expert's "failure to reconcile their opinions of insolvency and inadequate capital with the contradictory evidence of positive value attributed to the business at the time provides sufficient reason for this Court to question the reliability and credibility of their opinions."
5. Court also notes that the expert's reliance on only one valuation approach "simply did not provide the necessary 'check' on the value he arrived at that would render that value a reliable measure of the company's worth."
6. Court references the Campbell decision, "Absent some reason to distrust it, the market price is 'a more reliable measure of the stock's value than the subjective estimates of one or two expert witnesses'".
7. "…the public trading market constitutes an impartial gauge of investor confidence and remains the best and most unbiased measure of fair market value and, when available to the Court, is the preferred standard of valuation."
8. **Outcome:** The Court found the Committee's expert to have presented unreliable valuation of Iridium, because he relied on only one valuation approach, and excluded the contemporaneous reference points for the value of the Company. These contemporaneous reference points were based on full information, though they were ultimately wrong. He failed to reconcile his valuation of Iridium with the consensus of investors, analysts, and lenders at the time.

iv. **VFB v. Campbell Soup Co., 482 F.3d 624 (2007)** - This case stems from the 1998 sale of several Campbell business units to Vlasic Foods International, Inc. (VFI), a new entity created by Campbell. Campbell

sold the businesses in return for borrowed cash, and subsequently issued the subsidiary's stock to Campbell stockholders as an in-kind dividend. Within three years VFI filed for bankruptcy, and sold the businesses for less than they paid to Campbell. This case was a fraudulent transfer case, with the creditors claiming that the businesses purchased from Campbell were not worth the $500 million paid.

1. This case was cited in Iridium, which had a similar fact pattern where the contemporaneous market consensus of value was high relative to the subsequent value upon sale.
2. The sale transaction was based on unreliable information, as a result VFI revised post transaction revenue and earnings estimates.
3. The market price of VFI held steady, with Market Cap in excess of $1.1 billion through the end of 1998, even after learning of VFI's true earnings prospects.
4. Experts for the Creditors estimated the value of VFI at less than $500 million, based on comparable companies analysis and DCF analysis.
5. The Court noted: "*There is simply no credible evidence to justify setting aside VFI's stock price and the other contemporaneous market evidence of VFI's worth. Even if, as VFB implies, the market was suffering from some "irrational exuberance" in establishing VFI's stock price, that gives me no basis for second-guessing the value that was fairly established in open and informed trading.*"
6. **Outcome:** The Court upheld the District Court's decision, noting: "*VFB makes additional arguments concerning its expert witnesses' valuations, urging that it was clear error to dismiss them in favor of the market figures, but we do not think that the district court erred in choosing to rely on the objective evidence from the public equity and debt markets. To the extent that the experts purport to measure actual postspin performance, as by, for example, discounted cash flow analysis, they are measuring the wrong thing. To the extent they purport to reconstruct a reasonable valuation of the company in light of uncertain future performance, they are using inapt tools.*"

Controversial Valuation Issues in the Context of Financial Distress and Bankruptcy

Controversy Surrounding the Proper Discount Rate to Be Employed When Quantifying Long-Term Unliquidated Debt

1. Long-term, unliquidated debt represents debt that both the debtor and creditor agree exists, but no agreement exists regarding the amount and timing of payments associated with the obligation. Such obligations may include the following:
    a. Environmental remediation obligations;
    b. Causes of action that have been resolved as to general liability, but not as to quantity of claims, nor the timing and amount of payment, such as asbestos claims.
    c. Unfunded pension obligations; and
    d. Obligations associated with the perpetual care of cemeteries.

2. The need to quantify such obligations, in the context of financial distress or bankruptcy, may arise in the following circumstances:
    a. Plan confirmation;
    b. Claims determination, including an assessment of future claimants;
    c. Solvency in the context of avoidance actions; and
    d. Negotiations in the context of turnarounds and workouts.

3. Conceptually, quantifying long-term, unliquidated liabilities is relatively simple. It requires two primary inputs:
    a. The cash outlays associated with satisfying the obligation; and
    b. The discount rate to be employed to determine the present value of those cash outlays.

4. In practice, however, the assessment is complex and presents many challenges. The discussion in this panel will focus on issues relating to the controversy surrounding the proper discount rate to be employed when making such an assessment.

5. Two alternative rates for consideration are:
    a. The risk-free rate; and
    b. The rate of return on the reserves set aside to fund the obligation.

6. In the context of employing a risk-free rate, consider the following bankruptcy court decisions.
    a. As part of its chapter 11 plan of reorganization, Garlock Sealing Technologies, LLC proposed to set aside $125 million to satisfy its liability for the legitimate present and future mesothelioma claims. Class action plaintiff's lawyers, on the other hand, sought in excess of $1.0 billion.[16] One of the points of controversy in the proceeding was the appropriate discount rate to employ when quantifying the

[16] *In re Garlock Sealing Technologies, LLC,* 504 B.R. 71 (Bankr. W.D.N.C. 2014)

present value of the aforementioned claims. Among other things, the court opinion states the following:

i. "Garlock produced and sold asbestos gaskets, sheet gasket material and packing used in pipes and valves that transported hot fluids in maritime, refinery and other industrial applications. Its products spent their working lives bolted between steel flanges or valves and generally wrapped with asbestos thermal insulation produced by other manufacturers. Garlock's products released asbestos only when disturbed, such as by cutting, scraping, wire brushing or grinding—procedures that were done sporadically and then generally only after the removal of the thermal insulation products which caused a "snowstorm" of asbestos dust. It is clear that Garlock's products resulted in a relatively low exposure to asbestos to a limited population and that its legal responsibility for causing mesothelioma is relatively de minimus. The Sixth Circuit has noted in an individual pipefitter's case that the comparison is as a "bucket of water" would be to the 'ocean's volume.' *Moeller v. Garlock Sealing Techs., LLC,* 660 F.3d 950, 954–55 (6th Cir.2011)."

ii. "Garlock was sued in the tort system by victims of various asbestos-related diseases starting in the early 1980s—generally in Complaints naming 20 to 50 or more defendants. By all accounts Garlock was very successful in settling (and rarely trying) such cases. By the early 2000s the focus of tort litigation had become mesothelioma wrongful death cases. Such cases presented an extraordinary environment because of the disastrous consequences of a plaintiff's verdict. Thus, even where the likelihood of an adverse verdict was small, the prospect of a huge verdict and the great expense of defending a trial drove Garlock to settle cases regardless of its actual liability."

iii. "Beginning in early 2000s, the remaining large thermal insulation defendants filed bankruptcy cases and were no longer participants in the tort system. As the focus of plaintiffs' attention turned more to Garlock as a remaining solvent defendant, evidence of plaintiffs' exposure to other asbestos products often disappeared. Certain plaintiffs' law firms used this control over the evidence to drive up the settlements demanded of Garlock. And, Garlock suffered a few large jury verdicts when such evidence was not available. Garlock continued settling cases with relative success, but at higher amounts, until its insurance was exhausted and it filed this bankruptcy case in June 2010. Involved in the present matter are over 4000 mesothelioma claimants who had sued Garlock prior to its bankruptcy filing and also an unknown number of victims who will develop mesothelioma in the future."

iv. "The purpose of this Order is to determine Garlock's responsibility for causing mesothelioma and the aggregate amount of money that is required to satisfy its liability to present claimants and future victims. The estimates of Garlock's aggregate liability that are based on its historic settlement values are not reliable because those values are infected with the

impropriety of some law firms and inflated by the cost of defense. The best evidence of Garlock's aggregate responsibility is the projection of its legal liability that takes into consideration causation, limited exposure and the contribution of exposures to other products. The court has determined that $125 million is sufficient to satisfy Garlock's liability for the legitimate present and future mesothelioma claims against it."

v. "After applying these factors and valuing the claims in the manner described previously, Dr. Bates discounted his estimate to present value using the Congressional Budget Office's long-term inflation and risk free rates. That is an appropriate and acceptable discount rate in these circumstances."

b. Tronox, Inc. was principally a chemical mining company that had been spun off from a much larger company primarily involved in oil and gas exploration. As part of the spin-off, substantially all of the consolidated enterprise's environmental remediation obligations and related tort liabilities were imposed upon Tronox. Notwithstanding these liabilities, the IPO for Tronox produced approximately $225 million in proceeds. In addition, Tronox incurred new indebtedness of approximately $537 million, $350 million of which was unsecured. Three years later, Tronox filed for bankruptcy protection. The bankruptcy estate sued its former parent, which had since been sold to Anadarko, and which also was a defendant.[17] Solvency opinions were issued by each of the parties and a trial ensued. Among other things, the court opinion states the following:

i. "The final step in valuing the environmental liabilities as of the date of the IPO is to reduce the future costs to present value. Prof. Newton used a rate of 2.5% as a risk-free rate, based on the yields of U.S. treasury obligations and high-grade corporate bonds. Mr. Shifrin's colleague, Mr. White, advocated the use of a 5% discount rate on the ground there should be an element of risk built into the rate. There is no question that a risk element is built into an analysis of income to be received in the future, on the ground that the expected income may never be received. However, a valuation of environmental and similar liabilities does not take into account the possibility that the debtor may not be able to pay the obligation; it attempts to arrive at a "fair valuation" of the liability regardless of ability to pay. Accordingly, Newton's discount rate is appropriate, and Defendants 5% rate results ***314** in an unduly small present value.[98] Using Newton's discount rate, Ram calculated the fair value of Tronox's environmental liabilities as at the date of the IPO as between $1.499 billion and $1.684 billion, the midpoint of which is $1.592 billion. To account for a few sites where Ram may have been overly-aggressive, the Court will use Ram's lower figure, rounded to $1.5

[17] *Tronox, Inc. v. Kerr McGee Corp. (In re Tronox, Inc.),* 503 B.R. 239 (Bankr. S.D.N.Y. 2013)

billion. This nets to an environmental liability of approximately $1.5 billion."

ii. The parties also presented expert testimony on the tort liability that Tronox faced as of the date of the IPO…. Defendants established through the Vazquez testimony that some of Dr. Martin's analysis was flawed, in that she overestimated the likelihood of liability at certain locations. However, on the record as a whole, her conclusions as to liability were far more credible than those of Dr. Vazquez. Moreover, there was no dispute that 2.5% was an appropriate discount rate. The Court will reduce her estimate of a present value of the tort claims by $100 million to account for her overestimation of liability at some of the sites. This results in a present value of tort claims of $257 million as of the date of the IPO. Adding this liability to the lowest estimation of liability of Dr. Ram, Tronox's legacy liabilities from environmental and tort claims as of the IPO date totaled $1.757 billion, or $1.27 billion (rounded) net of reimbursements of $484.4 million.[100] Tronox's other liabilities, the value of which was not disputed, totaled approximately $803 million.[101] This brings the fair value of its liabilities to $2,073,000,000. Based on these findings as to the fair value of Tronox's liabilities, Tronox was insolvent as of the IPO date in that its liabilities at a fair valuation exceeded the value of its assets, even if we use Defendants' highest and most aggressive value for the assets. In any event, we turn now to the asset side of the insolvency analysis.

7. In the context of employing the rate of return on the reserves set aside to fund the obligation, consider the following from the Fourth Amended Disclosure Statement with Respect To Fourth Amended Plan for the Adjustment of Debts of the City of Detroit.
    a. "The City has set a goal of achieving a 70% and 75% funded status for GRS and PFRS, respectively, based upon an assumed investment rate of return of 6.75%, by June 30, 2023 and based further on the market value of assets, not a smoothed value of assets."
    b. "Specifically, the calculation of the aggregate amounts of the Allowed PFRS Claims in Class 10 and the Allowed GRS Claims in Class 11 utilizes, among other assumptions, a 6.75% discount rate to value liabilities and a 6.75% investment return rate for future growth of assets. This investment return rate is less than (a) the net 8% investment return rate historically utilized by PFRS in calculating the actuarial underfunding of the PFRS pension plan and (b) the net 7.9% investment return rate historically utilized by GRS in calculating the actuarial underfunding of the GRS pension plan. In both cases, the City has utilized the lower rate as a measure to ensure that both GRS and PFRS utilize prudent and conservative investment policies going forward to protect the assets in both pension plans from unnecessary and imprudent risk of depletion to the detriment of the plan beneficiaries and also to insulate the City – given its extremely limited cash resources – from unforeseen and unbudgeted increases in required future contributions to the pension plans that could cause the City to

experience budget deficits in the future. The City believes that its use of these revised investment return assumptions is consistent with the trend by governmental entities to reduce pension investment return assumptions. In 2012, for example, the California Public Employees' Retirement System (known as CalPERS) – the nation's second-largest public pension fund – reduced its assumed rate of return from 7.75% to 7.5%. The particular rates used in the Plan – although lower than most jurisdictions – nonetheless align with the unique financial inability of the City to weather unanticipated pension investment loss. Certain other pension funds utilize assumed rates of return that are equal to, or lower than, those utilized by the City. For example, Washington D.C.'s Teachers' Retirement System and Police Officers' and Fire Fighters' Retirement System both use an assumed rate of return of 6.5%, and the Indiana Public Retirement System uses a 6.75% rate of return. The City believes that these conservative assumptions are particularly appropriate given the large percentage of investments held by the pension funds that do not have a readily determinable market value and the uncertainty to actual asset values held by the pension plans as a result."

Controversial Valuation Issues in the Context of Financial Distress and Bankruptcy

Controversy Surrounding the Use of Company-Specific Risk Premiums

1. An essential element when assessing the value of a business interest or the enterprise value of a company using an income approach is the discount rate to be employed to determine the present value of future cash flows. Whether the valuation analyst is assessing the value of equity or the entire business enterprise on a going-concern basis, it is necessary to develop an estimate for the cost of equity capital. Various methodologies are employed in developing such as assessment, such as the:
    a. Capital Asset Pricing Model (CAPM);
    b. Modified CAPM;
    c. Fama and French Factor Models;
    d. Build up Method; and
    e. Duff & Phelps Risk Premium Study

2. Some valuation analysts assert that, in many instances, these models do not capture all the risk inherent in the investment of a small to mid-sized, privately-held company (particularly if that company is experiencing financial distress) and that an additional element of risk must be added to the cost of equity capital reflected in the aforementioned models. This addition premium, which is largely developed using subjective methods, is typically called a company-specific risk premium.

3. No controversy exists regarding the existence of company-specific risk.[18] The controversy surrounding company-specific risk is whether or not such risk is "priced" in security returns. In other words, are investors compensated for bearing company-specific or unsystematic risk?

4. Arguing in favor of company-specific risk premiums, Shannon Pratt and Roger Grabowski state the following:
    a. "In this chapter the authors of this book are initially addressing C-SRP in the context of an adjustment to cost of equity capital estimates derived from a sample guideline public companies to account for differences in risk between a subject company that is not public and the guideline public companies."[19]

5. Robert Reilly, who also argues in favor of company-specific risk premiums, states the following:
    a. "Inexperienced valuation analysts sometimes ask: "Why not use the CAPM (or any other cost of equity model) as it was originally developed?" After all, they mention that CAPM developer William F. Sharpe received the Nobel Prize in economics for his groundbreaking work on measuring the cost of capital. Surely

[18] Company-specific risk is also referred to as unsystematic risk, diversifiable risk or idiosyncratic risk in finance and valuation texts and in academic research.
[19] Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 5th ed. Hoboken, New Jersey: John Wiley & Sons, Inc., 2014): 375.

the Nobel Committee would not have recognized Sharpe for developing a cost-of-capital model that was still a work in progress."

b. "These inexperienced valuation analysts are effectively asking: "Why do we need to modify the CAPM (or any other cost of equity model) for consideration of company-specific risk?" The answer is that the CAPM (and each other cost of equity model) is perfectly suited for the purpose for which it was developed. However, the purpose for which the CAPM was developed is not the purpose to which valuation analysts generally apply this cost of equity model."
c. "The CAPM was developed for, and is used by, investment managers who invest in publicly traded securities as part of a diversified portfolio of publicly traded securities. The CAPM (and each other cost of equity model) is well-suited to estimate the required return on investment for this purpose. However, valuation analysts need to estimate the cost of equity capital for purposes of the bankruptcy valuation of a closely held business, a fractional ownership interest in a closely held business, or an intangible asset. The CAPM has to be modified to achieve this purpose."
d. "The CAPM (and every other cost of equity model) is based on a number of theoretical assumptions with regard to the subject investment security. These theoretical assumptions are as follows:
    i. Perfect liquidity
    ii. Many potential buyers
    iii. No transaction costs
    iv. No price fluctuation during sale
    v. Perfect diversification
    vi. No wealth concentration
    vii. Liability limited to investment
    viii. Borrowing / lending at risk-free rate
    ix. Investment can be divided into small units (i.e., shares)
    x. No transaction-related taxes"
e. "These theoretical assumptions are not always applicable with regard to the valuation of publicly traded securities. However, these theoretical assumptions are almost never applicable with regard to the bankruptcy valuation of closely held ownership interests."[20]

6. However, many academics and practitioners argue that company-specific risk premiums should not be applied because, among other things, there is no evidence to support the assertion that investors should be compensated for assuming company specific, or unsystematic, risk. Furthermore, many academics point out that the presumption of a company-specific risk premium would violate the premise of arbitrage.
    a. Regarding the later point, Jonathan Berk and Peter Demarzo state that, in essence, that the presumption of a company-specific risk premium would represent a violation of the no-arbitrage principle. In particular, they state that "if the

[20] Robert F. Reilly, Analysis of Company Specific Risk in Bankruptcy Business Valuations, *ABI Journal*, February 2008, 48-54.

> diversifiable risk of stocks were compensated with an additional risk premium, then investors could buy the stocks, earn the additional premium, and simultaneously diversify and eliminate the risk. By doing so, investors could earn an additional premium without taking on additional risk. This opportunity to earn something for nothing would quickly be exploited and eliminated. [21]"

7. Furthermore, Richard Brealey, Stewart Myers and Franklin Allen state the following regarding company specific risk premiums:
    a. "Fudge factors in discount rates are dangerous because they displace clear thinking about discount rates."[22]

8. A number of court cases and academic research address the issue of company-specific risk premiums. A good overview of academic research that addresses this issue are contained in:
    a. The 16th chapter of Shannon Pratt and Roger Grabowski's cost of capital book.[23]
    b. A white paper prepared by Brian Calvert and David Smith entitled "Company-Specific Risk Premiums: Update on the Scholarly Research."[24]

9. Some court cases with which we are familiar that specifically discuss and address the appropriateness and application of company-specific risk premiums are as follows:
    a. *Delaware Open MRI Radiology Associates, P.A. v. Howard B. Kessler et al.* (Court of Chancery of State of Delaware, Cons C.A. No. 275-N).
    b. *In re Orchard Enterprises, Inc.*, 2012 WL 2923305
    c. *In re American Classic Voyages Co.*, 367 B.R. 500 (2007)

[21] Jonathan Berk and Peter Demarzo, *Corporate Finance*, (New York: Pearson, 2007): 305.
[22] Richard A. Brealey, Steward C. Myers, and Franklin Allen, *Principles of Corporate Finance*, 11th ed. (New York:McGraw-hill/Irwin): 230.
[23] Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 5th ed. (Hoboken, New Jersey: John Wiley & Sons, Inc., 2014).
[24] R. Brian Calvert and David C. Smith, "Company-Specific Risk Premiums: Update on the Scholarly Research," March 20, 2011.