

Complex Commercial Valuation

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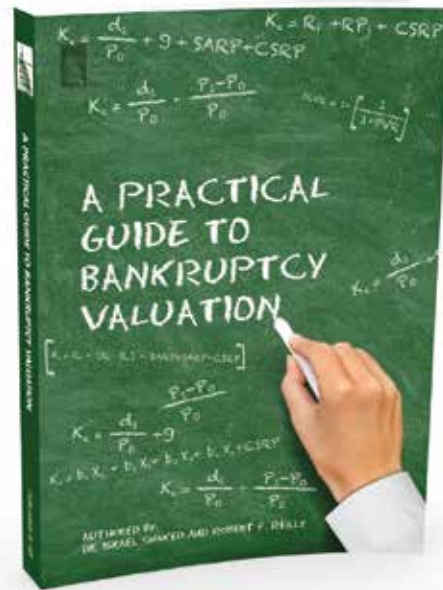
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A Practical Guide to Bankruptcy Valuation

A Practical Guide to Bankruptcy Valuation helps both practitioners and students navigate the complex task of valuing a bankrupt or other financially distressed business, and provides practical guidance on the selection and application of valuation approaches, methods and procedures. Partially drawn from articles that have appeared in the *ABI Journal*, the book contains a wealth of information on how solvency and capital-adequacy analyses, creditor-protection issues, debtor-in-possession financing, staffing costs, bankruptcy taxation issues and fresh-start accounting issues, among others, are factored into properly valuing a bankrupt company. Interspersed with helpful charts and hypothetical examples (some based on real cases), the book describes the generally accepted approaches for valuing the assets and securities of a financially troubled business. *A Practical Guide to Bankruptcy Valuation* lays a solid foundation for those seeking a better understanding of valuation within the bankruptcy context.



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Complex Commercial Valuation in Bankruptcy (Introduction)

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Overview



Examples of Valuation in Bankruptcy

- Asset Sales and Transfers
- Plan Confirmation
- Corporate Liquidation
- Fraudulent Conveyance Actions
- Preference Actions



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Keys to a Successful Valuation

1. What is the objective of the valuation?
2. What is the relevant premise of value and standard of value?
3. Which valuation methodologies are appropriate?
4. Which valuation metrics are relevant and how are they defined?
5. Are valuation discounts or premiums applicable?



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Defining Premise & Standard of Value



Premise of Value

- **Going Concern**
 - The entity will continue to operate in its current form.
- **Liquidation**
 - The entity will cease to operate and its assets will be sold.
- **Forced Liquidation**
 - Auction.



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Standards of Value

- **Fair Market Value**

- Hypothetical willing buyer and seller, each with reasonable knowledge of relevant facts, neither under compulsion to buy or sell.

- **Investment Value**

- Value to a specific buyer.

- **Fair Value**

- Typically similar to fair market value, but the definition depends on jurisdiction and context. For example, the Delaware Chancery's definition of fair value excludes deal synergies and valuation discounts.



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Valuation Methodologies



Valuation Methodologies

■ Income Approach

- Determines a company's value by discounting projected future cash flows or income back to the valuation date using the company's discount rate.
- One of the most commonly utilized forms of the Income Approach is the Discounted Cash Flow (DCF) method.

■ Adjusted Asset Approach

- Determines a company's value by adjusting the book value of assets and liabilities to the applicable Standard of Value.
- Commonly utilized to value holding companies.



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Valuation Methodologies

■ Market Approach

- Comparable Publicly Traded Company Multiple Valuation Analysis (**CompCo**) – determines a company's value based on multiples of publicly traded comparable firms.
- Comparable Precedent Transactions Multiple Valuation Analysis (**Comp M&A**) – determines a company's value based on multiples of comparable firms that were acquired.

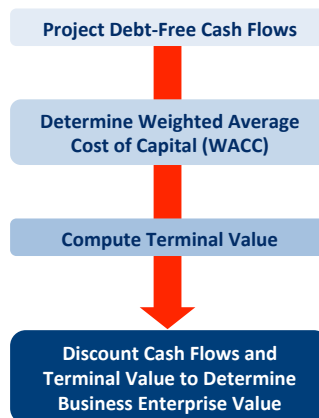


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Income Approach

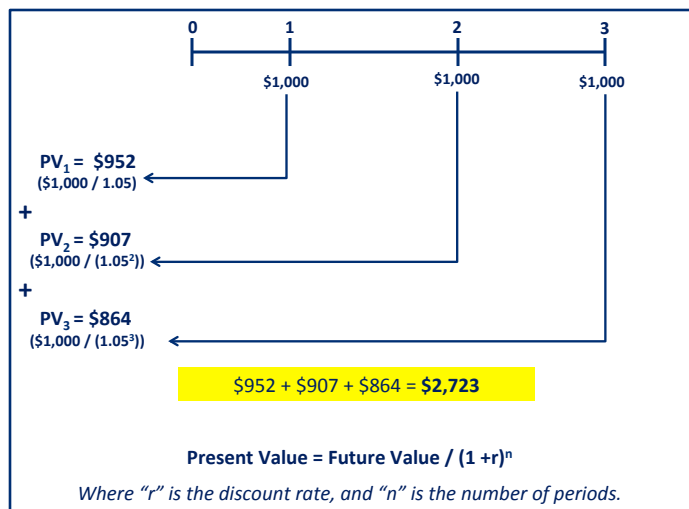


Income Approach – Discounted Cash Flow



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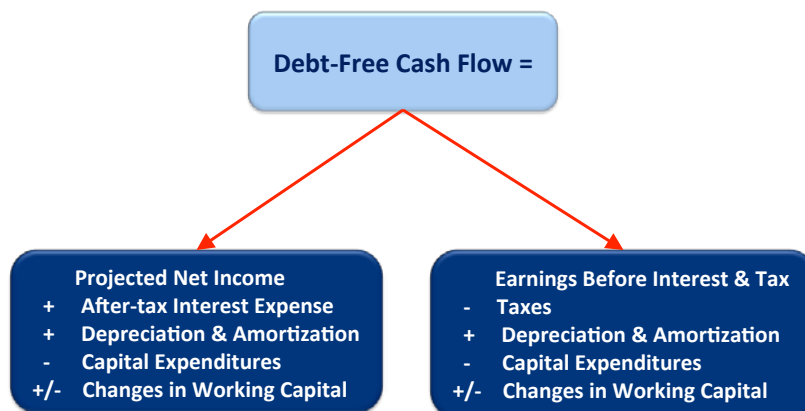
Present Value Example – 5% Discount Rate



MSG

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1. Compute Projected Debt-Free Cash Flow



MSG

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2. Determine Cost of Capital

- **Compute** the costs of debt and equity capital
 - Utilize the after-tax cost of debt. (Interest Rate * (1-Tax))
 - Calculate the cost of equity, typically using the CAPM equation¹.
- **Weight** each cost by its proportion of the firm's capital structure.
- **Sum** together the costs to derive the firm's cost of capital.



Note: (1) The CAPM equation: Cost of Equity = Risk Free Rate + Company Beta * Equity Risk Premium + Additional Premiums (if merited)

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3. Determine Terminal Value

- A terminal value accounts for cash flows expected to be received after the projection period has ended.
- In general, terminal values are calculated using two methods:
 - Perpetuity Growth Rate (constant growth model)
 - Terminal multiple (e.g. based on EBIT or EBITDA multiples)



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Market Approach



Market Multiple Analysis

Select Comparable Companies or Transactions

Determine the Appropriate Valuation Multiple(s)

Calculate Multiples for Comparables

Determine the Value of Subject Company



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Example: EBITDA Multiple Valuation

1. Compute Multiples for the Comparable Companies:

$$\frac{\text{EQUITY}_{\text{comparable}} + \text{DEBT}_{\text{comparable}}}{\text{EBITDA}_{\text{comparable}}} = \text{EBITDA MULTIPLE}_{\text{comparable}}$$

2. Select the Representative Multiple:

➤ Examples include median, upper quartile, lower quartile.

3. Value Target Company:

$$\text{VALUE}_{\text{Target}} = \text{EBITDA MULTIPLE}_{\text{comparables}} \times \text{EBITDA}_{\text{Target}}$$

4. Subtract Debt to Derive Equity Value



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Adjusted Asset Approach



Adjusted Asset Approach

1. Obtain current balance sheet showing financial position of the firm.
2. Adjust assets and liabilities listed on the balance sheet to (typically) fair market value.
3. Add/subtract off-balance sheet assets and liabilities.



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Other Valuation Considerations



Discount for Lack of Control

- Standard Understanding - When equity ownership of the subject company is greater than 50% a control premium is added to the equity value.
- However – The true value of control is depends on being able to run a company differently and better.
- Value of control is dependent on facts and circumstances, and may be limited by the availability of data.



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Discount for Lack of Marketability

- Standard Understanding - All else being equal, a freely marketable interest in a business is worth more than one which is not traded regularly in public markets.
- Marketability has value because (among other things) ready liquidity can limit investment risk and reduce transaction costs.
- Assessments of discounts for lack of marketability are often accomplished through the use of quantitative models and discount studies.



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



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Background: KM Separates Its Profitable E&P Business From Legacy Liabilities

- Kerr McGee ("KM") formed in 1929 and operated and wound down a number of "dirty" businesses, including uranium mining and creosote wood treatment, leading to 2,700 environmental sites in 47 states, including 7 federal Superfund sites.
- By 2000, KM operated two main divisions – oil/gas exploration & production ("E&P") and commodity chemical production. KM's various entities reported financials on a consolidated basis.
- KM employed extensive professional services to explore strategies for spinning off the profitable E&P business and freeing it from legacy liabilities. In 2002, KM began a complex series of restructuring transactions that resulted in the E&P business in "New KM" and the chemical business and all legacy liabilities in Tronox Inc.
- After its formation, Tronox incurred \$250 M of secured debt, issued \$350 M of unsecured bonds, and raised \$225 M in equity from an IPO. All but \$40 M was "upstreamed" to New KM.
- In late 2005, Tronox and New KM entered into a Master Separation Agreement. Within months, Tronox was struggling with cash flow and implemented cost-cutting initiatives. New KM was sold to Anadarko for \$19 B. Tronox filed for chapter 11 on January 12, 2009.

Key Valuation Issue: Solvency

- Through a confirmed plan, the Anadarko Litigation Trust was formed to pursue actual and constructive fraudulent transfer claims against New KM and Anadarko Petroleum (collectively, "Defendants").
- For both claims, the focus on expert testimony was on (1) whether Tronox received reasonably equivalent value ("REV"), and (2) whether Tronox was insolvent or rendered insolvent by the transfers.
- Defendants did not dispute REV – approximately \$17 B transferred in exchange for \$2.6 B. Defendants focused on whether REV should be determined on an entity-by-entity or consolidated basis. The Court ruled that, under the facts of the case, REV should be judged on a REV basis.
- Focus of opinion on solvency issues.
- Trial on summary judgment last 34 days, 28 experts were called, 6,100 exhibits were introduced, and the written opinion was 110 pages with 144 footnotes.

Defendants: Contemporaneous Market Value is Most Reliable

- Contemporaneous market valuation is most reliable measure of solvency (i.e., Tronox raised capital through secured/unsecured debt and IPO; Apollo Investors offered to purchase Tronox for \$1.3 B in June 2005)
- Ex Post Analysis – Liabilities = \$1.18 B to \$1.28 B
 - Environmental – 8,000 page report based on "conceptual probability matrix" → \$280M to \$380 M, as reduced by insurance, indemnity, and tax implications
 - Tort - \$100 M
 - Other - \$800 M
- Ex Post Analysis – Assets = \$1.7 B
 - All based on March 2005 projections for IPO
 - DCF - \$1.8 B (10% weighted average cost of capital; 2.87% terminal rate)
 - Comparable Company – 15 comps based on third party analysis, not expert's independent analysis → 7.63x EBITDA multiple → \$1.48 B to \$1.6 B
 - Comparable Transaction – Any transaction in prior 3 years involving chemical company and over \$50 M → 8x EBITDA multiple → \$1.7 B
- Solvency Opinion – Solvent by approximately \$500 M.

Plaintiff: Market Misled by False Financials; Ex Post Analysis is Most Reliable

- Market misled by false, “sell-side” values and projections
 - New KM CFO insisted that historical model be changed → EBITDA over forecast period is \$315 M/year (contrast with 2000-2005 annual average of \$168 M)
 - March 2005 environmental liability disclosures - \$350 M demand by EPA at NJ Superfund site not reported as GAAP liability
 - Apollo “offer” not final – included material open items and was not even presented to KM board
- Ex Post Analysis – Liabilities = \$2.65 B to \$2.85 B
 - Environmental – (1) “claims” must be construed broadly under UFTA; (2) 2,500 page expert report (40,000 hours) assigned costs to only 372 of 2,746 sites → \$1.5 B to \$1.7 B
 - Tort - \$357 M
 - Other - \$800 M
- Ex Post Analysis – Assets = \$1.223 B
 - All based on February 2005, pre-IPO financials
 - DCF - \$1 B (11% average weighted cost of capital; 2.5% terminal rate)
 - Comparable Companies – 10 commodity chemical companies independently selected by expert → 6.2x EBITDA multiple → 770 M to \$ 1.23 B (\$1 B midpoint)
 - Comparable Transactions – 7 comps independently selected by expert → 6.6x EBITDA multiple → \$900 M to \$1.24 B (\$1.1 midpoint)
- Solvency Opinion – Insolvent by \$1 B to \$1.5 B

Court’s Decision: Tronox Insolvent by Any Measure

- Contemporaneous market valuation was unreliable (“inflated,” “sell-side”)
- Ex Post Analysis: Liabilities = over \$2 B
 - Environmental - \$1 B to \$1.2 B – (1) Debts/claims must be construed broadly under UFTA; (2) Plaintiff’s expert was only expert – before or after transaction – to perform any comprehensive analysis of environmental liabilities; (3) Plaintiff’s expert failed to account for any insurance, indemnity, or tax implications, so \$500 M reduction justified.
 - Tort - \$257 M – Plaintiff’s expert overstated liabilities, so \$100 M reduction justified
 - Other - \$800 M
- Ex Post Analysis: Assets – Even using Defendants’ asset value (\$1.7 B) and Plaintiff’s conservative liability values (as adjusted), Tronox was insolvent by \$300 M
 - “The extent of insolvency need not be calculated to the dollar.”
 - Court rejects use of March 2005 financials as “inflated” and “sell-side”
 - DCF – Court agrees with Plaintiff’s \$1 B value based on February 2005 financials
 - Comparable Companies – Defendants’ comps included larger/more diversified companies and specialty companies, leading to inflated EBITDA multiple (and were based on inflated March 2005 financials); Court agrees with Plaintiff’s \$1 B value
 - Comparable Transactions – Court rejects Defendants’ comps and use of March 2005 financials → \$1.1 B

Tronox Takeaways

- Contemporaneous market valuation of solvency is inappropriate where information available to market may be false or misleading
- Before questionable restructuring transaction that is likely to be attacked, obtain an independent and robust solvency opinion
- Appreciate importance of unique valuation issues like legacy environmental liabilities and how they should change analysis (e.g., Tronox's pre-transaction restructuring advisor analyzed risks based on traditional LBO issues and ignored unique implications of environmental liabilities)
- "Claims" and "debts" have broad meanings under UFTA and the Bankruptcy Code
- For asset valuations, the quality of comps is paramount in ascertaining an appropriate EBITDA multiple

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Eastman Kodak Company (Kodak)

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Case Facts

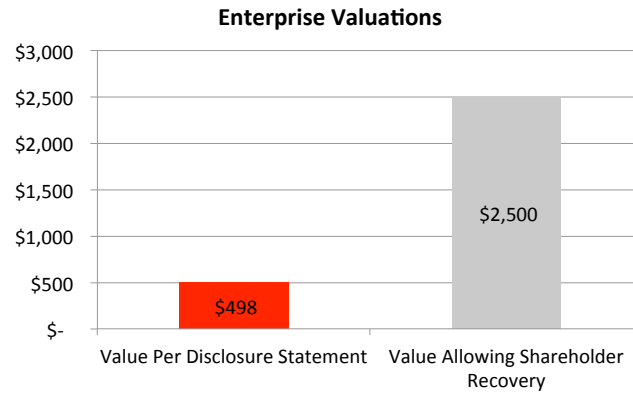
- January 19, 2012 – Kodak files for Chapter 11.
- Shortly after the petition date, certain Kodak shareholders request that the U.S. Trustee form an equity committee.
- February 29, 2012 – U.S. Trustee denies the shareholders' request.
- Shareholders file a motion seeking the appointment of an equity committee.
- June 28, 2012 – The Court denies the shareholders' motion for a committee.
- Shareholders file new motions opposing the plan of reorganization and urge the appointment of an equity committee. Shareholders also submit documents, including those prepared by two expert witnesses.
- Debtors, U.S. Trustee and the Creditors' Committee all oppose appointment of an equity committee, and file motions and expert declarations in support of their position, as well as motions to exclude the shareholders' experts.
- August 5, 2013 – a hearing is held to resolve these issues.



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Kodak – Valuation Issues

\$millions



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Kodak – Shareholder Allegations

- Shareholders contend that Kodak's Disclosure Statement grossly underestimates the fair market value of Kodak's assets, primarily its intellectual property. Supported by testimony from:
 - Patent Expert – Testified that the value of Kodak's U.S. patent portfolio ranged from \$1.6 billion to \$2.5 billion.
 - Brand Expert – Testified that the value of Kodak's brand ranged from \$400 million to \$1 billion.
- Shareholders contend that the Plan of Reorganization gives up \$2.6 billion in Net Operating Losses which could provide substantial value to the reorganized company.



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The Court's Criticism of Shareholders' Patent Valuation

- Expert spent only 5 hours (and his firm spent 10 hours) valuing Kodak's 8,532 patents using a Discounted Cash Flow methodology. Expert admitted that it would take his firm 5,000 hours to perform a full analysis of the portfolio.
- Expert used revenue projections \$250-350 million per year. These figures are from January 2012, prior to the sale of the largest and most valuable portion of the patent portfolio. Recent projections from most recent financial statements put annual revenue at \$35 million.
- Expert did not consider that licenses might already have been granted on the remaining portfolio, or that the remaining patents may be essential to Kodak's core business.
- Expert relied on the past revenue generating capacity of the patent portfolio, rather than estimates of future performance.
- Expert was a lawyer who had practiced for only a year when he founded his own firm in 2009.



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The Court's Criticism of Shareholders' Brand Valuation

- Expert and her firm spent only 6 hours before producing a "Kodak Preliminary Brand Valuation" using the Relief from Royalty methodology.
- Expert had extensive experience valuing brands and had frequently testified, but admitted she had not had the time or information to perform her analysis thoroughly, and had little or no information of the type she would typically access in performing a brand valuation, including:
 - Interviews with Kodak management.
 - Determining whether settlements have already licensed away Kodak's brand.
- Expert did not dispute that brand value is not a separate item of value in excess of the total value of an enterprise. Absent rebuttal to the contrary, which Shareholders did not produce, brand value is therefore included in the \$498 million reorganization value proposed by the Debtor.



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Common Methods of Valuing Intellectual Property

- Cost Approach
 - Historical cost
 - Replacement cost
- Income Approach
 - **Discounted cash flow – utilized by Kodak Patent Expert**
 - **Relief from royalty – utilized by Kodak Brand Expert**
 - Excess earnings method
- Market Approach
 - Comparable market value
 - Comparable royalty rate
- Real Options Approach



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The Court's Other Valuation Criticisms

- Shareholders argued that the use of certain multiples resulted in enterprise valuations of Kodak as high as \$3.7 billion. However no testimony was introduced to support that these multiples were appropriate for valuing Kodak.
- Shareholders argued that the plan of reorganization “unnecessarily” gives up \$2.6 billion in Net Operating Losses (NOLs). The court recognized that NOL’s could provide benefit, but to creditors rather than shareholders, and also noted that the creditors supported a plan which would result in their loss.
- The Debtor’s valuation of the reorganized company was not rebutted by the Shareholders.



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Kodak – Select Takeaways

- Credible valuations typically take time. There is no such thing as a “back of the envelope” valuation.
- Valuations should utilize the most current and relevant information.
- Historical cash flows cannot be blindly extrapolated to the future. Sales and/or acquisitions of assets can create substantial uncertainty as to an entity’s future cash flows.
- Intellectual Property assets should not be “double counted” in valuation. If they contribute to the company’s cash flows, they cannot be added to the computed enterprise value of the business.
- Certain “contingent” assets, like NOLs, have value only to the extent that they can be monetized.



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Limitations of DCF Valuation in Bankruptcy

Lessons from Genco Shipping

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DCF in Bankruptcy

Two common requirements for valuation in bankruptcy

- Plan confirmation
- Avoidance actions

Discounted Cash Flow is often cited by business courts as primary method of valuation

But limitations of DCF can be exacerbated in bankruptcy

- Lack of predictable cash flows
- Build-up of excess inventory
- Significant restructuring of operating business
- Potential liquidation

If lesser weight is accorded to DCF, greater weight may be given to asset- or market-based valuation approaches

***Genco Shipping* valuation trial and *TOUSA* avoidance litigation provide examples for practitioners**

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Genco: A Quick Summary

- Genco Shipping and Trading Limited is one of the world's largest dry bulk shippers, operating a fleet of 53 shipping vessels.
- On April 21, 2014 Genco filed a voluntary prepackaged Chapter 11 petition with an RSA that was supported by a strong majority of senior secured lenders.
- At filing, Genco reported assets of \$3.2B and liabilities of \$3.2B, including \$1.3B of senior secured debt.
- Under the proposed plan, existing equity holders were to receive warrants covering 6% of the new equity. The statutory Equity Committee rejected the plan.
- Judge Lane of SDNY agreed to a confirmation hearing and valuation trial that took place in June 2014.
- Judge Lane found the Equity Committee out-of-the-money and not entitled to recovery.

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Genco Valuation Testimony and Findings

Five valuation experts: 3 for Debtor and 2 for Equity Committee

Debtor argued for court's adoption of net asset value (NAV)

Equity Committee weighted multiple approaches, including:

- 37.5% for both DCF and comparable company
- 15% for NAV, based primarily on value of vessels

Court gave "substantial", but not exclusive, weight to NAV finding the market approaches to be "useful"

Court rejected DCF as "not appropriate" for valuing Genco, citing:

- "Highly speculative" projections
- Low barriers to enter shipping industry facilitated by ease of acquiring ships (Genco's main asset).

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Why was DCF Rejected in Genco?

Court rejected Equity Committee's DCF analysis

"No accurate projections exist in this case. ... all parties agree that dry bulk shipping rates are extremely volatile and difficult to predict."

Weakness of "key input" to projections – forecasted shipping rates. Court found Debtor's forecasting expert to be "far more persuasive".

The court cited proxy statements for third-party M&A transactions in the shipping industry. These statements emphasized NAV.

DCF valuation conclusion was "significantly" higher than plaintiff's other valuation conclusions

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Cramdown Interest Rates

A Valuation Perspective

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A Brief History of the Formula Approach

Cram down rate is used to compute “present value” of future claim payouts to objecting secured lenders under a confirmed plan of reorganization

Formula Approach derives cram down interest rate as:

- Base rate (Prime or Treasury)
- Plus: small risk premium of 1% - 3%

Formula Approach upheld by US Supreme Court in *Till* (2004)

- Chapter 13 bankruptcy
- \$4,000 debt secured by automobile

SDNY adopted Formula Approach in *Momentive* Chapter 11 plan confirmation (2014)

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Momentive: A Quick Summary

- Momentive is one of the world's largest producers of silicones and silicone derivatives, and is a global leader in the development and manufacture of products derived from quartz and specialty ceramics.
- On April 14, 2014 Momentive filed a voluntary Chapter 11 petition with an RSA that was supported by a strong majority of second lien creditors.
- At filing, Momentive reported assets of \$550M and liabilities of \$3.5B.
- Under the proposed plan, first and 1.5 lien creditors were to receive payouts to satisfy allowed claims over approximately 7 years. Creditors objected to proposed cram down rate.
- Judge Drain of SDNY issued bench ruling in August 2014 at plan confirmation hearing.
- Judge Drain firmly upheld *Till* Formula Approach, making only small modifications to debtor's proposed risk premium. Affirmed on appeal to District Court.

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Cram Down Rate: Testimony

Debtor proposed:

- Formula approach based on U.S. Treasury rates
- 7-year payout of \$1.1B allowed claim to first lien at 3.6% (1.5% premium)
- 7.5-year payout of \$250M allowed claim to 1.5 lien at 4.09% (2% premium)

Creditors proposed:

- Market-based approach
- Reliance on *committed* facility debtor had secured to fund payout to first and 1.5 lien creditors (prior to demand for make-whole)
- First lien: LIBOR + 4%, with 1% LIBOR floor
- 1.5 lien: LIBOR + 6%, increasing quarterly by 50bps (to cap)

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Cram Down Rate: Findings

Notwithstanding “footnote 14” in *Till* the Formula Approach is fully applicable to Chapter 11 bankruptcies

- Two-step approach also rejected (if no market rate, then formula)

Cram down rate should not reflect “profit, fees or costs” of lender

Feasibility of plan (upon confirmation) significantly reduces risk of cashflows

Factors for determining risk premium (1% - 3%):

- Circumstances of estate
- Nature of collateral
- Terms of cram down note
- Duration and feasibility of plan

As debtors proposed Treasury rate (instead of prime) Judge Drain increased the risk premium by .5% (first lien) and .75% (1.5 lien)

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Formula Approach: What's Next?

Assume base rate will be Treasury or Prime. Focus on risk premium.

Heavily scrutinize plan projections to assess risk of cash flows servicing payout

- Examine discount rates used to value re-organized entity
- Consider expert testimony to assess extent of plan “feasibility”

Assess value of collateral relative to amount of allowed claim

- The greater the cushion, the lower the risk premium

Note terms that may influence risk premium

- Amortization schedule
- Priority
- Non-cash interest

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