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Presented by: NCBJ | National Conference of Bankruptcy Judges 2018

Monday, October 29

11:00 AM - 12:30 PM | CC Lila Cockrell Theatre

Remember the Alamo: Shareholders vs. Hedge Funds

92nd Annual
National Conference of Bankruptcy Judges

October 28–31, 2018
San Antonio, TX

Remember the Alamo:
Shareholders vs. Hedge Funds

Hon. Laurie S. Silverstein, U.S. Bankruptcy Court, D. Del.
Neil Gupta, SSG Capital Advisors
Ann Miller, Cowen's Special Situations Group
Ian T. Peck, HaynesBoone
Camisha L. Simmons, Simmons Legal PLLC
Robert J. Stearn, Jr., Richards Layton & Finger, P.A.

Remember the Alamo:
Shareholders vs. Hedge Funds

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In re Horsehead Holding Corp.: A Case Study for Valuation Issues

Robert J. Stearn, Jr., Richards Layton & Finger, P.A., and Camisha L. Simmons, Simmons Legal PLLC*

Horsehead was a publicly-traded producer of zinc and nickel-based products with over 150 years in the industry. It was also one of the largest recyclers of electric arc furnace dust and a leading recycler of waste for the United States steel industry. Headquartered in Pittsburgh, Horsehead and its affiliates had seven production and/or recycling operations across the United States and Canada. Facing a precipitous drop in zinc prices[1] and suffering from a liquidity crisis caused by startup issues at a newly constructed zinc-processing facility ("Mooresboro"), Horsehead defaulted on its senior line of credit and filed for Chapter 11 protection in Delaware on February 2, 2016. *In re Horsehead Holding Corp.*, No. 16-10287 (Bankr. D. Del.).

The debtors[2] negotiated a plan of reorganization with their key creditor constituencies, including a group of hedge funds that had acquired a controlling interest in the secured and unsecured notes, and that served as the plan sponsors (the "Plan Sponsors") and DIP lenders. The plan contemplated taking Horsehead private and converting debt to equity, with existing equity being wiped out. The plan also proposed to eliminate over $400 million of debt, with the Plan Sponsors providing enough capital to pay the administrative and senior secured claims in full. Further, the Plan Sponsors committed up to $100 million in additional capital to help fund repairs

[*] With assistance from Brian L. Gifford and Laura F. Atack, Law Clerks to the Hon. John E. Hoffman, Jr., Southern District of Ohio.

[1] According to Horsehead's disclosure statement, the price of zinc dropped about 30% between 2014 and 2015, while nickel prices dropped approximately 41% over the same period. *Horsehead*, No. 16-10287, Doc. 605 (Bankr. D. Del. Apr. 14, 2016).

[2] The case of Horsehead Holding Corp. was jointly administered with those of Horsehead Corporation, Horsehead Metal Products, LLC, The International Metals Reclamation Company, LLC, and Zochem Inc. *Horsehead,* No. 16-10287, Doc. 49 (Bankr. D. Del. Feb. 3, 2016).

necessary to restart the debtors' Mooresboro facility. Senior secured and unsecured noteholders would receive substantially all of the equity in the reorganized entity. The Court appointed an equity committee to investigate the rapid decline in Horsehead's value shortly before and after the petition date, and to determine if the public shareholders were unjustly being left with no recovery under the plan. *Horsehead*, No. 16-10287, Doc. 857 (Bankr. D. Del. May 2, 2016).

The debtors' expert prepared a valuation in support of the plan with a mid-point estimate of approximately $435 million in the scenario in which the company reinstated production at Mooresboro—a slightly lower value than the $448 million implied plan value and significantly lower than the $651 million necessary to provide a return to equity. The expert for the equity committee, on the other hand, calculated a valuation mid-point of $843 million. Based on that valuation, the equity committee argued that it was entitled to a recovery and that the debtors' plan violated the absolute priority rule by providing certain noteholders more than they were entitled to receive while paying equity nothing. The parties also disagreed as to whether the valuation that was needed in order for equity to be in the money (the "equity hurdle") should include the $100 million of additional capital contributed by the Plan Sponsors. Because there was no formal marketing process that would have established value (as the DIP loan agreement contained a "no shop" provision), the Court found that it had to rely on expert opinion to determine Horsehead's enterprise value.

Horsehead Holding Corp. provides a good case study for the numerous issues that may arise in a Chapter 11 valuation trial. The following not only summarizes some of the issues that arise in a valuation dispute involving a large company like Horsehead, it also provides an overview of common evidentiary issues in such litigation.

I. VALUATION ISSUES

A. Projections

1. As most valuation methodologies are forward looking, business projections play a critical role in valuation. In *Horsehead*, the debtors and the equity committee disputed the debtors' projections. The dispute centered not on the business plan itself, but rather on a critical input to the projections: assumptions concerning future zinc prices. The equity committee argued that the debtors' assumptions concerning future zinc prices were too conservative, thereby reducing projected revenues and depressing value. The debtors relied on pricing assumptions provided by their financial advisor; the equity committee's financial advisor looked to projected zinc prices provided by an independent third party.

2. The Court sided with the equity committee. As for the debtors' projections, there was evidence that (a) management simply deferred to its financial advisor (who in turn deferred to other financial analysts without assessing those analysts' track records), (b) management's record of predicting zinc prices was poor, and (c) management used conservative zinc pricing assumptions for business planning (as opposed to valuation) purposes. By contrast, the independent third party relied on by the equity committee provided a list of analyst projections (which its financial advisor averaged) and evaluated the analysts' track records.

B. Applicable Valuation Methodologies

1. The equity committee's expert used only the discounted cash flow (or "DCF") methodology; the debtors' expert relied on the DCF and comparable companies (a/k/a guideline public companies) methodologies. Neither advisor relied on the comparable transactions (a/k/a precedent transactions) methodology.

2. Although the Court accepted both advisors' approaches, as each had defensible reasons for taking its approach, in its ruling the Court focused on the equity committee's DCF-based valuation.

C. DCF

1. A DCF valuation involves estimating the company's future cash flows and discounting them to present value.[3] The DCF methodology essentially has three inputs: (1) projected cash flows (derived from projections); (2) a

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[3] For a discussion of the DCF approach and other valuation methodologies from a bankruptcy judge's perspective, *see generally* Hon. Christopher S. Sontchi, *Valuation Methodologies: A Judge's View*, 20 Am. Bankr. Inst. L. Rev. 1 (2012). Judge Sontchi's article also identifies numerous cases in which courts have considered and applied these methodologies. *See id.* at n.5.

discount rate; and (3) a perpetuity growth rate. The parties in *Horsehead* disputed all three inputs.

2. Cash Flows

   (a) As discussed above, there was no dispute over the debtors' business plan itself; only as to projected zinc prices, which would determine the debtors' revenues and cash flows under its business plan.

   (b) Because the Court accepted the equity committee's projected zinc prices, it also accepted equity's higher projected cash flows, thereby increasing value.

3. Discount Rate

   (a) Typically, discount rate is determined using the weighted average cost of capital, or WACC. Valuation professionals calculate a projected cost of equity (typically using the capital asset pricing model, or CAPM) and a projected cost of debt, and weight them using an assumed capital structure.

   (b) Cost of Equity (CAPM)

      (i) There are a number of inputs (and potential inputs) here, including levered beta, risk free rate, market risk premium, size premium, company specific premium, cost of debt and tax rate/after tax cost of debt. In *Horsehead*, the primary area of dispute was beta.

      (ii) Levered Beta

         (1) "One of the first steps in calculating the cost of equity portion of the WACC is selecting a peer group of publicly traded companies to establish a 'beta,'" which "reflects the risk associated with an equity investment in the firm relative to the risk of an investment in the equity market as a whole.'" *U.S. Bank, N.A. v. Wilmington Tr. Co. (In re Spansion)*, Inc., 426 B.R. 114, 133 & n.32 (Bankr. D. Del. 2010) (quoting Peter V. Pantaleo & Barry W. Ridings, *Reorganization Value*, 51 Bus. Law. 419, 434 (1996)). Generally, levered betas are observed for comparable companies, those betas are then unlevered (because each comparable company's capital structure affects its beta), a mean or median beta is calculated for the comparable companies, and that mean/median beta is then levered given the assumed capital structure of the subject company.

Beta was a huge battleground in *Horsehead*; there were several contested issues.

(2) Beta can be determined using various methodologies, which are applied to the valuation professional's choice of comparable companies. The financial advisor for the debtors used the "Barra Predicted Beta" for its comparable companies analysis, but the equity committee demonstrated that the Barra Predicted Beta generally has not been accepted by the courts. The equity committee relied on a standard methodology for determining historical betas and demonstrated that, with the exception of one company, its choice of comparable companies was reasonable. Its financial advisor averaged the median unlevered betas of its comparables with a beta derived from a broader set of metals and mining companies.

(3) The equity committee also demonstrated that betas for companies in commodities industries tend to be lower, and under the circumstances, the debtors' beta was, in the Court's words, "way too high."

(4) All other things being equal, a lower beta = a lower discount rate = a higher valuation. The Court accepted the lower beta presented by the equity committee's financial advisor, thereby increasing value.

(iii) Capital Structure

(1) The debtors' experts assumed a consistent capital structure both during the projection period and during the terminal period. The equity committee's experts assumed that, as Horsehead effectively was being taken private by sophisticated investors, those investors would seek to optimize Horsehead's capital structure (i.e., reduce its cost of capital) in the future by increasing debt, and thus, they assumed it would take on additional debt in the terminal period. Because, generally speaking, debt is cheaper than equity, increases in debt allocation lower the cost of capital and increase value in a DCF analysis.

(2) The Court rejected the equity committee's optimization theory, as there was testimony from management that Horsehead would not take on

increased levels of debt because it would make the company riskier.

(c) Perpetuity Growth Rate

(i) "Given the inherent uncertainty in predicting the future, one generally only uses three to five years of projections in performing a DCF analysis," and then "assum[es] that the cash flows of the firm at that [final] year will grow at a constant rate forever beyond that time" (i.e., "the perpetuity growth rate"). Sontchi, *supra* note 3, at 8. The perpetuity growth rate and the resulting terminal value of the firm "can have a significant if not dominating influence on the ultimate conclusion as to the firm's value." *Id.* at n.14. The financial advisor for the debtors assumed a perpetuity growth rate of 2.5%, in line with inflation and GDP. The equity committee's advisor assumed a perpetuity growth rate of 3.5%, to take into account management's prior statements concerning increased output and future efficiency gains at the debtors' new Mooresboro facility.

(ii) During the trial, management distanced itself from its prior statements concerning increased value and efficiency gains at Mooresboro. Accordingly, the Court found these gains too speculative and adopted the debtors' lower growth rate, which depressed value.

D. Comparable Companies

1. As the Court focused on the equity committee's valuation model, there was no separate discussion of the comparable companies methodology.

2. Under the comparable companies methodology, "value is calculated by examining the trading ranges of comparable publicly-traded companies . . . because they are the only ones for which economic data (stock value, revenue, EBITDA, EBIT, etc.) is readily available." Sontchi, *supra* note 3, at 11. "Trading ranges are viewed as a multiple of a performance metric, generally revenues, EBITDA, or EBIT[,] [and] [t]he multiples are then applied to the same metric of the company being evaluated in order to determine its value." *Id.*

E. Hurdle Rate

1. The "equity hurdle," which is the value which must be exceeded in order to provide a recovery to stockholders, is "the total of all outstanding claims, whether secured, administrative, priority, or unsecured." *In re Bush Indus., Inc.*, 315 B.R. 292, 298 (Bankr. W.D.N.Y. 2004). The hurdle rate was not technically a valuation issue in Horsehead's case, although it directly

impacted the value the equity committee had to demonstrate to be in the money.

2. Two important reasons for the debtors' bankruptcy were declining zinc prices and the expensive but failed Mooresboro facility. Although Mooresboro was projected to be profitable when/if it was repaired, it would have taken approximately $100 million to do so. The debtors had prepared two post-bankruptcy business plans—a Mooresboro Idle Scenario and a Mooresboro Ramp Up Scenario. The latter provided a higher valuation and was the focus of the valuation dispute. The Court also concluded that the Mooresboro Ramp Up Scenario was "the basis of the reorganization thesis."

3. It was generally agreed that the equity committee would need to demonstrate value of approximately $651 million to be in the money. However, the debtors argued that the Court should bake the additional $100 million needed to fix Mooresboro into the hurdle rate. Although the equity committee objected, the Court agreed with the debtors.

F. Valuation Conclusion

1. The equity committee was able to demonstrate value of approximately $654 million, which would have put it in the money.

2. But because the Court determined that the $100 million needed to fix the Mooresboro facility must be included in the equity hurdle, thereby increasing the hurdle to approximately $751 million, the Court concluded that equity fell short.

II. EVIDENTIARY ISSUES

A. Expert Reports

1. When squarely presented with the issue, most courts hold that expert reports technically are hearsay and accordingly do not come into evidence.[4]

(a) In those jurisdictions where an expert report is inadmissible evidence, the expert witness may rely upon the inadmissible materials to form his or her opinion. But the Sixth Circuit explained that Rules 702 and 703 of the Federal Rules of Evidence provide support for exclusion of the report itself:

[4] *See, e.g.*, *Bruhn Farms Joint Venture v. Fireman's Fund Ins. Co.*, No. 13-CV-4106-CJW, 2017 WL 752282, at *9 (N.D. Iowa Feb. 27, 2017) (holding that "an expert's report is hearsay and is not admissible in evidence, unless a party can establish an exception to the hearsay rule").

> Rule 702 permits the admission of expert opinion *testimony* not opinions contained in documents prepared out of court. Rule 703 allows a testifying expert to rely on materials, including inadmissible hearsay, in forming the basis of his opinion. Rules 702 and 703 do not, however, permit the admission of materials, relied on by an expert witness, for the truth of the matters they contain if the materials are otherwise inadmissible. Rather, Rule 703 merely permits such hearsay, or other inadmissible evidence, upon which an expert properly relies, to be admitted to explain the basis of the expert's opinion. . . . When inadmissible materials are admitted for explanatory purposes, the opposing party is entitled to a limiting instruction to the jury that the evidence may be considered solely as a basis for the expert opinion and not as substantive evidence.[5]

(b) If the particular jurisdiction precludes admission of expert reports on hearsay grounds, parties may seek the admission of such reports by way of pre-trial stipulation. In *Horsehead*, the parties agreed in advance of trial that the reports would come into evidence, because the parties thought it would be helpful to the Court and easier for the parties, especially given the expedited nature of the litigation.

2. Some jurisdictions, on the other hand, will allow admission of expert reports.

(a) Practitioners accordingly should familiarize themselves with the local rules and practice of the particular judge and court.[6]

(b) Although the expert report itself may be admitted into evidence by pre-trial stipulation or during trial, the fact-finder must still weigh the credibility of the expert testimony and determine the weight to give to the findings and conclusions contained in the report.[7]

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[5] *Engebretsen v. Fairchild Aircraft Corp*., 21 F.3d 721, 728–29 (6th Cir. 1994) (internal quotation marks and citations omitted).

[6] *See, e.g., In re Loudoun Heights, LLC,* No. 13–15588–BFK, 2014 WL 2928110, at *5 (Bankr. E.D. Va. June 26, 2014) (noting expert report was admitted into evidence); *In re U.S. Concrete, Inc*., No. 10–11407 (PJW), 2010 WL 3493066, at *2 (Bankr. D. Del. July 29, 2010) (taking judicial notice of expert report filed on the docket and admitting the expert report into evidence); *In re Nw. Timberline Enters., Inc*., 348 B.R. 412, 423 (Bankr. N.D. Tex. 2006) (stating two expert reports were admitted into evidence).

[7] *See, e.g., Paloian v. LaSalle Bank Nat'l Ass'n (In re Doctors Hosp. of Hyde Park, Inc.)*, 507 B.R. 558, 639 (Bankr. N.D. Ill. 2013) (noting that even though an expert report was admitted at trial, "[t]he fact finder must still consider the credibility of the expert and determine the weight to be accorded their testimony and report") (citations omitted); *In re Nellson Nutraceutical, Inc.*, No. 06–10072 (CSS), 2007 WL 201134, at *41 (Bankr. D. Del. Jan. 18, 2007) (explaining that the

B. Tendering the Witness as an Expert

1. Practitioners offering up a witness to serve as an expert on a particular subject such as business valuation should determine whether the presiding judge requires that, after the witness testifies as to his or her qualifications, including background and experience, the attorney must request that the judge approve the witness's designation as an expert on that subject.[8]

2. In some jurisdictions, an expert must be formally tendered as such and accepted by the court before being allowed to offer expert opinion testimony.

3. In other jurisdictions, however, so long as an adequate foundation is properly laid, counsel may immediately begin questioning the expert witness as to his or her opinions without a formal tender and continue to do so unless the opposing party objects.

C. Demonstrative Evidence

1. What is demonstrative evidence?

(a) Black's Law Dictionary defines "demonstrative evidence" as "[p]hysical evidence that one can see and inspect (i.e. an explanatory aid, such as a chart, map, and some computer simulations)." *Demonstrative Evidence*, Black's Law Dictionary (10th ed. 2014). Although demonstrative evidence is "of probative value and usu[ally] offered to clarify testimony, [it] does not play a direct part in the incident in question." *Id.* Demonstrative evidence may also be referred to as "illustrative evidence; autoptic evidence; autoptic proference; real evidence; [or] tangible evidence." *Id.*[9]

"expert reports and testimony meet the criteria of admissibility of expert evidence: qualification, reliability and fit" but that the court nonetheless "must examine the qualifications of the experts and the credibility of their testimony to determine the weight to give the admissible evidence") (citation omitted).

[8] *See, e.g., Krystal Energy Co. v. Navajo Nation (In re Krystal Energy Co.)*, No. 01–ap–00171–GBN, 2012 WL 32636, at * 3 (Bankr. D. Ariz. Jan. 6, 2012) (stating that "[a]lthough he has never before qualified as an expert witness in a judicial proceeding, the court overruled an objection and accepted his tender as an expert in oil equipment valuation for this case"), *report and recommendation adopted*, No. CV 12–00079–PHX–FJM, 2012 WL 1899912 (D. Ariz. May 24, 2012).

[9] *See also* Hon. Barry Russell, Bankr. Evid. Manual § 401:2 (2017 ed.) ("Demonstrative evidence, including such items as a model, map, chart, photograph, or demonstration is distinguished from real evidence in that it has no probative value itself, but serves merely as a visual aid in comprehending the oral testimony of a witness or other evidence; demonstrative evidence illustrates and clarifies.").

(b) Be on the lookout for varying meanings of "demonstrative evidence." As one article pointed out, the term is often used to refer to evidence of a completely different character (and admissibility):

> Some judges use the term demonstrative evidence to refer to any physical evidence, while others restrict the term's use to any nonadmissible exhibit to aid in understanding testimony or argument, and still others use the words demonstrative evidence to describe substantive physical evidence (such as the weapon in a murder trial). To add to the confusion, some judges use the term "illustrative" to refer to an entire subset of this evidentiary universe, sometimes using the terms demonstrative and illustrative interchangeably, yet at other times to describe discrete subparts of this evidentiary universe. Still other jurisdictions talk of "admitting" demonstrative evidence as shorthand for permitting its use at trial without formally admitting it into evidence.[10]

2. Admissibility of Demonstrative Evidence

(a) Relevant Rules

(i) Fed. R. Evid. 611(a)(1) ("The court should exercise reasonable control over . . . presenting evidence so as to . . . make those procedures effective for determining the truth."). Some courts rely on Rule 611(a)(1) as authority to admit demonstrative evidence.[11]

(ii) Fed. R. Evid. 1006 ("The proponent may use a summary, chart, or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court.").

(iii) Fed. R. Evid. 403 ("The court may exclude relevant evidence if its probative value is substantially outweighed by . . . misleading the jury[.]"). Given the predominance of bench trials, this concern is unlikely to arise in trials before the bankruptcy court.

(b) Perhaps because of the variation in terminology—and without any Federal Rule of Evidence directly on point—courts come out differently on whether demonstratives are admissible into evidence.

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[10] Maureen A. Howard & Jeffery C. Barnum, *Bringing Demonstrative Evidence in from the Cold: The Academy's Role in Developing Model Rules*, 88 Temp. L. Rev. 513, 520 (2016) (footnotes omitted).

[11] *See id.* at 522–23 & n.46 (listing cases).

The decision whether to admit demonstrative evidence is committed to the sound discretion of the trial court.[12] Although some courts will admit demonstrative evidence and some decline to do so, many courts seem to fall somewhere in between—"admitting" the evidence for a specific use or merely "receiving" the evidence for reference.[13] In *Horsehead*, the court did not admit a demonstrative into evidence.

[12] *See United States v. Paulino*, 935 F.2d 739, 753 (6th Cir. 1991) (citations omitted), *superseded by statute on other grounds as stated in United States v. Caseslorente*, 220 F.3d 727, 736 (6th Cir. 2000) ("The summaries presented here are pedagogical devices 'more akin to argument than evidence' since they organize the [factfinder's] examination of testimony and documents already admitted in evidence. Thus, strictly speaking, they do not fall within the purview of Rule 1006. This court has indicated, however, that authority for such summaries exists under Fed. R. Evid. 611(a). . . . The admission of summaries is committed to the sound discretion of the trial court.") (citations omitted).

[13] *Robinson v. Robinson-Maldonado (In re Robinson-Maldonado)*, No. 2:14-ap-01660-RK, 2017 WL 2912399, at *2 (Bankr. C.D. Cal. July 6, 2017) (receiving exhibits of data compilations for consideration "only as demonstrative evidence or argument rather than substantive evidence"); *In re Samson Res. Corp.*, 559 B.R. 360, 373 & n.53 (Bankr. D. Del. 2016) ("[T]he Court is well aware that the demonstrative evidence is not admissible, thus while referring to the demonstrative as a clear example, the Court is specifically relying on the check detail and testimony in making these comments."), *appeal dismissed*, No. 15-11934-CSS, 2017 WL 3638071 (D. Del. Aug. 23, 2017); *U.S. Tr. v. Sieber (In re Sieber)*, 489 B.R. 531, 541 n.8 (Bankr. D. Md. 2013) (admitting a summary of the debtor's monthly operating reports and payment records "as demonstrative evidence to assist the Court but not for the truth of the conclusions reached therein" and upon review of the operating reports and checks that the summary compiled, "find[ing] that the information set forth . . . is supported by the evidence admitted at trial"); *Elder-Beerman Stores Corp. v. Thomasville Furniture Indus. Inc. (In re Elder-Beerman Stores Corp.)*, 206 B.R. 142, 157 n.3 (Bankr. S.D. Ohio 1997) ("Although Plaintiff's Demonstrative Exhibit 81 was a demonstrative exhibit and not admitted as substantive evidence, the court will refer to Exhibit 81 as it conveniently summarizes the testimony given at trial by [the expert]."), *aff'd in part, rev'd in part on other grounds*, 250 B.R. 609 (S.D. Ohio 1998).

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Remember the Alamo:

Shareholders vs. Hedge Funds

Agenda

I. Introduction

II. Executive Summary

III. Valuation Issues

I. INTRODUCTION

Introduction

Panel Participants

- **Honorable Laurie Silverstein, Judge**
  - United States Bankruptcy Judge
  - District of Delaware
- **Ian Peck, Debtors' Counsel**
  - Bankruptcy and restructuring counsel
  - Haynes and Boone
- **Ann Miller, Debtors' Investment Banker**
  - Special situations investment banker
  - Cowen
- **Camisha Simmons, Creditors' Committee Counsel**
  - Bankruptcy and restructuring counsel
  - Simmons Legal
- **Bob Stearn, Equity Committee Counsel**
  - Bankruptcy litigation counsel
  - Richards, Layton & Finger
- **Neil Gupta, Equity Committee Investment Banker**
  - Special situations investment banker
  - SSG Capital Advisors

II. EXECUTIVE SUMMARY

Horsehead Background

- Publicly-traded producer of zinc and nickel-based products throughout the U.S. and Canada
  - One of the largest recyclers of electric arc furnace dust and a leading recycler of waste for the steel industry
  - Headquartered in Pittsburgh with over 150 years of operations in the zinc industry
- Precipitous drop in zinc prices coupled with constrained liquidity brought about by startup issues at a newly constructed zinc processing facility resulted in the Company defaulting on its senior line of credit
- Filed for bankruptcy protection in Delaware due to the operational and liquidity issues
- Negotiated a plan of reorganization with key constituencies including a group of hedge funds that acquired a controlling interest in the secured and unsecured notes
  - Plan contemplated taking Horsehead private and converting debt to equity, with existing equity being wiped out
  - Group of hedge funds served as Plan Sponsor as well as DIP Lender
  - DIP agreement contained a "no-shop" provision, which prevented a formal marketing process
- Court appointed an Equity Committee to investigate what happened to the Company's value shortly before and after the Petition Date and to determine if the public shareholders were unjustly being left with no recovery under the Plan

Plan of Reorganization

- Plan proposed to eliminate over $400 million of debt with the Plan Sponsors providing enough capital to pay the administrative and senior secured claims in full
- Plan Sponsors also committed up to $100 million in additional capital to help fund repairs necessary to restart zinc processing facility
- Senior secured and unsecured noteholders would receive substantially all of the equity in the reorganized entity
- Plan was overwhelmingly accepted by the voting creditors

Description	Value	Comments
Administrative Claims	$ 55,887,118	Paid in full
Secured Claims (DIP & others)	136,687,407	Paid in full
Secured Noteholders Claims	222,858,620	Equity conversion & some cash
Unsecured Claims (includes notes)	32,243,224	Cash to notes & unsecured claims
Implied Plan Value	**447,676,369**	
UCC Deficiency Claims	193,023,004	Deficiency in notes & unsecured claims
Secured Notes Redemption Fee	10,762,500	Not applicable under proposed plan
Equity Hurdle	**651,461,873**	
Additional Capital Commitment	100,000,000	Capital need to restart key facility
Equity Hurdle and Additional Capital	**$ 751,461,873**	

Valuation

- Horsehead's expert prepared a valuation in support of its plan with a mid-point estimate of approximately **$435 million** in the scenario where the Company ultimately ramps up production again at its shutdown facility
- Per the prior slide, this value is slightly less than the $448 million implied plan value and significantly less than the $651 million necessary to provide a return to equity
  - Furthermore, the Debtors argue that the $100 million of additional capital commitment should be considered in the overall equity hurdle
- Equity Committee believed the Plan violates the absolute priority rule given its expert valuation mid-point of **$843 million**
  - Equity Committee believed that $651 million is the correct hurdle without the additional capital commitment
  - As such, the Equity Committee believes its constituency should receive their rightful allocation of estate value
- Given that there was no formal marketing process conducted to dictate value, the Court determined that it must rely on expert opinion to establish enterprise value

Comparison

- The difference in enterprise value can be distilled into a handful of key categories that drive the majority of discrepancies in valuation:

Assumptions	Debtors	Equity Committee	Valuation Impact
Debtors' Valuation:			***$ 435,000,000***
Valuation Methodologies	Comps & DCF	DCF Only	(95,000,000)
Zinc Price Range (per pound)	\$0.80 - \$1.00	\$0.94 - \$1.09	205,000,000
Unlevered Beta	1.39	0.99	109,000,000
Terminal Debt / Equity Ratio	30 / 70	50 / 50	95,000,000
Perpetuity Growth Rate	2.5%	3.5%	84,000,000
Other Factors	-	-	10,000,000
Equity Committee Valuation:			***$ 843,000,000***
Equity Hurdle	$ 751,461,873	$ 651,461,873	$ 100,000,000

III. VALUATION ISSUES

Valuation Methodologies

- Debtors used both the discounted cash flow and comparable companies methodologies
- Given the Company's operational performance at the time and negative EBITDA over the last twelve months ("LTM"), the Equity Committee relied only on the DCF methodology
  - Equity Committee believed that applying a forward multiple to future EBITDA does not properly account for the investment necessary to achieve the future results and is therefore not as accurate as a DCF analysis
- Neither party relied on the comparable transactions methodology
- While the Court accepted both the DCF and comparable company approaches, its ruling focused on comparing the DCF-based valuations

Projections

- Debtors and Equity Committee did not dispute the business plan itself, but rather a critical input to the projections: assumptions concerning future zinc prices
- Equity Committee argued that the Debtors' assumptions concerning future zinc prices were too conservative, thereby reducing projected revenues and depressing value
- Debtors relied on pricing assumptions provided by its advisor while the Equity Committee looked to projected zinc prices provided by an independent third party

Zinc Prices ($ per pound):	Debtors	Equity Committee
H2 2016	$ 0.80	$ 0.94
2017	0.89	1.01
2018	1.00	1.12
2019	1.00	1.11
2020	1.00	1.09

- The Court sided with the Equity Committee, which had a **$205 million** positive valuation effect
  - There was evidence that management simply deferred to its advisors (who deferred to analysts without assessing those analysts' track records), that management's record of predicting zinc prices was poor and that management used conservative zinc pricing assumptions for business planning (as opposed to valuation) purposes
  - The independent third party relied on by the Equity Committee provided a list of analyst projections and evaluated the analysts' track records

Beta

- One of the key inputs into the discount rate used to discount the cash flows in a DCF-based valuation is beta (systematic risk of a company)
  - Betas are typically observed for comparable companies; those betas are then unlevered (because each comparable company's capital structure affects its beta), a mean or median beta is calculated for the comparable companies and that mean / median beta is then levered given the assumed capital structure of the subject company
- Beta can be determined using several different methodologies and the Debtors used the "Barra Predicted Beta" for its comparable companies (Unlevered Beta of **1.39**)
  - Equity committee demonstrated that the Barra Predicted Beta generally has not been accepted by the courts
  - Equity committee also demonstrated that betas for companies in commodities industries tend to be lower, which was not reflected in the Debtors choice of methodologies
- Equity Committee relied on a standard methodology for determining historical betas: averaged the median unlevered betas of its comparables with a beta derived from a broader set of metals and mining companies (Unlevered Beta of **0.99**)
  - Demonstrated that, with the exception of one company, its choice of comparable companies was reasonable
- The Court sided with the Equity Committee, which had a **$109 million** positive valuation effect

Valuation Issues

Capital Structure

- Another key input into the discount rate is the assumed capital structure
  - Generally speaking, debt is cheaper than equity; as such, increases in debt allocation lowers the cost of capital and increase value in a DCF analysis
- Debtors assumed a consistent capital structure both during the projection period and during the terminal period (perpetuity period beyond the projections)
- Equity Committee assumed the same capital structure as the Debtors during the projection period but assumed a capital structure with additional debt during the terminal period
  - Given that the Company was being taken private by sophisticated investors, those investors would seek to optimize Horsehead's capital structure (i.e. reduce its cost of capital) in the future by increasing debt

		Equity Committee	
Capital Structure:	**Debtors**	**2016 - 2020**	**Terminal Period**
% Debt	30%	30%	50%
% Equity	70%	70%	50%

- The Court rejected the Equity Committee's optimization theory, as there was testimony from management that Horsehead would not take on increased levels of debt because it would make the Company riskier (**$95 million** negative valuation effect)

Perpetuity Growth Rate

- Since management did not project cash flows beyond 2020, a calculation of the terminal period was used to estimate Horsehead's cash flows in perpetuity with the growth rate being one of the key assumptions
- Debtors relied upon a **2.5% growth rate**, which is consistent with the long-term historical GDP growth and inflation rate of the U.S.
- Equity Committee assumed a **3.5% growth rate**, to take into account management's prior statements concerning increased output and future efficiency gains at Mooresboro (the Debtors' new plant, which had been shut down because of construction defects that had to be remedied)
- The Court found the gains from Mooresboro too speculative and adopted the Debtors' lower growth rate, which depressed value by **$84 million**
  - During the trial, management distanced itself from its prior statements concerning increased value and efficiency gains at Mooresboro

Hurdle Rate

- Hurdle rate was technically not a valuation issue but it directly impacted the value the Equity Committee had to demonstrate to be in the money
- Two important reasons for the Debtors' bankruptcy were declining zinc prices and the expensive but failed Mooresboro plant
  - Although Mooresboro was projected to be profitable if / when repaired, it would take approximately $100 million to restart the facility
- It was generally agreed that the Equity Committee would need to demonstrate value of at least $651 million to be in the money, but the Debtors argued that the additional $100 million capital commitment should be included in the hurdle rate
- Although the Equity Committee objected, the Court agreed with the Debtors

Description	Value	Comments
Administrative Claims	$ 55,887,118	Paid in full
Secured Claims (DIP & others)	136,687,407	Paid in full
Secured Noteholders Claims	222,858,620	Equity conversion & some cash
Unsecured Claims (includes notes)	32,243,224	Cash to notes & unsecured claims
Implied Plan Value	**447,676,369**	
UCC Deficiency Claims	193,023,004	Deficiency in notes & unsecured claims
Secured Notes Redemption Fee	10,762,500	Not applicable under proposed plan
Equity Hurdle	**651,461,873**	
Additional Capital Commitment	100,000,000	Capital need to restart key facility
Equity Hurdle and Additional Capital	**$ 751,461,873**	

Valuation Issues

Conclusion

- In aggregate, the Equity Committee was able to demonstrate value of $654 million, which would have put it in the money according to the equity hurdle
- However, because the Court determined that the $100 million needed to fix Mooresboro must be included in the hurdle rate, the Court concluded that equity fell short

Assumptions	Debtors	Equity Committee	Court Ruling
Debtors' Valuation:	***$ 435,000,000***	***$ 435,000,000***	***$ 435,000,000***
Valuation Methodologies	-	(95,000,000)	(95,000,000)
Zinc Price Range (per pound)	-	205,000,000	205,000,000
Unlevered Beta	-	109,000,000	109,000,000
Terminal Debt / Equity Ratio	-	95,000,000	-
Perpetuity Growth Rate	-	84,000,000	-
Other Factors	-	10,000,000	-
Valuation:	***$ 435,000,000***	***$ 843,000,000***	***$ 654,000,000***
Equity Hurdle	*751,461,873*	*651,461,873*	*751,461,873*
Equity Value (Deficiency):	***$ (316,461,873)***	***$ 191,538,127***	***$ (97,461,873)***