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FINANCING FAILURE:
BANKRUPTCY LENDING, CREDIT MARKET CONDITIONS,
AND THE FINANCIAL CRISIS

FREDERICK TUNG*
NOVEMBER 2019

ABSTRACT

When contemplating Chapter 11, firms often need to seek financing for their continuing operations in bankruptcy. Because such financing would otherwise be hard to find, the Bankruptcy Code authorizes debtors to offer sweeteners to debtor-in-possession (DIP) lenders. These inducements can be effective in attracting financing, but because they are thought to come at the expense of other stakeholders, the Code permits these inducements only if no less generous a package would have been sufficient to obtain the loan.

Anecdotal evidence suggests that the use of certain controversial inducements—I focus on roll-ups and milestones—skyrocketed in recent years, leading critics to question whether DIP lenders were abusing their power. Lenders, however, respond that DIP loan terms simply reflect economic conditions: When credit is tight, as it was in recent years because of the Financial Crisis, more sweeteners are needed to induce lending.

Using a hand-collected dataset reflecting contractual detail in DIP loan agreements, I examine the relationship between changes in credit availability and DIP loan terms before, during, and after the Crisis. As one might expect, I find that ordinary loan provisions like pricing and reporting covenants are sensitive to changes in credit availability. By contrast, I also find that the incidence of so-called “extraordinary provisions” has no statistically meaningful relationship with changes in credit availability. These findings have important implications for bankruptcy policymakers and judges struggling to evaluate whether extraordinary DIP lending inducements are necessary. Too-generous loan terms come at the expense of junior claimants and may distort the bankruptcy process in favor of senior claimants.

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INTRODUCTION

A firm that seeks refuge in Chapter 11 often requires financing for its continuing operations in bankruptcy. Its pre-bankruptcy sources of credit typically dry up, and it often cannot proceed without what is known as debtor-in-possession (“DIP”) financing. The terms of the DIP financing matter a great deal for the bankruptcy case and its participants. DIP loans are approved early on in the Chapter 11 case, often in a rush. Specific loan terms and the identity of the DIP lender have enormous impact on the ensuing contestation of the terms of reorganization, which shape the contours of any surviving business and distributions to creditors.

To induce DIP lending, the Bankruptcy Code authorizes the debtor to provide prospective lenders with sweeteners that make DIP financing attractive. But because these inducements may come at the expense of other stakeholders, the Code requires the debtor to convince the court that no less generous a package would have been sufficient to obtain the loan. The Code expressly authorizes such conventional inducements as first priority liens and payment priority when liens may be insufficient. These inducements make sense: Lenders to distressed borrowers typically demand strong assurances with respect to the new money they bring to the table.

Anecdotal evidence suggests, however, that DIP loans have become littered with certain controversial lending inducements in recent years. Some have begun to question whether these sweeteners are truly necessary to induce lending, suggesting instead that DIP lenders now extract excessively generous terms.¹ In response, DIP lenders and their defenders note a simple explanation for this seeming increase in inducements: reduced credit availability during the Financial Crisis.² When credit is tight, of course lenders need more

¹ Am. Bankr. Inst., American Bankruptcy Institute Commission to Study the Reform of Chapter 11: 2012-2014 Final Report and Recommendations 73-79 (2014) (discussing findings from study on DIP financing, and detailing Commission’s recommendations, which include limitations on creditor inducements for entering into DIP financing agreements) [hereinafter ABI Report].

² E.g., Robert H. Barnett & Brian J. Grant, *Credit Crisis Puts Focus on Out-of-Court Restructurings*, J. CORP. RENEWAL, June 14 2010.

sweeteners—which is why judges have explicitly relied on changing credit-market conditions to justify their approval of so-called “extraordinary” lending inducements.³

In this Article, I examine whether changes in credit availability explain the use of extraordinary inducements in DIP loans. Using a hand-collected dataset including detailed information on DIP loan terms from 2004 to 2012, I provide the first evidence on the relationship between the presence of these terms and changing credit availability. I first show that standard terms, like loan pricing and reporting covenants,⁴ are indeed sensitive to economic conditions. I then offer evidence that the extraordinary inducements found in DIP loans are generally unrelated to the broader economic conditions that have been cited to justify judicial approval.

I focus on two extraordinary lending inducements that judges and lawyers often find troubling: “roll-ups” and case milestones.⁵ DIP financing is most commonly provided by the debtor’s major pre-bankruptcy secured lender. A roll-up allows this DIP lender to reduce its financial risk by requiring the debtor to draw on the DIP loan to pay off some—or more typically all—of the DIP lender’s pre-bankruptcy secured claim against the debtor. This gives the DIP lender a peace of mind rarely enjoyed by other creditors in bankruptcy. Creditors’ pre-bankruptcy claims ordinarily get paid only at the end of the case, after the debtor—and perhaps competing creditors—have had some opportunity to investigate and possibly challenge those claims.⁶ Absent some opportunity to investigate, roll-up may reduce the debtor’s negotiating leverage with the DIP lender going forward.⁷ Roll-up also eliminates other avenues of negotiation that might otherwise be open to the debtor.⁸ Case milestones are covenants that set specific deadlines for important events in the case, giving lenders critical control over the reorganization process and curbing the discretion of the debtor’s management

³ David Griffiths, *Roll-up, Roll-up, Read All About It!*, WEIL BANKRUPTCY (Oct. 6, 2010), <https://business-finance-restructuring.weil.com/dip-financing/roll-up-roll-up-read-all-about-it/> (noting bankruptcy judges’ explicit consideration of market conditions when granting substantial inducements to DIP financier).

⁴ Reporting covenants govern the frequency with which the debtor must report specified financial information or events to the lender. A reporting covenant may, for example, require the borrower’s monthly reporting of its cash flows. *E.g.*, Eastman Kodak, Annual Report Exhibit 4.22 77 (Form 10-K) (Feb. 29, 2012), at 79 (requiring borrower to report cash flows within fifteen days of end of each fiscal month).

⁵ *See, e.g.*, ABI REPORT, *supra* note 1, at 76-79 (discussing Commission’s findings and noting concerns regarding roll-ups and case milestones).

⁶ Moreover, unsecured creditors’ claims are typically paid with promises of future payment that do not make them whole. Outside of the roll-up context, significant pre-bankruptcy claims rarely get paid in full in cash in the early part of the case. Also the new DIP debt, including the roll-up (that is, the amount incurred to repay the DIP lender’s pre-bankruptcy claim against the debtor) enjoys an especially high priority in payment in reorganization. DIP debt must be paid in full in cash as a condition to plan confirmation. 11 U.S.C. § 1129(a)(9)(A).

⁷ *See infra* notes 78-80 and accompanying text.

⁸ *See infra* notes 77-80 and accompanying text.

and the bankruptcy court. For example, a common milestone sets a drop-dead date for the filing or court approval of the reorganization plan.⁹ Milestones are controversial because too-tight deadlines may advantage senior creditors—like DIP lenders—at the expense of junior creditors.¹⁰ Neither roll-ups nor case milestones are specifically authorized in the Bankruptcy Code. They may even contradict specific provisions of the Code.¹¹

As an empirical matter, because debtor firms are not randomly assigned to DIP loans, selection and endogeneity concerns preclude any causal conclusions, and my empirical goals are modest. I investigate a cross section of Chapter 11 debtors with DIP loans, examining both ordinary and extraordinary provisions in those loans. I search for *any* evidence suggesting a negative association between changes in credit availability and the use of extraordinary provisions. We would expect the use of extraordinary inducements to decrease with increasing credit availability (and increase with credit tightening). Indeed, we see this result with the “ordinary” provisions that I examine (i.e., pricing and loan covenants). However, despite the use of multiple empirical measures for changes in credit availability and extraordinary provisions, I fail to find evidence of the expected negative association. Moreover, my tests in some instances suggest that extraordinary inducements are *positively* associated with changes in credit availability. The causal claims made to justify resort to extraordinary provisions do not survive careful scrutiny. Given the absence of any association between the use of extraordinary provisions and changes in credit availability, extraordinary provisions seem difficult to justify.

My paper has significant policy implications for bankruptcy participants. The market for DIP financing has grown steadily in size and significance in the last two decades as the size of public company bankruptcies has increased. Individual judges deciding whether to approve a particular set of DIP loan terms often face a difficult decision. They must assess whether the extraordinary terms are necessary to induce lending, but they do not have the benefit of counterfactuals. Judges worry that rejection of the proposed DIP loan would spell doom for the debtor: without financing, liquidation may be the only alternative. A number of institutional features make the judge’s decision doubly difficult. The debtor’s dominant pre-

⁹ A less common milestone sets a deadline for court approval or completion of a specified sale of debtor assets. *See infra* Part II.A.2.

¹⁰ For example, a quick sale of debtor assets may generate sale proceeds sufficient only to pay off a senior creditor, while a longer marketing period might have helped realize a higher sale price. *See* Lynn M. LoPucki & Joseph W. Doherty, *Bankruptcy Fire Sales*, 106 MICH. L. REV. 1, 29 (2007) (concluding debtor will receive lower price if sale is made earlier in bankruptcy process).

¹¹ General Order No. M-274, U.S. Bankruptcy Court for the Southern District of New York, In the Matter of the Adoption of Guidelines for Financing Requests (Sep. 9, 2002) [hereinafter SDNY General Order].

bankruptcy secured lender (the “inside” lender) enjoys a number of advantages over outside lenders in competing to make the DIP loan.¹² This inside lender also typically has strong incentives to make the DIP loan, which it does in the supermajority of cases.¹³ Providing the DIP financing enables the senior secured lender to exercise significant control over the case.¹⁴ With typically only one offer on the table and no competitors in sight, judges quite understandably hesitate to reject the DIP loan negotiated between the debtor and the inside lender. Instead, the judge reluctantly approves the proffered arrangements on the view that the terms were necessary to induce critical lending.

Given the lack of a well-functioning DIP loan market and the dominant role for inside lenders in providing DIP financing, it should hardly be surprising that some important DIP loan terms may be less than responsive to market pressure, bearing little or no relation to changes in credit availability. Recognizing the potentially problematic nature of extraordinary provisions, the American Bankruptcy Institute’s (“ABI”) recent Chapter 11 reform proposals offer guidelines to curb or delay the effects of extraordinary DIP loan provisions.¹⁵ I provide, to my knowledge, the first empirical evidence questioning the longstanding and widely held assumption that extraordinary provisions are a function of changing credit availability. This analysis will hopefully assist policymakers, judges, and other bankruptcy participants to better evaluate the DIP lending process in order to optimize DIP loan structure going forward. In particular, because roll-ups—and to a lesser extent, milestones—run counter to bankruptcy rules and norms, judges should be skeptical about their use, which should be rare.

The rest of the paper is organized as follows: Part I offers conceptual and institutional background along with a review of the relevant literature. It first explains the tricky institutional context within which judges must decide whether to approve a given DIP loan. It then discusses the role of loan covenants and the effects on loan covenants of changing credit market conditions. Part II describes extraordinary provisions, their perceived harms,

¹² See *infra* Part I.A. (detailing relationship between inside lender and borrower in bankruptcy process).

¹³ Inside lenders made 75% of the DIP loans in my sample. See *infra* Part I.A.

¹⁴ Kenneth M. Ayotte & Edward R. Morrison, *Creditor Control and Conflict in Chapter 11*, 1 J. LEGAL ANALYSIS 511, 512 (2009) (“[C]reditors with senior, secured claims have come to dominate the Chapter 11 process.”); Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PENN. L. REV. 1209, 1236 (2006) (“Senior creditors keep their hands on the levers of corporate governance even after the corporation enters Chapter 11”); David A. Skeel, Jr., *The Past, Present and Future of Debtor-in-Possession Financing*, 25 CARDOZO L. REV. 1905, 1918-19 (2004) (noting process through which creditors use control to control Chapter 11 case); Sreedhar T. Bharath, Venky Panchapegesan & Ingrid Werner, *The Changing Nature of Chapter 11* 6 (Fisher Coll. of Bus., Working Paper No. 461, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2443248 (“Financial innovations (such as DIP and KERP), has contributed to an increase in creditor control of the Chapter 11 process . . .”).

¹⁵ ABI REPORT, *supra* note 1, at 73-74 (recommending principles to guide DIP financing inducements).

and policy responses. Part III describes the data and empirical results. Part IV discusses implications of my findings and then concludes.

I. BACKGROUND AND LITERATURE REVIEW

In this Part, I first explain the institutional context in which DIP lending occurs, a setting that makes it difficult for judges to police DIP loan terms. I follow with a description of the *Lyondell* DIP loan and the process by which it was put together. At the time, it was the second largest commercial DIP loan in history, made in the face of increasingly severe credit scarcity. Finally, as prelude to the ensuing analysis of ordinary as well as extraordinary DIP loan provisions, I elaborate on the role of loan covenants and the effects on loan covenants of changing credit market conditions.

A. The View from the Bench: Difficulty in Policing DIP Loan Terms

In a traditional Chapter 11 reorganization, the debtor and its multiple creditors negotiate over the financial (and sometimes operational) restructuring of the firm. The debtor firm, its major secured and unsecured creditors, and an official committee representing unsecured creditors typically drive the process. The general goal is to reduce the debt burden on the company such that its operations can generate sufficient cash flow to service the remaining debt. Creditors may agree to reduce their pre-bankruptcy claims against the debtor, extend maturities, reduce interest rates, or otherwise ease the debtor's debt burdens. Eventually a plan of reorganization memorializes this multiparty bargain. The plan requires both creditor consent and judicial approval.¹⁶ The bankruptcy court confirms the plan after assuring all confirmation requirements have been met.¹⁷ While the debtor typically drafts the plan,¹⁸ the debtor's major pre-bankruptcy secured lenders generally enjoy outsized influence in reorganization. By the time a firm is facing a Chapter 11 filing, substantially all its assets are typically subject to creditor liens.¹⁹ Making the DIP loan enables the debtor's dominant pre-bankruptcy lenders to augment their control of the case.²⁰

Evaluating whether a DIP loan's terms are the best available for the debtor is no small task for a judge. Institutional features of DIP lending give an edge to the debtor's pre-bankruptcy secured lender in capturing the DIP loan. Therefore, in the vast majority of cases, there may be no real

¹⁶ 11 U.S.C. § 1129 (“The court shall confirm a plan only if . . . each holder of a claim or interest of such class—has accepted the plan . . .”).

¹⁷ See 11 U.S.C. § 1129.

¹⁸ In large public company bankruptcies, the debtor typically enjoys the exclusive right to file a plan with the court for the first 18 months of the case. *Id.* at § 1121(d)(1). This “exclusivity” therefore gives the debtor some measure of agenda control.

¹⁹ See *infra* note 25 and accompanying text.

²⁰ See *supra* note 14 and accompanying text.

competition to offer DIP financing. No true market exists for DIP loans. Instead, the debtor's dominant pre-bankruptcy secured lender (the "inside" lender) essentially enjoys a first option to fund the DIP loan.

The inside lender typically has enormous incentive to make the DIP loan because it has its existing pre-bankruptcy loan to protect. Making this "defensive" DIP loan preserves the inside lender's control over the debtor's assets,²¹ and it enables the lender to advantage its pre-bankruptcy claim as part of the deal.²² It also endows the inside lender with enormous influence over the debtor and the bankruptcy proceedings.²³ Bankruptcy scholars identify DIP financing as one important avenue by which secured creditors have gained influence over the reorganization process.²⁴

In addition to this incentive structure, the pre-bankruptcy lender also enjoys a significant informational advantage over competing outside lenders because of its pre-bankruptcy relationship with the debtor. This up-to-date private information may enable the inside lender to underbid prospective outside lenders, as well as deter competition *ex ante*. Prospective outside lenders would have to expend resources on due diligence in order to be able to offer competitive terms. Once invested, they face the prospect of either getting outbid by the inside lender—in which case the outside lender's investment in due diligence is for naught—or potentially overbidding to get the DIP loan. Given the inside lender's information advantage, as well as its incentive to make the DIP loan in order to protect its existing pre-bankruptcy loan, outside lenders seldom initiate a challenge.

²¹ The DIP loan would typically be secured by first priority liens on all the debtor's assets, including its cash, and the lender's pre-bankruptcy claim would enjoy next priority with respect to the debtor's assets. In this way, the inside lender would control both loans and would enjoy first claim to the debtor's assets to satisfy its debts.

²² For example, the DIP loan agreement typically requires the debtor to acknowledge the validity of the lender's pre-bankruptcy claim and liens, to recognize its fully secured status, and to waive any potential challenges. *E.g.*, *In re Eddie Bauer, Inc., et al.*, Case No. 09-12099 (MFW), at 7-12 (Bankr. D. Del. Jul. 8, 2009) (Final Order Pursuant to 11 U.S.C. Sections 105, 361, 362, 363 and 364 and Rules 2002, 4001 and 9014 of the Federal Rules of Bankruptcy Procedure (1) Authorizing Incurrence by the Debtors of Post-petition Secured Indebtedness with Priority over Certain Secured Indebtedness and with Administrative Superpriority, (2) Granting Liens, (3) Authorizing Use of Cash Collateral by the Debtors Pursuant to 11 U.S.C. Section 363 and Providing for Adequate Protection, and (4) Modifying the Automatic Stay) (detailing validity of lender's prepetition lien). That agreement, of course, would not bind the creditors' committee.

²³ These include budget constraints and constraints on the debtor's use of its DIP loan proceeds and other cash. *See infra* Part III.A.3 (detailing most common covenant constraints used by DIP lenders).

²⁴ *See, e.g.*, Bharath, Panchapegasan & Werner, *supra* note 14. They study deviations from absolute priority—reorganization plans in which senior creditors waive their right to full payment of their claims in order to allow junior claimants to receive some consideration. These deviations reflect incumbent management's hold up power over creditors and therefore weak creditor influence. The authors document a secular decline in the incidence of absolute priority violations from the 1980s to 2005, as well as a corresponding increase in the use of DIP financing. They find a negative association between the presence of DIP financing and absolute priority deviations. *See also supra* note 14 and sources cited therein.

A pre-bankruptcy lender also typically has pre-bankruptcy liens on all the debtor's assets by the time bankruptcy approaches, so the debtor may have no free assets to offer an outside lender as collateral.²⁵ The pre-bankruptcy lender, then, may be the only game in town—the only lender willing and able to finance the bankruptcy. Consistent with the information and incentive structures, inside lenders made 75% of the DIP loans in my sample, and these inside lenders enjoy pre-bankruptcy liens on all of the debtor's assets in 81% of the cases. In any case, whether inside or outside lenders make the DIP loan, the DIP loan is typically fully secured with first priority liens on substantially all the debtor's assets.

Besides the typically weak competition for any given DIP loan, a rushed approval process at the outset of the case makes it difficult for the bankruptcy court or junior claimants to challenge the debtor's generosity in its offering of lending inducements. An interim approval of a portion of the proposed DIP loan is typically made early in the case (the motion is typically filed on the same day as the debtor's bankruptcy petition). The debtor and its lawyers claim that the debtor's cash needs are dire, so that a hearing is held only days after the bankruptcy filing, on expedited notice. Given the hectic early days of any large Chapter 11 proceeding, approving a DIP loan is only one of dozens of issues the bankruptcy court must decide at the outset. So interim DIP loan approval is done in a hurry.²⁶ Though the subsequent hearing on the final DIP order may be more considered, the interim approval creates a certain momentum favoring the status quo.²⁷ The final order might possibly modify some terms, but the possibility of an alternative lender is basically foreclosed.

²⁵ An outside lender would almost certainly insist on first priority liens to secure its new DIP loan, but the court may not authorize such priming liens unless the debtor can offer the pre-bankruptcy lender "adequate protection." 11 U.S.C. § 364(d)(1)(B) (2012) (stating court "may authorize the obtaining of credit or the incurring of debt . . . only if . . . there is adequate protection of the" senior lender). In order to be able to offer priming liens to the outside DIP lender, the debtor must be able to preserve the pre-bankruptcy lender's secured position—by granting additional liens or making cash payments to reduce the pre-bankruptcy lender's claim, for example—such that the pre-bankruptcy lender is not prejudiced by having its liens subordinated to the priming DIP lender's new liens. The debtor in this situation is unlikely to be able to offer adequate protection. Moreover, fights over the adequacy of adequate protection in the context of priming liens are contentious and expensive.

²⁶ It is for this reason that important bankruptcy courts and the ABI discourage interim approval of extraordinary provisions like roll-ups and milestones. *See, e.g.*, ABI REPORT, *supra* note 1, at 80 ("A court should not approve permissible extraordinary financing provisions in connection with any proposed postpetition financing under section 364 in any interim order.").

²⁷ The advance of DIP loan proceeds authorized in the interim order is subject only to the terms of the earlier order; subsequent modification in the court's final order does not change the terms of the earlier advance. 11 U.S.C. § 364(e) ("The reversal or modification on appeal of an authorization . . . does not affect the validity of the debt so incurred, or any priority or lien so granted . . ."). This makes some sense, since no lender would advance funds under terms that might later be changed. At the same time, however, once funds have been lent, the interim order may tend to "anchor" the deal terms in the face of subsequent objections.

A final difficulty for judges is the simple fact that obtaining DIP financing is good news for the debtor and its creditors. The parties may disagree on the details, but they agree that the debtor needs the financing! The finance literature by and large finds beneficent case outcomes associated with the presence of DIP lending.²⁸ Both stocks and bonds of public companies typically enjoy significant abnormal returns when the company announces a DIP loan, suggesting that DIP loans provide widely shared benefits for both junior and senior claimants.²⁹ DIP lending is also associated with a higher likelihood of the debtor's emergence from bankruptcy and a shorter time in bankruptcy.³⁰ These effects are greater when the DIP lender is also the debtor's pre-bankruptcy lender, suggesting strong screening and monitoring roles for relational DIP lenders, who use their private information about debtor firms to select for strong borrowers and then help them emerge quickly.³¹ Researchers also find a positive association between DIP loan size and creditor recovery rates, consistent with efficient lender monitoring.³² A judge caught between approving a DIP order with questionable inducements or denying the debtor's financing might understandably err on the side of caution and approve the loan.

²⁸ This is consistent with findings outside the bankruptcy context that obtaining a bank loan is typically good news for a firm. Ronald Best & Hang Zhang, *Alternative Information Sources and the Information Content of Bank Loans*, 48 J. FIN. 1507, 1511 (1993); Matthew T. Billett, Mark J. Flannery & Jon A. Garfinkel, *The Effect of Lender Identity on a Borrowing Firm's Equity Return*, 50 J. FIN. 699, 700 (1995); Christopher James, *Some Evidence on the Uniqueness of Bank Loans*, 19 J. FIN. ECON. 217, 219 (1987); Myron B. Slovin, Shane A. Johnson & John L. Glascock, *Firm Size and the Information Content of Bank Loan Announcements*, 16 J. BANKING & FIN. 1057, 1058 (1992); Scott L. Lummer & John J. McConnell, *Further Evidence on the Bank Lending Process and the Capital-Market Response to Bank Loan Agreements*, J. FIN. ECON. 99, 101 (1989).

Although I hesitate to infer that DIP loans cause these positive outcomes, I note a few possible explanations that are not mutually exclusive. First, bank monitoring may add value by improving managerial performance during the reorganization, such that emergence becomes more likely. Bankers are repeat players in distress situations and may take actions that improve the likelihood of emergence, such as mandating that the debtor's management hire a chief restructuring officer. See Baird & Rasmussen, *supra* note 14, at 1233 (“[B]anks may condition the waiver of loan covenants on the appointment of a CRO [Chief Restructuring Officer].”). Second, prospective DIP lenders may be effective screeners of good credit risks, such that the import of DIP lending is in the selection. Both these explanations—monitoring and selection—have antecedents in the finance literature on banks generally. See, e.g., Amar Gande & Anthony Saunders, *Are Banks Still Special When There Is a Secondary Market for Loans?*, 67 J. FIN. 1649 (2012). Finally, it is of course possible that the additional funding assists the reorganization process, increasing the likelihood of emergence.

²⁹ Sris Chaterjee, Upinder S. Dhillon & Gabriel G. Ramirez, *Debtor-in-Possession Financing*, 28 J. BANKING & FIN. 3097 (2004).

³⁰ Sandeep Dahiya et al., *Debtor-in-Possession Financing and Bankruptcy Resolution: Empirical Evidence*, 69 J. FIN. ECON. 259, 278 (2003) (“We find that DIP financing is associated with a higher probability of emergence as well as a shorter time in bankruptcy (both for firms that reorganize and for firms that liquidate).”).

³¹ *Id.*

³² Dahiya et al., *supra*; Chaterjee, Dillon & Ramirez, *supra* note 29, at 3099; Maria Carapeto, *Does Debtor-in-Possession Financing Add Value?* (Working Paper 2003), available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.197.6324&rep=rep1&type=pdf>.

Institutional factors, then, make it difficult for judges to deny DIP loans, even if they may view certain terms as value-reducing. These features of DIP financing may create tough hurdles for opponents of aggressive lender protections, especially when credit is tight.

B. The *Lyondell* DIP Loan

The *Lyondell* case offers a useful illustration of the dynamics of DIP loan structure during a time of severe credit scarcity. Lyondell Chemical Co., a Houston-based chemical company, filed for Chapter 11 on January 6, 2009,³³ during the depths of the Financial Crisis. Aggressive lending inducements for Lyondell's DIP loan included steep pricing, strict covenants, perhaps the largest roll-up in history, and draconian milestones. Judge Gerber's reluctant approval of Lyondell's hotly contested \$8.5 billion DIP loan well illustrates judges' predicament. Judge Gerber noted at the time:

I assume, or at least hope that economic conditions in this country, including freeze-ups of the lending markets and the very limited present availability of credit will ultimately improve. What I'm of a mind to recognize and respect now in the way of economic reality will be trumped by the facts on the ground with respect to economic conditions at the time of the next financing I'm asked to approve. And people should be wary of using this case as a precedent in the next one that comes down the road, especially if that's the case after the liquidity markets have loosened up.³⁴

About a year earlier, when Lyondell was the third largest independent publicly traded chemical company in North America,³⁵ it had sold itself via a leveraged buyout to Basell AF S.C.A., a Dutch subsidiary of an even larger European industrial conglomerate. The transaction created the LyondellBasell group of companies, one of the world's largest petrochemical firms, with a post-LBO debt burden approaching \$30 billion.³⁶ Shortly after this transaction, steeply rising oil prices, a global recession, and a rough 2008

³³ This initial filing included all of Lyondell's U.S. affiliates. Other affiliates followed Lyondell into bankruptcy in April and May of 2009. All tolled, ninety-four Lyondell affiliates ultimately filed for bankruptcy. All ninety-four cases were jointly administered by the U.S. bankruptcy court for the Southern District of New York. Third Amended Disclosure Statement Accompanying Third Amended Joint Chapter 11 Plan of Reorganization for the LyondellBasell Debtors at 54, *In re Lyondell Chem. Co., et al.*, No. 09-10023 (REG) (Bankr. S.D.N.Y. March 12, 2010) ("All 94 of these Chapter 11 Cases are jointly administered in the Bankruptcy Court.") [hereinafter Lyondell Disclosure Statement].

³⁴ Griffiths, *supra* note 3 (quoting Judge Gerber's statement in *Lyondell*).

³⁵ *Id.* at 25.

³⁶ DealBook, *Lyondell Files for Bankruptcy* (Jan. 6, 2009), available at: http://dealbook.nytimes.com/2009/01/06/lyondellbasell-us-unit-files-for-bankruptcy/?_r=0 (visited Mar. 1, 2016).

hurricane season for the Gulf coast combined to preclude Lyondell from meeting its debt obligations, forcing it into bankruptcy.³⁷

On the day of its bankruptcy filing, Lyondell moved for an order authorizing an \$8.5 billion DIP loan, at the time, the second largest commercial DIP loan ever.³⁸ With global credit markets extremely tight, Lyondell's proposed DIP loan included a number of important twists to induce lending. Most importantly, the requested DIP facility included a \$6.5 billion term loan,³⁹ consisting of \$3.25 billion of "new money"—actual new credit for the debtors—and a \$3.25 billion roll-up. The roll-up debt refinanced \$3.25 billion of the DIP lenders' pre-bankruptcy secured debt, essentially *doubling* the interest costs of the term loan.⁴⁰ The DIP loan also conferred hefty fees to the DIP lenders.

The DIP loan imposed several tight deadlines on the debtor. The DIP loan's original maturity date was set at December 15, 2009, less than a year from the date of Lyondell's bankruptcy filing. And the DIP loan agreement set draconian milestones for a case as large and complicated as *Lyondell*. For

³⁷ Lyondell Disclosure Statement, *supra* note 33, at 51 (noting volatile commodity prices, global recession, and natural disasters as contributing factors to bankruptcy filing).

³⁸ Among other things, the motion asked for an interim order approving an immediate \$2 billion draw to tide the debtors over until a final hearing could be held. Over the following two days, hearings were held, and on the second day, the judge approved the interim \$2 billion draw. *In re Lyondell Chem. Co., et al.*, No. 09-10023 (REG), at 10 (Bankr. S.D.N.Y. Jan. 8, 2009) (Interim Order (I) Authorizing Debtors (A) to Obtain Post-petition Financing Pursuant to 11 U.S.C. §§ 105, 361, 362, 364(c)(1), 364(c)(2), 364(c)(3), 364(d)(1) and 364(e), (B) to Utilize Cash Collateral Pursuant to 11 U.S.C. § 363 and (C) to Purchase Certain Assets Pursuant to 11 U.S.C. § 363, (II) Granting Adequate Protection to Pre-petition Secured Parties Pursuant to 11 U.S.C. §§ 361, 362, 363 and 364 and (III) Scheduling Final Hearing Pursuant to Bankruptcy Rules 4001(b) and (c) (granting interim financing). The debtors were also given immediate access to a \$1.5 billion Asset-Based Lending ("ABL") DIP facility, a revolving facility collateralized by the debtors' inventory and accounts receivable. *Id.* at 19.

³⁹ The other \$2 billion was in the form of a revolving credit facility. *In re Lyondell Chem. Corp., et al.*, No. 09-10023 (REG), at 2 (Bankr. S.D.N.Y. Mar. 1, 2009) (Final Order (I) Authorizing Debtors (A) to Obtain Post-petition Financing Pursuant to 11 U.S.C. §§ 105, 361, 362, 364(c)(1), 364(c)(2), 364(c)(3), 364(d)(1) and 364(e), (B) to Utilize Cash Collateral Pursuant to 11 U.S.C. § 363 and (c) to Purchase Certain Assets Pursuant to 11 U.S.C. § 363, and (II) Granting Adequate Protection to Pre-petition Secured Parties Pursuant to 11 U.S.C. §§ 361, 362, 363 and 364) (noting \$2 billion option increase in DIP credit agreement) [hereinafter *Lyondell Final DIP Order*].

⁴⁰ Had the \$3.25 billion term roll-up *not* been rolled up, its status as a \$3.25 billion pre-bankruptcy debt would have garnered it interest during the course of the case *only* to the extent it was oversecured, 11 U.S.C. § 506(b), and also at a lower rate than the DIP debt.

While rolled-up debt would generally also enjoy a near-certainty of repayment, since all DIP debt has to be repaid in cash at plan confirmation, 11 U.S.C. § 1129(a)(9)(A), Lyondell's DIP loan included an option for the debtors to refinance their roll-up debt with a five-year debt security. *Id.* at 63. This was a "dollar-for-dollar" roll-up. Only prepetition secured lenders willing to participate in the DIP financing were entitled to roll-up their pre-bankruptcy debt, and then only on a dollar-for-dollar basis (i.e., one dollar of new DIP financing entitled the DIP lender to roll up one dollar of pre-bankruptcy debt). Although this aggressive inducement resulted in unequal treatment among prepetition secured lenders' claims, the judge was willing to approve the dollar-for-dollar feature due to Lyondell's dire circumstances. *See id.* at 20; Griffiths, *supra* note 3 (noting Judge Gerber's express consideration of economic conditions in granting DIP financing).

example, the debtors were given only seven months to deliver a draft plan of reorganization and disclosure statement to the DIP lenders.⁴¹

The hearing on the final order approving the DIP loan was hotly contested, lasting three days.⁴² Lyondell's creditors' committee objected to the tight maturity date and milestones, as well as what it saw as unreasonably tight financial covenants. As the Committee also noted, pricing was steep: a 13% interest rate and about 7% in fees for what was initially a less-than-one-year loan. Under the original maturity, the arrangement would have given the DIP lenders a 20% annual return!⁴³

Though Judge Gerber shared many of the Committee's concerns, he approved the \$8.5 billion DIP loan nonetheless, recognizing the dramatic shrinking of credit markets and that the debtors' assets would be liquidated if no financing were found. As earlier noted, however, he did take pains to try to limit the precedential value of his decision.⁴⁴

⁴¹ The debtors were also given:

- (i) an additional month (until September 15, 2009) to file the plan and disclosure statement with the bankruptcy court;
- (ii) a month after that (until October 15, 2009) to obtain bankruptcy court approval of the disclosure statement; and
- (iii) a month and a half after that (until December 1, 2009) to have the bankruptcy court hold a hearing to confirm the plan.

Debtor-in-Possession Credit Agreement, dated as of February [], 2009 among LyondellBasell Industries AF S.C.A., as the Company, Lyondell Chemical Company, Equistar Chemicals, LP, Houston Refining LP, Basell USA Inc., Millennium Chemicals Inc., and Millennium Petrochemicals Inc., as Borrowers, each of the foregoing a Debtor and Debtor-in-Possession under Chapter 11 of the Bankruptcy Code, the Lenders Party Hereto, Citibank, N.A., as Administrative Agent and Collateral Agent, [UBS Securities LLC], as Syndication Agent, Citigroup Global Markets Inc., UBS Securities LLC, Goldman Sachs Lending Partners LLC, Merrill Lynch Capital Corporation, and ABN AMRO Bank N.V., Joint Lead Arrangers, Citigroup Global Markets Inc., Sole Bookrunner, at 127-28.

⁴² Griffiths, *supra* note 3.

⁴³ Objection of the Official Committee of Unsecured Creditors to Motion for an Order (I) Authorizing Debtors (A) to Obtain Post-petition Financing Pursuant to 11 U.S.C. §§ 105, 361, 362, 364(c)(1), 364(c)(2), 364(c)(3), 364(d)(1) and 364(e), (B) to Utilize Cash Collateral Pursuant to 11 U.S.C. § 363 and (c) to Purchase Certain Assets Pursuant to 11 U.S.C. § 363, (II) Granting Adequate Protection to Pre-petition Secured Parties Pursuant to 11 U.S.C. §§ 361, 362, 363 and 364 and (III) Scheduling Final Hearing Pursuant to Bankruptcy Rules 4001(b) and (c), at 23-24, *In re Lyondell Chem. Co.*, et al., No. 09-10023 (REG) (Bankr. S.D.N.Y. February 22, 2009) ("The Debtors have committed to borrow money at 20% to pay interest on the Roll Up which would otherwise accrue at less than 7%").

The Committee also objected to the proposed granting of liens to the DIP lenders in the debtors' avoidance actions, *id.* at 27, as well as the proposed waiver of the debtors' rights under § 506(c) to surcharge the collateral. *Id.* at 29. Section 506(c) authorizes the debtor to charge a secured creditor's collateral for reasonable expenses incurred to preserve or dispose of that collateral to the extent the secured creditor benefits. The debtor's waiver of Section 506(c) rights forces unsecured creditors to bear the costs of preserving the DIP lender's collateral. The Bankruptcy Court for the Southern District of New York lists § 506(c) waivers among its extraordinary provisions. *See* Bankr. S.D.N.Y. General Order M-274 ("Extraordinary Provisions include any waiver of the debtor's right to a surcharge against collateral under section 506(c) . . .").

⁴⁴ *See supra* 34 and accompanying text.

The DIP loan agreement was amended several times over the course of the case to extend the loan's maturity and applicable milestones,⁴⁵ and Lyondell's plan was ultimately confirmed. It emerged from bankruptcy on April 30, 2010, having spent about sixteen months in Chapter 11.⁴⁶

C. Loan Covenants and Credit Markets

Because lenders know less about prospective borrowers than the borrowers know about themselves, lenders need devices to (a) screen for risky borrowers before deciding whether to lend and on what terms; and (b) constrain borrower risk taking once a loan is made. Covenants are the most visible contractual constraint on borrower risk-taking. This section explains lenders' use of covenants and the effects of credit market changes on loan pricing and covenant design.

1. Adverse Selection, Moral Hazard, and Covenants

The typical bank loan agreement specifies a number of financial covenants—continuing obligations relating to the borrower's financial condition that serve as tripwires should the borrower falter. For example, a common financial covenant requires the borrower to maintain a minimum level of cash flow.⁴⁷ Such a requirement benefits banks by assuring that the borrower will be able to meet its loan obligations; steady cash flow evidences the borrower's ability to make its regular interest payments. Similarly, the loan agreement may require regular reporting of the borrower's cash levels. A lending agreement may also require or prohibit certain activities that could affect the riskiness of the loan. For example, a cap on capital expenditures or other investments is common,⁴⁸ as is a requirement that the borrower maintain adequate insurance.

⁴⁵ Lyondell Disclosure Statement, *supra* note 33, at 47.

⁴⁶ The new money DIP loan claims were repaid in full. The DIP roll-up claims were refinanced with new notes in the same principal amount as their roll-ups, which the debtors anticipated would amount to 100% recoveries. The prepetition secured claims received the lion's share of the common stock in the reorganized Lyondell. General unsecured creditors received a 16.8% recovery in the form of cash and common stock, plus the possibility of additional payments based on causes of action of the debtor to be pursued by a special Litigation Trust post-reorganization. *Id.* at 9.

⁴⁷ A cash flow covenant may state a minimum dollar requirement over a specified period. Or it may take the form of a coverage ratio, which requires the borrower to maintain its cash flow at or above a certain multiple of its interest expense. One study of public company loan agreements finds that 83% contain some form of cash flow covenant. Michael R. Roberts & Amir Sufi, *Renegotiation of Financial Contracts: Evidence from Private Credit Agreements*, 93 J. FIN. ECON. 159, 172 (2009).

⁴⁸ To deter overly aggressive investments by the borrower, capital expenditures covenants place either a strict dollar limit on annual capital expenditures or set a cap based on the borrower's earnings or revenues. Greg Nini, David C. Smith & Amir Sufi, *Creditor Control Rights and Firm Investment Policy*, 92 J. FIN. ECON. 400, 403 (2009) (finding that 42% of firms in their 1996-2005 sample period faced a capital expenditure covenant). To further deter overly aggressive investment, capital expenditures covenants are often paired with covenants that subject the loan's proceeds to explicit restrictions. For example, the loan

Lenders use covenants to constrain borrower moral hazard once the loan is made. Without these constraints, borrowers may be tempted to take on more risk after the loan is made than they let on beforehand.⁴⁹ The borrower's violation of a covenant is considered an event of default. Upon default, the lender is entitled to call the loan and seize and sell the debtor's assets to satisfy the debt. Covenants essentially determine control rights over the borrower's assets.⁵⁰ This risk of loss serves as an important deterrent to excessive risk taking.

Besides constraining borrower risk taking ex post, covenants also help lenders screen their borrowers ex ante.⁵¹ A borrower willing to accept strict covenants effectively signals its creditworthiness to the lender and its willingness to narrow its risk-shifting opportunities. Not surprisingly, tighter covenants are associated with lower borrowing costs,⁵² since tight covenants offer the lender more sensitive trip wires and stronger constraints on borrower risk taking. This better pricing is consistent with the notion that borrowers' accession to stricter constraints signals lower risk to lenders.

The lender will monitor the borrower to ensure that it adheres to its contractual constraints. Covenants encourage monitoring, and they are more valuable to lenders who monitor well.⁵³ Contracts provide lenders with multiple mechanisms to facilitate such monitoring. First, the borrower will generally be required to provide regular reports on its financial condition and operating obligations. Second, the borrower will be required to notify the

contract may mandate loan prepayments to the extent the borrower finds itself with "excess" cash, as defined in the contract. *Id.* at 405.

Bradley & Roberts note in a sample of bank loan agreements to public and private companies that 62.5% contain an asset sale sweep covenant—requiring loan prepayment from the proceeds of certain asset sales; 46.2% contain a debt sweep—requiring prepayment from proceeds of debt offerings; and 45.9% contain an equity sweep—which requires prepayment from proceeds of an equity offering. Michael Bradley & Michael R. Roberts, *The Structure and Pricing of Corporate Debt Covenants* 11 (Working Paper 2004), available at <http://ssrn.com/abstract=466240>.

⁴⁹ A borrower with limited liability may be tempted to take excessive risk in search of higher returns, despite the accompanying possibility of larger losses, since its losses are limited to the value of its assets.

⁵⁰ Collateral plays a similar role. By granting security interests in its property to the lender, the borrower essentially offers the lender a semi-private enforcement remedy should the borrower default. This enables the lender to sell the collateral with relatively little oversight by a court or other public regulator. Colleen Honigsberg, Sharon Katz & Gil Sadka, *State Contract Law and Debt Contracts*, 57 J. LAW & ECON. 1031 (2014). I do not focus on collateral, however, because there is little variation in collateral coverage across the sample firms.

⁵¹ See Cem Demiroglu & Christopher James, *The Information Content of Bank Loan Covenants*, 23 REV. FIN. STUD. 3700, 3701 (2010); Nicolae Garleanu & Jeffrey Zwiebel, *Design and Renegotiation of Debt Covenants*, 22 REV. FIN. STUD. 749 (2009).

⁵² Demiroglu & James, *supra* at 3701.

⁵³ Raghuram Rajan & Andrew Winton, *Covenants and Collateral as Incentives to Monitor*, 50 J. FIN. 1113, 1134 (1995) ("Effective use of covenants forces the lender to do some monitoring . . .").

lender should specific negative events occur.⁵⁴ Third, the contract will provide the lender with wide access to the borrower's books and records, properties, and management. The loan agreement may even require the borrower to keep its deposit accounts with the lender bank. This arrangement facilitates the bank's real-time monitoring of the borrower's cash flows, giving the bank a clear window on the borrower's financial performance.⁵⁵ And in the case of default, this arrangement enables the bank to enforce its loan against the borrower's cash.

Covenants are not costless. While they protect lenders, they may also impede value-enhancing strategies of the borrower, since lenders' primary concern will be borrowers' ability to repay, not their value maximization. Renegotiation following covenant violations is also common. Though routine, renegotiation may be costly. Technical violations do not typically signal financial distress. Instead, the lender uses the covenant violation as an opportunity to re-evaluate the borrower's operational and financial condition and reset the breached covenant.⁵⁶ In addition, when violations do signal financial distress, the exercise of lender remedies may sacrifice going concern value.

2. Credit Market Conditions

As one would expect, loan pricing and contracting practices vary with market conditions. Because lender-protective features like covenants curb the latitude of borrower management, borrowers tend to resist these constraints. When credit is plentiful and lenders must compete to make loans, borrowers enjoy more bargaining power to minimize constraints. The opposite is true when credit is scarce. Empirical studies confirm that when credit is scarce, not only does pricing increase, but loan contracts include more lender-protective features.⁵⁷ Covenants become more numerous and more restrictive

⁵⁴ For example, a lender must notify the bank if any of the following occur: default or potential default on a material loan provision, the threat or commencement of material litigation against the borrower, or receipt of a notice from a government agency of a material regulatory violation.

⁵⁵ See Fisher Black, *Bank Funds Management in an Efficient Market*, 2 J. FIN. ECON. 323, 326 (1975) (explaining the informational advantages for a lender from maintaining its borrower's deposit account); Arnoud W. A. Boot, *Relationship Banking: What Do We Know*, 9 J. FIN. INTERMEDIATION 7, 11 (2000); Eugene F. Fama, *What's Different About Banks?*, 15 J. MONETARY ECON. 29, 36–38 (1985).

⁵⁶ Roberts & Sufi, *supra* note 47, at 160.

⁵⁷ Bradley & Roberts, *supra* note 48, at 21 (“[M]acroeconomic factors also play a role in the determination of the covenant structure of corporate bonds. The greater the credit spread, the greater the number of covenants . . .”).

as the risk-free rate of interest increases.⁵⁸ A similar association exists with respect to collateral requirements.⁵⁹

Albert Choi and George Triantis offer a nuanced explanation of the interaction between price and non-price terms. While lender-friendly changes in credit markets move both price and non-price terms in lenders' favor, Choi and Triantis show that bargaining power does not affect price and non-price terms independently. Instead, in an environment of information asymmetry, price changes not only affect the division of gains from trade; they also affect the severity of adverse selection and moral hazard problems, which in turn affects covenant structure. Price increases exacerbate both moral hazard and adverse selection, attracting more high-risk borrowers seeking to pool with low-risk borrowers, and more strongly encouraging post-borrowing asset substitution. To be effective for screening and signaling and combating moral hazard, covenants need to be more stringent as pricing increases.⁶⁰

Adverse selection and moral hazard are likely to be much less severe in the DIP loan context than for the garden-variety commercial loan outside of bankruptcy. Because the prototypical DIP lender is the debtor's pre-bankruptcy secured lender, that lender is already familiar with the debtor's management, operations, and financial condition. Having already invested in the debtor, the prospective inside DIP lender's screening activity is quite focused. It evaluates the debtor's prospects for rehabilitation to determine whether to make a follow-on investment to improve its total return from its loans to the debtor. Moral hazard is also likely to be much less severe in bankruptcy, given the debtor's required public disclosure obligations in bankruptcy and the careful monitoring by the DIP lender, other creditors, and the court. While we expect greater information asymmetry with outside DIP lenders, the infinitesimally low default rate for DIP loans suggests that even outside DIP lenders do well at picking good risks and curbing debtor-in-possession moral hazard.⁶¹

Of course, information will not be perfect even in the DIP context. DIP lenders use covenants as tripwires the same way that lenders do outside of bankruptcy: DIP loan covenants are occasionally breached and then

⁵⁸ Matthew T. Billett, Tao-Hsien Dolly King & David C. Mauer, *Growth Opportunities and the Choice of Leverage, Debt Maturity, and Covenants*, 62 J. FIN. 697, 708 (2007); Nini, Smith & Sufi, *supra* note 48, at 408.

⁵⁹ Arnoud W.A. Boot, Anjan V. Thakor & Gregory F. Udell, *Secured Lending and Default Risk: Equilibrium Analysis, Policy Implications and Empirical Results*, 101 ECON. J. 458, 471 (1991).

⁶⁰ Albert Choi & George Triantis, *Market Conditions and Contract Design: Variations in Debt Contracting*, 88 N.Y.U. LAW. REV. 51 (2013).

⁶¹ See *infra* note 105 and accompanying text (highlighting low historical default rates for DIP lenders)..

renegotiated just as with non-bankruptcy loans.⁶² To the extent information asymmetry exists in DIP lending, we would expect that the phenomenon Choi and Triantis posit for credit market conditions and loan terms outside of bankruptcy would hold for DIP loans as well. Price changes should beget corresponding changes in covenants and other non-price DIP loan terms, though with less information asymmetry in DIP lending, we would expect the magnitude of such changes to be less severe than in non-bankruptcy lending markets.⁶³

II. EXTRAORDINARY LENDING INDUCEMENTS

Customary lending inducements available in bankruptcy help to overcome the debt overhang that precludes fresh financing outside of bankruptcy. Section 364 of the Code expressly enumerates and authorizes such conventional inducements as payment priority and new liens, which may even enjoy seniority over existing pre-bankruptcy liens.⁶⁴ In addition to these expressly authorized inducements, market participants have introduced so-called “extraordinary” provisions also meant to induce lending. Although not explicitly authorized under the Code, a recent study found, consistent with my findings below,⁶⁵ that the “vast majority” of DIP agreements include these types of provisions.⁶⁶ The provisions are controversial because they may be inconsistent with specific Code provisions. In addition, they are often thought to increase the DIP lender’s control at the expense of other stakeholders.

As earlier noted, Section 364 suggests a general constraint on the use of inducements: The debtor may extend only as much inducement as is

⁶² See, e.g., *supra* note 45 and accompanying text (discussing mid-stream covenant modifications in *Lyondell* case).

⁶³ In Choi and Triantis’ model, in the absence of information asymmetry, covenants and other non-price terms would not change in the face of credit market changes. Instead, only the pricing would change. Choi & Triantis, *supra* note 60, at 66.

⁶⁴ 11 U.S.C. § 364. Inducements range from (a) an offer of basic administrative priority, which entitles a creditor to be paid ahead of general unsecured claims along with other administrative expenses, to (b) a higher priority that places the new debt ahead of all administrative expenses, to (c) collateral of various priorities—liens on free assets, junior liens on assets with existing liens, or even “priming” liens that are senior to any pre-existing liens. To protect the pre-existing security interests that are burdened with equal or priming liens, Section 364 requires that the debtor give “adequate protection” to those secured creditors. 11 U.S.C. § 364(d)(1)(B). Adequate protection intends to preserve the secured creditors’ pre-bankruptcy position with respect to their collateral. For example, if a primed secured creditor was fully secured on the petition date but would be undersecured as a result of the priming, the debtor could grant the primed secured creditor additional liens to ensure that the secured creditor maintained its fully secured position. In any event, the DIP loan is required to be paid off in cash as a condition to confirming the plan of reorganization. 11 U.S.C. § 1129(a)(9)(A). By contrast, other claims may be satisfied with promises of future payment.

⁶⁵ See *infra* Part III.A.3.

⁶⁶ Loan Syndications and Trading Association, THE TROUBLE WITH UNNEEDED BANKRUPTCY REFORM: THE LSTA’S RESPONSE TO THE ABI CHAPTER 11 COMMISSION REPORT 23 (2015) [hereinafter, LSTA REPORT], available at <http://www.lsta.org/uploads/DocumentModel/1860/file/lsta-abi-10615-final.pdf>

necessary to obtain the desired DIP financing. The debtor must show that no lesser inducements would suffice—at least in theory. This approach recognizes that inducements are not costless; they can take value away from junior claimants. This Part begins by describing roll-ups and milestones, two of the most common extraordinary DIP loan provisions, and explaining how DIP lenders use these devices to advantage themselves in bankruptcy. I then summarize the policy responses by the courts and bankruptcy professionals to the use of these extraordinary provisions.

A. Roll-ups

A roll-up is a strong inducement for the debtor's pre-bankruptcy secured lender to fund a DIP loan. The roll-up grants this inside DIP lender an enviable position by requiring that the debtor draw on the DIP loan to pay off some—most typically all—of the inside lender's pre-bankruptcy secured claim,⁶⁷ typically early on in the case. This essentially refinances the pre-bankruptcy debt with DIP debt, which offers the DIP lender a number of potential advantages—with respect to both the treatment of its pre-bankruptcy claim and its influence over the case—that other creditors do not enjoy.

1. Cross-Collateralization's Ghost

Roll-up is the progeny of an earlier somewhat controversial DIP financing practice called cross-collateralization. In its common form, the debtor's major secured pre-bankruptcy lender would be undersecured, but would be willing to extend the DIP loan as long as the debtor granted postpetition liens to secure not only the DIP loan but also the unsecured portion of the DIP lender's pre-bankruptcy debt.⁶⁸ This maneuver is objectionable because the amount and nature of creditor claims are generally determined as of the date of the bankruptcy petition. A claim's unsecured status as of the petition date renders that claim unsecured for the entire case; the Code offers no possibility for an upgrade later on in the case. Collateralizing an unsecured pre-bankruptcy claim *after* the bankruptcy filing therefore upsets the Bankruptcy Code's priority scheme. Secured creditors should be paid before unsecured creditors, but cross-collateralization gives a priority jump to the DIP lender's unsecured pre-bankruptcy claim,⁶⁹ which

⁶⁷ Seventy-eight percent of the roll-ups in the sample roll up all of the DIP lender's pre-bankruptcy claim. These 100% roll-ups comprise 41% of the DIP loans in the sample. Three quarters of the roll-ups involve defensive DIP loans.

⁶⁸ See, e.g., *Otte v. Manufacturers Hanover Commercial Corp. (In re Texlon)*, 596 F.2d 1092 (2d Cir. 1979).

⁶⁹ Mark J. Roe & Frederick Tung, *Breaking Bankruptcy Priority: How Rent-Seeking Upends the Creditors' Bargain*, 99 VA. L. REV. 1235, 1250-51 (2013) (describing the priority jump for undersecured DIP lenders).

would otherwise be paid only a fraction of its face amount at the end of the case.

The practice of cross-collateralization began in the 1970s, in the waning years of the former Bankruptcy Act.⁷⁰ As with roll-ups today, the justification offered was that the prospective DIP lender would not lend otherwise.⁷¹ Courts approving the practice however, did recognize cross-collateralization as a “disfavored means of financing,”⁷² to be used only as a last resort. The practice more or less ended with the Eleventh Circuit’s decision in *Matter of Saybrook Mfg. Co., Inc.* in 1992,⁷³ the first Court of Appeals decision to state definitively that cross-collateralization is not an authorized method of post-petition financing. Cross-collateralization is “directly contrary to the fundamental priority scheme of the Bankruptcy Code.”⁷⁴

2. Roll-up’s Refinement

Cross-collateralization seems quaint in the context of roll-ups, a clever refinement offering treatment even better than the earlier practice. In a given case, roll-up improves the DIP lender’s return on its DIP loan and may augment the DIP lender’s control over the bankruptcy case. Roll-up also raises systemic concerns described below.

To the extent the pre-bankruptcy debt was undersecured at the time of the bankruptcy filing, the benefit of a roll-up is clear. While the secured portion of the debt would typically get paid in full *at the end of the case*, unsecured pre-bankruptcy debt typically gets paid only a fraction of its face amount, and again, only at the end of the case.⁷⁵ By contrast, a roll-up pays in full both the secured and unsecured portions of the DIP lender’s undersecured pre-bankruptcy debt in the early part of the case—better treatment than even pre-bankruptcy secured claims enjoy, and clearly inconsistent with the Bankruptcy Code’s priority scheme.⁷⁶ Cashing out the unsecured pre-

⁷⁰ Bankruptcy Act of 1898, Pub. L. No. 62-57, 30 Stat. 544-66 (1898) (amended 1938) (repealed 1978). The Second Circuit criticized cross-collateralization in the *Texlon* decision in 1979. However, the court made no categorical pronouncement against its use. *In re Texlon Corp.*, 596 F.2d 1092 (2d. Cir. 1979).

⁷¹ *In re Vanguard Diversified, Inc.*, 31 B.R. 364, 366 (Bankr. E.D. N.Y. 1983); *In re Beker Indus. Corp.* 58 B.R. 725 (Bankr. S.D.N.Y. 1986); *In re Tom McCormick Enterprises, Inc.*, 26 B.R. 437, 439-40 (Bankr. M.D. Tenn. 1983).

⁷² *In re Vanguard Diversified, Inc.*, 31 B.R. at 366.

⁷³ 963 F.3d 1490 (1992).

⁷⁴ *Id.* at 1495.

⁷⁵ Undersecured claims are generally bifurcated into the secured portion—which depends on the value of the collateral securing the claim—and the unsecured portion. 11 U.S.C. § 506(a)(1).

⁷⁶ *Transamerica Commercial Fin. Corp. v. Citibank, N.A. (In re Sun Runner Marine, Inc.)*, 945 F.2d 1089, 1094 (9th Cir.1991) (“While § 364 authorizes the grant of priority or a security interest in estate assets in order to provide some assurance to post-petition lenders, the assurances so authorized do not include payment of pre-petition unsecured debt with estate assets. There is no other applicable provision in the

bankruptcy debt at full face value is the ultimate priority jump, and it of course eliminates any reorganization risk for that paid-in-full debt.⁷⁷ Even if the reorganization were ultimately to fail, that would not affect the earlier payoff of unsecured pre-bankruptcy debt.

Whether fully- or undersecured, pre-bankruptcy debt can benefit from a roll-up by improving the DIP lender's control over the case. Cashing out that pre-bankruptcy debt eliminates potential challenges to the validity of that debt or its secured status,⁷⁸ which reduces the debtor's and competing creditors' bargaining power with the DIP lender. Moreover, roll-up may change the dynamics of plan negotiation by eliminating not only reorganization risk but also the risk of "cramdown" of the DIP lender's pre-petition claim. Cramdown allows the debtor to confirm a plan over a secured lender's objection by essentially continuing the pre-bankruptcy secured loan at a rate of interest reflecting the risk of the loan.⁷⁹ But once the DIP lender's pre-bankruptcy loan is rolled up, the cramdown option disappears. Without the threat of cramdown, the debtor has less leverage against the DIP lender in negotiating the plan of reorganization. To be sure, DIP lenders may have other devices in their arsenal besides the roll-up to enhance their influence over the case.⁸⁰ But negotiations occur at the margin, so marginal enhancements matter for all the parties.

By using the DIP loan to cash out the DIP lender's pre-bankruptcy claim, not only does that claim get paid early and in full, but the roll-up effectively transforms the DIP lender's pre-bankruptcy claim into a fully

Bankruptcy Code authorizing the debtor to pay certain pre-petition unsecured claims in full while others remain unpaid. To do so would impermissibly violate the priority scheme of the Bankruptcy Code.”)

⁷⁷ This is true for roll-up of fully secured debt as well.

⁷⁸ *Id.* at 1251-52 (“[I]n a roll-up, the bankruptcy process often does not examine the old collateral’s adequacy and the older loan’s bona fides carefully.”); George A. Triantis, *Debtor-in-Possession Financing in Bankruptcy*, B. E. Adler, ed.: RESEARCH HANDBOOK ON CORPORATE BANKRUPTCY LAW (Barry Adler, ed; forthcoming 2019).

⁷⁹ 11 U.S.C. § 1129(b)(2)(A).

⁸⁰ For example, senior secured lenders are frequent sponsors of restructuring support agreements. Douglas G. Baird, *Bankruptcy’s Quiet Revolution*, 91 Am. Bankr. L. J. 593, 603 (2017) (detailing senior lenders’ use of restructuring support agreements to gain control over reorganization process). Senior lenders also commonly “advise” debtors regarding the appointment of a chief restructuring officer. Baird & Rasmussen, *supra* note 14. Moreover, it is not uncommon that a DIP loan agreement will prohibit the debtor from filing a plan not approved by the DIP lender. *See, e.g.*, \$75,000,000 Debtor-in-Possession Credit, Security & Guaranty Agreement, dated as of October [], 2010, among Motient Holdings Inc., Motient Communications Inc., Motient License Inc., Motient Services Inc., TerreStar New York Inc., MVH Holdings Inc., Motient Ventures Holding Inc., TerreStar National Services, Inc., TerreStar License Inc., each a debtor and debtor-in-possession, as a Guarantor, TerreStar Networks Holdings (Canada) Inc., TerreStar Networks (Canada) Inc., 0887729 B.C. Ltd., each a debtor and debtor-in-possession, as a Canadian Guarantor, TerreStar Networks Inc., debtor and debtor-in-possession, as the Borrower, the Lenders Party Hereto, and the Bank of New York Mellon, as Administrative Agent and Collateral Agent, at 2 (defining an “Acceptable Plan” as a plan “in form and substance reasonably acceptable to the Required Lenders”), 14 (including as a “Milestone Requirement” the filing of an Acceptable Plan by November 5, 2010).

secured,⁸¹ first-priority, high-interest-bearing post-bankruptcy claim. The rolled-up debt—now part of the DIP loan—earns interest at a healthy rate during the course of the case, along with the new money DIP debt.⁸² By contrast, in the absence of roll-up, the pre-bankruptcy debt would accrue interest only if and to the extent it was oversecured,⁸³ and generally at a lower rate than the DIP debt. As part of the DIP loan, the rolled-up debt will also get cashed out at the end of the case.⁸⁴ Figure A1 in the Appendix illustrates. This full cash payment of the DIP lender’s pre-bankruptcy claim does not come for free, of course. It gets paid by junior claimants creditors, since fewer assets are available to pay off juniors at the back of the line for distribution.

In addition to issues of DIP lender control and roll-up costs that may affect a particular case, roll-ups also create an important systemic problem: Roll-ups obfuscate DIP loan costs and pricing. For a DIP loan without a roll-up, of course, calculating all-in-spread is straightforward. And even for a roll-up DIP loan, one could calculate a no-roll-up-equivalent all-in-spread. Just back out the roll-up amount and solve for the new interest rate (including fees) based only on the DIP loan’s new money. Easy enough in theory. But as a systemic matter, when the parties are negotiating terms and looking for comparable cases, comparisons become difficult when there are too many factors to consider. It becomes especially difficult from the debtor’s side. The lender is the repeat player; the debtor is a one-off (typically). Add to that the possibly short fuse for putting together the DIP loan in the run-up to the Chapter 11 filing, and the debtor may be overmatched.

Roll-ups are controversial because they are not authorized in the Bankruptcy Code. Section 364 on DIP financing makes no mention of paying off pre-bankruptcy debt. Indeed, roll-up goes against the general notion that pre-bankruptcy claims must wait until the conclusion of the case for payment, pursuant to a distribution scheme memorialized in a confirmed plan of reorganization.

⁸¹ The DIP loan will typically be fully secured, with back-up administrative priority in case the security later turns out to be insufficient. Daniel J. Bussell & Kenneth N. Klee, *Recalibrating Consent in Bankruptcy*, 83 AM. BANKR. L.J. 663, 707 n.209 (2009) (“‘Roll-ups’ are arrangements whereby prepetition secured claims are converted to postpetition secured claims.”); Roe & Tung, *supra* note 69, at 1251 (noting that roll-up of pre-bankruptcy loan “effectively convert[s] the DIP lender’s (likely) undersecured pre-bankruptcy loan into a full secured postpetition claim); James J. White, *Death and Resurrection of Secured Debt*, 12 AM. BANKR. INST. 139, 182 (2004) (explaining that roll-up allows DIP lender to convert prepetition secured debt into postpetition secured debt, and that process “has become frequent if not commonplace.”).

⁸² See *infra* notes 103-105 and accompanying text (noting somewhat surprisingly high rates of interest for DIP loans).

⁸³ 11 U.S.C. § 506(b).

⁸⁴ The debtor is required to pay off the entire DIP loan in full in cash as a condition to the confirmation of any reorganization plan. 11 U.S.C. § 1129(a)(9)(A). During the depths of the Crisis, some confirmed plans offered flexibility on this score, allowing the debtor to pay off the DIP loan with securities of the reorganized debtor instead of cash. See *supra* note **Error! Bookmark not defined.** (discussing *Lyondell* DIP loan repayment).

B. Milestones

DIP lenders use milestones to impose important time constraints on the debtor's conduct of the bankruptcy case. These provisions place specific deadlines on the debtor, most typically with respect to the filing or court approval of its plan of reorganization or disclosure statement. When a major asset sale is in the offing, the DIP lender often sets milestones with respect to the sale process as well. Milestones may affect case outcomes because they tend to shorten the time that the debtor would otherwise have to accomplish particular tasks—tasks for which the Bankruptcy Code already specifies a timeline and a procedure for its judicial management. For example, in the court's discretion, the debtor may enjoy the exclusive right to file a plan of reorganization for up to eighteen months.⁸⁵ The purpose of this exclusivity provision is to fix the debtor as the focal party in managing restructuring negotiations and drafting the plan. A lender-mandated timetable constrains the court's discretion and diminishes the debtor's central role, potentially causing lost value for other claimants besides the DIP lender.

At the same time, however, milestones may play a useful role in setting expectations and expediting the reorganization process. In some cases, senior lenders' timetable may align with the interests of other stakeholders in getting a deal done.⁸⁶ For this reason, milestones may generally be less controversial than roll-ups.

C. Policy Responses to Extraordinary Provisions

As early as 2002, courts began to express concerns about extraordinary provisions. Multiple sources have recommended restricting their use. At the same time, the Loan Syndications and Trading Association (LSTA), a trade association for syndicated lenders, vigorously defends the use of extraordinary provisions.

In 2002, the Bankruptcy Court for the Southern District of New York promulgated guidelines: Extraordinary provisions (a) require conspicuous disclosure in DIP motions; and (b) would generally not be approved in an

⁸⁵ 11 U.S.C. § 1121(d)(2)(a). The Code sets an initial exclusivity period of 120 days. *Id.* at § 1121(b). The judge may shorten or lengthen exclusivity for cause. *Id.* at § 1121(d)(1). A judge will typically extend exclusivity at the debtor's request as long as she is convinced that the debtor and major creditors are making progress toward a negotiated resolution of the case. In the large public company reorganization cases, the debtor typically enjoys exclusivity for the duration of the case (up to the 18-month limit).

⁸⁶ Baird, *supra* note 80, at 606 ("When senior creditors . . . put the plan on a tight timetable . . . , their pursuit of their own self-interest may work to everyone's advantage.")

interim order absent “substantial cause shown, compelling circumstances and reasonable notice.”⁸⁷ Extraordinary provisions include roll-ups and any provisions “that divest the Court of its power or discretion in a material way”⁸⁸ (e.g., milestones). Delaware’s Bankruptcy Court, the most popular venue for public company Chapter 11s, adopted a similar local rule.⁸⁹

As for roll-ups specifically, the New York guidelines direct the court to consider, among other things, the amount of new credit to be offered and whether the advantages of the proposed financing justify the costs of cashing out the pre-bankruptcy secured debt, as opposed to satisfying that debt with new promises of future payment.⁹⁰ In other words, the court should weigh the costs of refinancing the pre-bankruptcy debt with high-priority high-interest postpetition financing—which itself must be cashed out at plan confirmation—against the benefits from the new credit. The ABI also considered the proliferation of extraordinary provisions in DIP loans in its comprehensive 2014 report reviewing Chapter 11 practices.⁹¹ Skeptical that these provisions are necessary to induce DIP financing, the Commission proposed significant restrictions echoing the approach of the New York and Delaware bankruptcy courts.⁹²

The ABI report prompted a response from the LSTA: the ABI’s approach to reform, “while well-intentioned and informed by much hard work and debate, is misguided.”⁹³ For extraordinary provisions specifically, the LSTA noted the lack of reliable empirical evidence to support the ABI’s reforms. Moreover, the LSTA cautioned that the ABI’s proposed restrictions could have unintended consequences, such as reduced loan volumes. Banning or limiting roll-ups and milestones could also cause lenders to demand other forms of compensation, such as higher interest rates. The LSTA also argued

⁸⁷ Bankr. S.D.N.Y. General Order M-274 at 2. The General Order also applies to cash collateral motions under § 363 of the Code. *Id.* at 3-4. In particular, the courts decreed that (i) a motion for DIP financing must “disclose prominently” whether the financing includes any of the enumerated extraordinary provisions; (ii) that such provisions must be “disclosed conspicuously” in the motion and any accompanying order, and (iii) that the justification for an extraordinary provision must be separately set forth. *Id.* at 4, 6.

⁸⁸ *Id.* at 9.

⁸⁹ Bankr. D. Del. R. 4001-2.

⁹⁰ The guidelines highlight “the loss to the estate of the opportunity to satisfy the prepetition secured debt otherwise in accordance with applicable provisions of the Bankruptcy Code.” Bankr. S.D.N.Y. General Order M-274 at 8. The Code specifically allows the debtor to pay the present value of the pre-bankruptcy secured claim with promises of future payment. Bankruptcy Code § 1129(b)(2)(A).

⁹¹ See ABI REPORT, *supra* note 1, at 73.

⁹² The Commission recommended that several extraordinary provisions, including roll-ups and milestones, not be permitted in interim orders. *Id.* at 80. The Commission recommended final approval of a roll-up only if the new money from the DIP loan comfortably exceeds the size of the roll-up, and the DIP loan at issue is the best available option and is in the best interests of the estate. As for milestones, the Commission recommended final approval only for milestones that provide the debtor with at least sixty days to complete the task in question. ABI Report, *supra* note 1, at 73.

⁹³ LSTA Report, *supra* note 66, at 9.

that milestones may improve efficiency by shortening the debtor's time in bankruptcy when assets are deteriorating.⁹⁴

Given the evidence of the positive effects of DIP loans generally,⁹⁵ it may be that roll-ups and milestones are worth the potential costs if indeed, credit market conditions affect their use. Courts typically justify these inducements with the recitation that no other financing is in sight, and the extraordinary terms are necessary to close the deal.⁹⁶ If credit markets are tight, then any potential negative side-effects may be insignificant compared to the benefits of the DIP loan. On the other hand, in the absence of a demonstrable association between the use of extraordinary provisions and changes in credit availability, extraordinary provisions seem hard to justify.

III. EMPIRICAL ANALYSIS

In this Part, I discuss my empirical findings on the variation in DIP lending arrangements before, during, and after the Financial Crisis. After describing the sample and data sources, I explain how each of the four loan provisions—loan pricing, covenants, roll-ups, and milestones—changed during the Crisis. As earlier noted, I expect loan contracting practices to vary with market conditions.

A. Data and Sample

1. Sample Selection

The sample of cases comes from Lynn LoPucki's Bankruptcy Research Database (BRD), which captures all "large" public company bankruptcy filings since October 1, 1979. A large case for BRD involves at least \$100MM in assets measured in 1980 dollars (about \$280 million in current dollars). I restrict the sample to BRD cases filed from 2004-2012 that involve non-financial firms and were resolved as of February 7, 2013, giving us 278 cases. Of these, DIP loans are present in 172 cases (62% of all cases).

⁹⁴ *Id.* at 56.

⁹⁵ See *supra* note 28 and accompanying text.

⁹⁶ For example, the Delaware bankruptcy court permits roll-ups, but only where they are conspicuously identified in the motion to approve financing and are justified. Bankr. D. Del. R. 4001-2(a)(i) (requiring that financing motion: (a) note whether extraordinary provisions are included, (b) identify such extraordinary provisions, and (c) justify such provisions). New York requires a hearing to approve a roll-up. Bankr. S.D.N.Y. R. 4001-2(e) (requiring notice to those directly affected and hearing on the motion). In sum, courts permit roll-ups, but are skeptical. See, e.g., *Transamerica Commercial Fin. Co. v. Citibank, N.A.* (*In re Sun Runner Marine*), 945 F.2d 1089, 1095 (9th Cir. 1991) ("[T]he use of financing to pay a prepetition unsecured debt is to be used only in extreme cases."); *In re EqualNet Commc'ns Corp.*, 258 B.R. 368, 370-71 (Bankr. S.D. Tex. 2000) (denying DIP financing that utilized roll-up, but permitting certain pre-petition claims to be paid during automatic stay).

I also rely on BRD for many firm-, case-, and loan characteristics: DIP loan amounts, case outcomes (i.e., traditional reorganization, prepackaged bankruptcy, § 363 sale, or other), financial characteristics, and whether the debtor emerged from bankruptcy. For DIP loan agreements, DIP financing orders, disclosure statements, and related bankruptcy documents, I rely on PACER. I hand-collected data on roll-ups, DIP lenders' pre-bankruptcy claims, case milestones, financial reporting obligations, covenants, and the other deal terms described below. Finally, I obtain loan pricing from the Thomson Reuters' Dealscan database.

2. Credit Availability

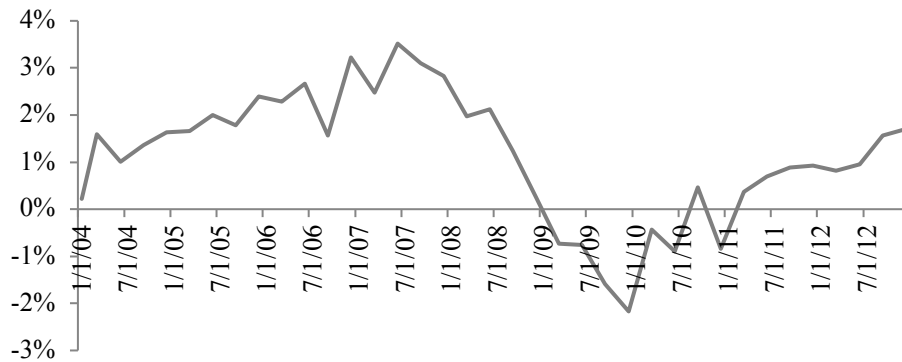
As the primary measure of credit availability, I use the quarterly *percentage change* in total credit for non-financial corporations ("Available Credit").⁹⁷ I also use additional measures of changes in credit availability in unreported robustness tests.⁹⁸ Results are generally consistent across all measures. As shown in Figure 1 below, my measure of Available Credit appears largely consistent with the conventional wisdom about the timing of the Crisis.⁹⁹ Available Credit rose steadily from 2004 through mid-2007, when it peaked. A sharper decline followed, bottoming out in late 2009, after which it rose gradually through 2012.

⁹⁷ Our credit data come from the Bank for International Settlements. For a discussion of the variable, see http://www.bis.org/statistics/totcredit/credpriv_doc.pdf.

⁹⁸ In addition to quarterly change in total credit for non-financial corporations, I use (1) quarterly percentage change in credit availability for the non-financial sector; (2) year-over-year quarterly percentage change for the entire U.S., including households and governments; and (3) quarterly percentage change in the Credit Suisse High-Yield Bond Fund (CHY). I focus on the change in credit availability for non-financial corporations because it is the most relevant to our setting, but the results are generally consistent across the various proxies.

⁹⁹ The National Bureau of Economic Research determined that the Great Recession in the U.S. began toward the end of 2007 and ended in June 2009. *US Business Cycle Expansions and Contractions*, NAT'L BUREAU OF ECON. RES. (last visited Oct. 8, 2019), <https://www.nber.org/cycles.html> (identifying recession lasting from December 2007 to June 2009).

FIGURE 1:
AVAILABLE CREDIT: NON-FINANCIAL CORPORATIONS
(% CHANGE)

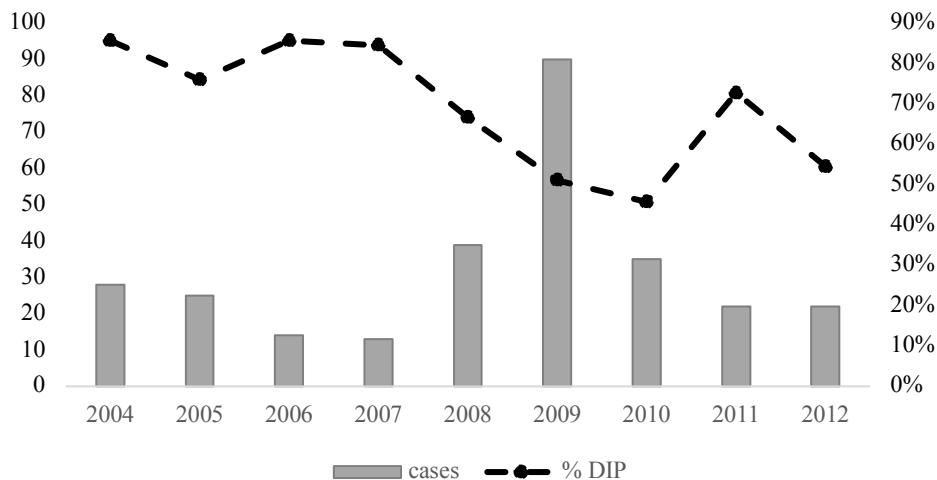


This figure shows the quarterly percentage change in total credit for non-financial corporations (“Available Credit”) for the sample period 2004-12. The data come from the Bank for International Settlements. The data include all credit to U.S. private and public non-financial corporations and reflect credit “provided by domestic banks, all other sectors of the economy and nonresidents.”

3. Descriptive Statistics

Of the 278 Chapter 11 cases in the sample, a disproportionate number were filed, not surprisingly, in 2009 during the depths of the Great Recession. As Figure 2 below shows, ninety cases—over 30% of the sample—were filed in 2009 (left axis). And while 62% of the cases overall had DIP loans, the 2009-10 period had the lowest percentage of DIP loans (51% and 44%, respectively, on the right axis), consistent with the credit scarcity implied by the trough we observe in Available Credit in Figure 1.

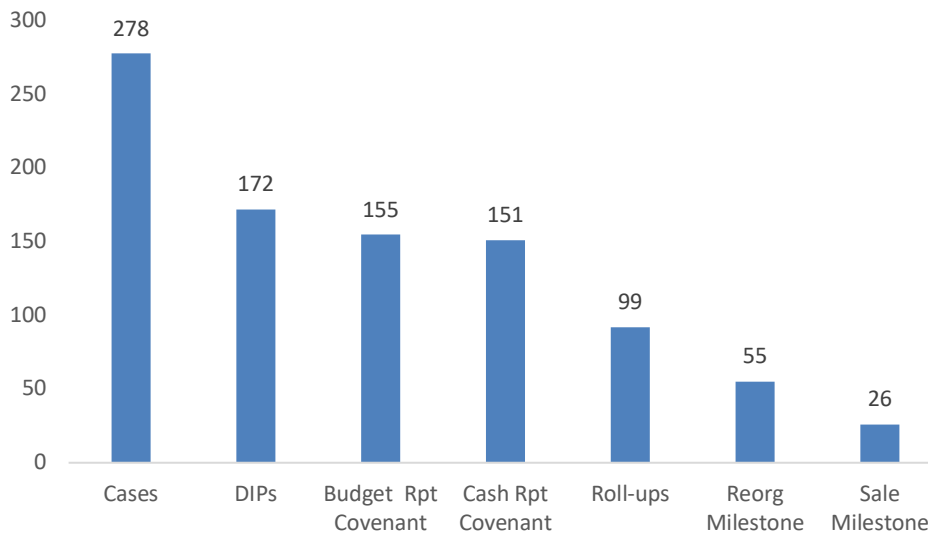
FIGURE 2: TOTAL CASES & PERCENTAGE WITH DIP LOANS



The vertical bars in this figure show the number of Chapter 11 cases in each sample year (left axis). The dotted line captures the percentage of cases with a DIP loan for each sample year (right axis).

Figure 3 below summarizes the most common DIP loan features in our sample. Of the 172 DIP loans, 155 contain a covenant requiring regular budget reconciliations; 151 contain a covenant requiring regular reporting of cash; 99 contain roll-ups; 55 contain a reorganization-related milestone (typically a deadline relating to the filing or court approval of the disclosure statement or plan of reorganization); and 26 contain an asset sale-related milestone.¹⁰⁰ Table 1 below contains variable definitions.

FIGURE 3: MOST COMMON DIP FEATURES



The vertical bars in this figure quantify the most common DIP loan features in the sample of 278 Chapter 11 cases.

¹⁰⁰ My data are consistent with findings in the finance literature that the presence of a DIP loan is associated with a higher likelihood of emerging from Chapter 11. Sixty-four percent of all cases in the sample emerged from bankruptcy. Of emerging cases, 77% of debtors with DIP loans emerged, while only 43% of debtors without DIP financing emerged. Bankruptcy Research Database codes a successful emergence as long as at least one operating company continues to exist post-bankruptcy. LYNN M. LOPUCKI, PROTOCOLS FOR THE UCLA-LOPUCKI BANKRUPTCY RESEARCH DATABASE 21 (2016), <http://lopucki.law.ucla.edu/documentation/Protocols.pdf> (“To emerge, the firm must continue to exist. . . . A company does not emerge if the company continues to operate only for the purpose of liquidation.”). These figures are comparable to a study by the LSTA, which found a 69% reorganization rate among firms with DIP financing and a 52% rate among firms without. *See supra* Part II.C.

TABLE 1: VARIABLE DEFINITIONS

Variable name	Definition
<i>Independent Variable of Interest</i>	
Available Credit (%)	Quarterly percentage change in total credit for non-financial corporations
<i>Dependent Variables: Ordinary DIP Loan Provisions</i>	
All-in-Spread (AIS)	All-in-spread above LIBOR.
Budget Reporting	Reporting interval for budget compliance (in days)
Cash Reporting	Reporting interval for cash (in days)
Financial Covenants	Total number of financial covenants
DIP Loan	Dollar amount of DIP Loan
<i>Dependent Variables: Extraordinary DIP Loan Provisions</i>	
Roll-up Dummy	Indicator for whether a DIP loan includes a roll-up feature
Roll-up	Amount of roll-up
Rollup/ DIP Loan	Roll-up amount scaled by the dollar amount of the DIP Loan
Term Roll-up Dummy	Indicator for whether a DIP loan includes a term roll-up feature
Term Roll-up	Amount of term roll-up
Term Roll-up/ Lean DIP	Amount of term roll-up/ (DIP Loan – any working capital roll-up amount)
Disclosure Statement Milestone	Indicator for whether a DIP loan agreement includes a disclosure statement milestone
Plan Milestone	Indicator for whether a DIP loan agreement includes a milestone with respect to plan filing or plan confirmation
Sale Milestone	Indicator for whether a DIP loan agreement includes a milestone with respect to a going concern sale
Any Milestone	Indicator for whether a DIP loan agreement includes one or more of the three types of milestones
<i>Firm and Case Characteristics</i>	
Assets	Total assets before Chapter 11 filing
Ln (Assets)	Log of total assets before Chapter 11 filing
Liabilities	Total liabilities before Chapter 11 filing
Leverage	(Total liabilities / total assets) before Chapter 11 filing
Prepack	Indicator that case is a prepackaged Chapter 11
363 Sale	Indicator that substantially all the debtor's assets will be sold as a going concern
<i>Indicia of Creditor Control</i>	
Same Lender	Indicator that DIP lender is also debtor's dominant pre-bankruptcy secured lender

Variable name	Definition
All Pre-Assets	Indicator that Debtor's dominant pre-bankruptcy secured lender has liens on all substantially all debtor assets as of the petition date
All Post-Assets	Indicator that DIP loan is secured by substantially all DIP assets
Prime Dummy	Indicator that DIP lender enjoys a priming lien
Budget Reporting	Reporting interval for budget compliance (in days)
Cash Reporting	Reporting interval for cash (in days)

Table 2 below shows summary statistics, describing in careful detail the contours of DIP financing terms that affect the incidence and size of roll-ups, as well as the use of case milestones. Of our 172 DIP loans, 58% have roll-ups, with a mean (median) value of \$201 million (\$80 million). To offer some sense of the control that DIP lenders enjoy: 74% are defensive DIP lenders, having enjoyed the position of the debtor's dominant pre-bankruptcy secured lender immediately before the Chapter 11 filing. In addition, 79% of DIP lenders enter bankruptcy with liens on substantially all the debtor's pre-bankruptcy assets, while 96% of DIP lenders enjoy liens on substantially all the debtor's pre- and post-petition assets; and 82% of DIP lenders enjoy priming liens in bankruptcy. Finally, for DIP loans with roll-ups, the mean (median) ratio of Roll-up to DIP loan is 59% (60%).

I separately describe term roll-ups as well. As more fully explained below,¹⁰¹ some bankruptcy lawyers and judges view roll-ups of pre-bankruptcy working capital loans as being less objectionable than roll-ups of term loans. To address this issue, I separately test for the incidence and size of term roll-ups and roll-ups generally. As Table 2 shows, 23% of our DIP loans include a term roll-up, with mean (median) value of \$208 million (\$67.5 million). Turning to milestones, 47% of DIP loans include at least one milestone. They break down as follows: 23% include a disclosure statement milestone; 32% include a plan milestone; and 16% include a sale milestone. As for case and firm characteristics, 35% of our DIP loan cases are prepackaged bankruptcies, while 26% involve a going concern sale of substantially all the debtor's assets. Our mean (median) DIP loan firm has assets of \$2.8 billion (\$637 million) and mean (median) liabilities of \$2.8 billion (\$653 million).

¹⁰¹ See *infra* Part C1 below.

TABLE 2: SUMMARY STATISTICS

This table presents summary statistics for our 172 Chapter 11 cases that include DIP loans. I rely on Lynn LoPucki's Bankruptcy Research Data for many firm-, case-, and loan characteristics. I hand-collected roll-up and milestone data and financial reporting and other covenant data directly from DIP loan agreements, DIP financing orders, disclosure statements, and related bankruptcy documents drawn from PACER. For loan pricing, I rely on Thompson Reuter's Dealscan database.

Variable	<i>mean</i>	<i>std</i>	<i>min</i>	<i>p25</i>	<i>median</i>	<i>p75</i>	<i>max</i>	<i>N</i>
<i>Indep Var of Interest</i>								
Available Credit (%)	0.73	1.43	-2.00	0	1	2	4	172
<i>Ordinary Loan Provisions</i>								
All-in-Spread	530.68	260.84	150	350	450	700	1300	96
Budget Reporting	26.86	44.93	7	7	14	30	360	155
Cash Reporting	21.40	33.18	1	7	7	30	360	151
Financial Covenants	1.66	1.35	0	0	2	3	5	172
DIP Loan	264.37	727.76	0.70	38.75	85	205	8500	172
<i>Extraordinary Provisions</i>								
Roll-up Dummy	0.58	0.50	0	0	1	1	1	172
Roll-up	111.60	407.33	0	0	18.75	91.70	4900	166
Roll-up > 0	201.37	531.57	4	37.8	79.75	188.5	4900	92
Roll-up/ DIP Loan	1.09	1.51	0	0	0.50	1.70	7.33	166
Roll-up/ DIP Loan > 0	0.59	0.18	0.05	0.47	0.60	0.73	0.99	92
Term Roll-up Dummy	0.23	0.42	0	0	0	0	1	171
Term Roll-up	47.46	269.43	0	0	0	0	3250	171
Term Roll-up > 0	208.11	538.93	3	20.5	67.5	143.7	3250	39
Term Roll-up/Lean DIP	0.19	0.28	0.00	0.00	0.00	0.46	1.00	105
Term Roll-up/Lean DIP > 0	0.52	0.19	0.11	0.41	0.53	0.63	1	39
Discl Stmt Milestone	0.23	0.42	0	0	0	0	1	159
Plan Milestone	0.32	0.47	0	0	0	1	1	159
Sale Milestone	0.16	0.37	0	0	0	0	1	159
Any Milestone	0.47	0.50	0	0	0	1	1	159
<i>Firm and Case Char</i>								
Assets	2813.98	7767.75	212	396	636.50	1800	80449	172
Ln(Assets)	6.86	1.20	5.36	5.98	6.46	7.50	11.30	172
Liabilities	2803.27	7314.43	137	414.50	652.50	1800	72280	172
Leverage	1.06	0.59	0.25	0.82	0.96	1.18	6.15	172

Variable	<i>mean</i>	<i>std</i>	<i>min</i>	<i>p25</i>	<i>median</i>	<i>p75</i>	<i>max</i>	<i>N</i>
Prepack	0.35	0.48	0	0	0	1	1	172
Sale	0.26	0.44	0	0	0	1	1	172
<i>Indicia of Creditor Control</i>								
Same Lender	0.74	0.44	0	0	1	1	1	167
All Pre-Assets	0.79	0.41	0	1	1	1	1	155
All Post-Assets	0.96	0.20	0	1	1	1	1	169
Prime Dummy	0.82	0.39	0	1	1	1	1	172
Budget Reporting	26.86	44.93	7	7	14	30	360	155
Cash Reporting	21.40	33.18	1	7	7	30	360	151

Table 3 below offers separate summary statistics for the DIP loan cases with and without roll-ups. The two right-hand columns show P-values for (a) t-tests for differences in means and (b) rank sum tests for differences in medians. With respect to ordinary loan provisions, pricing and covenants show no significant differences, except for mean and median size of the DIP loan. The mean (median) DIP loan amount for roll-up loans is \$339 million (\$125 million), while for DIP loans without roll-ups, the mean (median) amount is \$163 million (\$50 million). It makes sense that DIP loans with roll-ups would generally be larger than those without. The amount of new money required for the debtor to be able to operate in Chapter 11 would not depend on whether the DIP loan includes a roll-up. The roll-up amount just gets added on top of the new money. With respect to milestones, the sale milestone is significantly more likely with roll-up DIP loans. As for firm characteristics, firms with DIP loans without roll-ups show larger median assets and liabilities than firms with roll-up DIP loans.

TABLE 3: SUMMARY STATISTICS FOR DIP LOAN FIRMS
WITH/WITHOUT ROLL-UPS

This table presents comparisons of loan-, firm-, and case characteristics as between cases with and without roll-ups. The two right-hand columns show P-values for (a) t-tests for differences in means and (b) rank sum tests for differences in medians.

Variable	DIP loan with roll-up			DIP loan without rollup			total	P-value for differences	
	mean	median	N	mean	median	N		in means	in medians
<i>Indep Var of Interest</i>									
Available Credit (%)	0.85	1	99	0.58	0	73	172	0.218	0.200
<i>Ordinary Loan Provisions</i>									
All-in-Spread	504.23	425	65	586.13	550	31	96	0.151	0.182
Budget Reporting	29.55	14	92	22.92	15	63	155	0.368	0.837
Cash Reporting	19.15	14	91	24.81	7	60	151	0.307	0.266
Financial Covenants	1.79	2	99	1.48	2	73	172	0.139	0.155
DIP Loan	339.41	125	99	162.59	50	73	172	0.079*	0.000***
<i>Extraordinary Provisions (milestones)</i>									
Discl Stmt Milestone	0.25	0	95	0.20	0	64	159	0.472	0.470
Plan Milestone	0.32	0	95	0.33	0	64	159	0.871	0.871
Sale Milestone	0.21	0	95	0.09	0	64	159	0.051*	0.052*
Any Milestone	0.48	0	95	0.44	0	64	159	0.565	0.564
<i>Firm and Case Char</i>									
Assets	1941.13	585	99	3997.70	821	73	172	0.122	0.021**
Ln(Assets)	6.67	6.37	99	7.12	6.71	73	172	0.015**	0.021**
Liabilities	1992.32	542	99	3903.06	882	73	172	0.123	0.015**
Leverage	1.08	0.92	99	1.03	0.97	73	172	0.56	0.405
Prepack	0.34	0	99	0.37	0	73	172	0.722	0.721
Sale	0.29	0	99	0.22	0	73	172	0.279	0.278

B. DIP Loan Terms and the Financial Crisis: Ordinary Provisions

The Financial Crisis offers a shock to the credit markets that facilitates investigation of the relation between changes in credit availability and the terms of DIP financing. In this section and the next, I provide, to my knowledge, the first empirical evidence on this relationship. This section

examines two types of “ordinary” loan provisions: pricing and reporting covenants. The next section examines two types of “extraordinary” provisions: roll-ups and milestones.

1. Pricing DIP Loans

To examine how the pricing of DIP loans varies with financial conditions, I take several approaches. First, to understand generally how DIP loans are priced, Table 4 below shows the average pricing for all corporate bonds and DIP loans issued in each of the sample years.¹⁰² I measure pricing as the All-in-Spread above LIBOR (“AIS”), which captures interest costs, fees, and other charges associated with obtaining the loan. The average spread is broken down for each category of credit rating, where higher ratings indicate rating agency determinations of lower default risk. Of course, this simple analysis does not account for firm characteristics, but it gives some context for how DIP loans are priced. As the table indicates, interest rates on DIP loans are generally similar to those for “Non-investment grade speculative” or “Highly speculative” bonds. So DIP loans are priced similarly to junk bonds—albeit high quality junk bonds.

¹⁰² In order to compare DIP loan pricing with corporate bonds, the DIP spread in Table 4 includes LIBOR. The numbers in Table 4 therefore differ from those in Figure 4 below.

TABLE 4: PRICING OF DIP LOANS VERSUS CORPORATE BONDS

	2004	2005	2006	2007	2008	2009	2010	2011	2012
	DIP Loan Spread (inc. LIBOR)								
Median	612.10	703.30	895.00	712.40	908.90	810.40	492.30	483.00	801.30
Mean	680.95	769.47	969.58	797.40	919.23	850.08	554.80	579.00	709.63
Obs.	13	15	6	5	15	31	6	5	3
	Average Spread on Corporate Bonds Issued								
Prime	362.52	451.10	532.42	514.61	368.41	248.74	203.60	175.00	117.27
High Grade	393.45	438.76	552.78	681.67	341.78	291.15	566.45	177.61	139.13
Upper Medium Grade	412.68	420.15	423.84	510.12	475.72	525.25	401.61	365.57	311.45
Lower Medium Grade	481.13	547.09	563.11	558.11	654.05	665.48	501.50	452.60	401.75
Non-Investment Grade									
Speculative	631.27	651.46	641.64	632.88	740.62	851.53	744.93	645.13	557.01
Highly Speculative	779.99	804.68	829.67	777.39	865.69	965.68	915.12	869.69	770.54
Substantial Risks	716.27	886.96	942.38	946.44	954.45	924.38	972.85	970.16	928.04
Extremely Speculative	883.33	828.72	1125.00	706.25	945.00	1129.69	812.83	850.00	1133.33

This table shows the average pricing for all corporate bonds and DIP loans issued in each sample year. To be able to compare DIP loan and bond pricing, the DIP loan spread includes LIBOR. As the red figures show, DIP loans are generally priced like speculative junk bonds.

This high-quality-junk-bond pricing for DIP loans is perhaps surprising because DIP loans have much lower historical rates of default than junk bonds.¹⁰³ To my knowledge, only two DIP loans have ever experienced a payment default.¹⁰⁴ By comparison, corporate bonds with similar ratings have experienced average annual default rates of 10% or more.¹⁰⁵ Of course, default risk is only one component of loan pricing. Liquidity risk also affects pricing,¹⁰⁶ as does the cost of lender monitoring, and both of these factors are

¹⁰³ Skeel, *supra* note 14; Marshall S. Huebner, *Debtor-in-Possession Financing*, RMA J. 30, 33 (Apr. 2005).

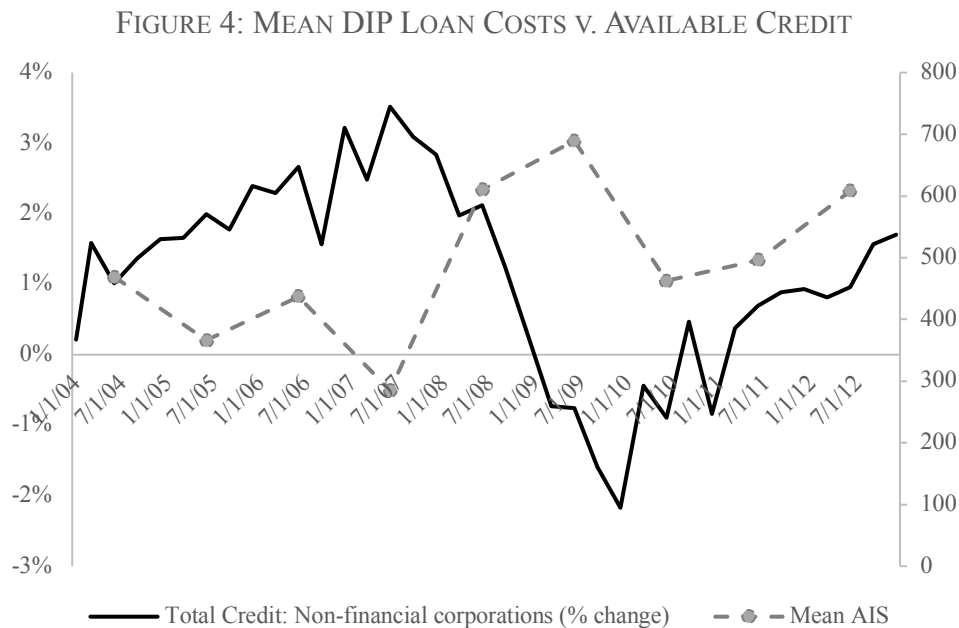
¹⁰⁴ See WILLIAM FAHY, MOODY'S COMMENTS ON DEBTOR-IN-POSSESSION LENDING 4 (2008), <https://www.moodys.com/sites/products/Research/2007300000539803.pdf> (detailing the DIP loan defaults of Marvel Entertainment Group and Winstar Communications). One of those DIP loans was ultimately repaid in full. *Id.* (noting that Marvel Entertainment Group's DIP loan "was repaid in full, but not per original payment terms of the facility.").

¹⁰⁵ See STANDARD & POOR'S, 2014 ANNUAL GLOBAL CORPORATE DEFAULT STUDY AND RATING TRANSITIONS 9 (2014), https://www.nact.org/resources/2014_SP_Global_Corporate_Default_Study.pdf (noting default rates frequently above ten percent for CCC rated bonds). For example, the mean DIP pricing in 2006 was comparable to mean pricing for CCC+ rated bonds. The average default rate for these CCC+ rated bonds was 13.33% in 2006. *Id.* (detailing default rates for 2006).

¹⁰⁶ Hui Chen et al., *Quantifying Liquidity and Default Risks of Corporate Bonds Over the Business Cycle*, 31 REV. FIN. STUD. 852, 853 (2018) (describing relationship between liquidity and pricing); Francis A. Longstaff, Sanjay Mithal & Eric Neis, *Corporate Yield Spreads: Default Risk or Liquidity? New Evidence*

intuitively more costly for DIP loans than for corporate bonds.¹⁰⁷ In addition, as earlier noted,¹⁰⁸ institutional features may preclude competitive pricing for DIP loans, unlike bond markets.

Next, as shown in Figure 4, I track mean DIP borrowing costs over the sample period. AIS over LIBOR is reported on the right axis.¹⁰⁹ And the graph for Available Credit from Figure 1 is superimposed on the left axis.



The dashed line in this figure captures mean DIP loan borrowing costs (AIS over LIBOR) for each sample year (right axis). The solid line is Available Credit from Figure 1 (left axis).

For most of the sample period, not surprisingly, the costs of DIP borrowing look to be moving inversely with Available Credit. As Available

from the *Credit Default Swap Market*, 60 J. FIN. 2213, 2246 (2005) (noting studies finding “that variation in liquidity is a risk that is priced in equity markets).

¹⁰⁷ DIP loans are quite different from the typical corporate bond insofar as the DIP lender will engage in far more monitoring than bondholders do. The data set shows, for example, that many DIP lenders require weekly—or even daily!—updates of their borrower’s financial condition. Corporate bondholders, on the other hand, generally have little interaction with their borrower companies and do not actively monitor. Indeed, even as compared to ordinary bank loans, corporate bonds contain very few financial covenants. Additionally, the DIP lender must not only monitor and understand the debtor’s business, but must monitor and understand the impact of Chapter 11 on the debtor’s business. See Mark Shapiro, Supplemental Testimony Before the ABI Commission to Study the Reform of Chapter 11 2 (2012) (noting lenders “must engage in all analyses that are attendant to a more typical loan to a non-distressed commercial borrower, but they also must understand the legal and financial framework that encompasses a potential borrower in a Chapter 11.”).

¹⁰⁸ See *supra* Part I.A. (“No true market exists for DIP loans.”).

¹⁰⁹ AIS in Figure 5 is reported as spread above LIBOR, whereas AIS reported in Table 1 includes LIBOR.

Credit rises from the beginning of the sample period through mid-2007, DIP loan costs correspondingly decrease. Then as Available Credit nosedives from mid-2007 through 2009, DIP loan costs rise, peaking in 2009 before falling again as Available Credit recovers in 2010.¹¹⁰ Consistent with this inverse relationship, the correlation between my liquidity measure and AIS is -0.24 (statistically significant at 5%).

To incorporate case-specific characteristics, I use regression analysis. In Table 5 below, I provide two models testing the relationship between AIS and Available Credit. The first model includes only standard controls—firm and case characteristics—which allows me to keep all 99 observations containing AIS. The second model adds controls for DIP loan terms, which may also affect pricing.

TABLE 5
DIP LOAN PRICING AND AVAILABLE CREDIT

	(1) Ln (AIS)	(2) Ln (AIS)
Available Credit (%)	-0.147*** (0.0360)	-0.121*** (0.0409)
Prepack	-0.0428 (0.112)	-0.0498 (0.121)
363 Sale	0.160 (0.117)	0.137 (0.157)
Ln (Assets)	-0.00511 (0.0392)	-0.0162 (0.0497)
Leverage	-0.0969 (0.0847)	-0.115 (0.0847)
Fin. Covenants		0.00248 (0.0327)
Any Milestone		0.165 (0.119)
Roll-up/DIP Loan		-0.0555 (0.177)
Constant	6.308*** (0.320)	6.360*** (0.427)
Industry FE	Yes	Yes
Observations	99	90
R-squared	0.261	0.292

This table presents ordinary least squares tests for the relationship between DIP loan pricing—proxied by the natural log of All-in-Spread above LIBOR—and Available Credit, our main independent variable of interest.

¹¹⁰ Although DIP loan costs appear to rise right along with Available Credit in 2012, that sample year includes only 14 DIP cases. The apparent anomaly could be an artifact of the details of specific cases.

The Column (1) test controls for the borrower's size, leverage, and industry, and whether the bankruptcy was prepackaged or a Section 363 sale. Size is measured as the natural log of total assets, and leverage is measured as total liabilities divided by total assets. Both are calculated using the most recently available financial statements filed with the SEC before bankruptcy. Column (2) adds controls for DIP loan terms—the number of financial covenants, whether any milestone is included, and the ratio of Roll-up/DIP Loan. Both models use robust standard errors and control for industry fixed effects using 1-digit SIC codes. Statistical significance of 1%, 5%, and 10% are represented using ***, **, and *, respectively. Robust standard errors are reported in parentheses.

Table 5 shows a statistically and economically significant inverse relationship between Ln (AIS) and changes in credit availability during the Crisis. The estimates suggest that, holding all other variables constant, for a 1% increase in Available Credit, AIS decreases by an estimated 11-14%.¹¹¹ It makes sense that a positive change in credit supply generally reduces DIP borrowing costs and vice versa. Indeed, empirical studies confirm that loan contracts outside of bankruptcy include higher pricing and more lender-protective features when credit becomes more scarce.¹¹²

In sum, the results indicate that the pricing of DIP loans appears connected to the ebb and flow of the wider credit markets. Such a finding does not necessarily mean that DIP loans are fully efficient and perfectly priced, but it does indicate that market forces affect DIP pricing.

2. Loan Covenants

Next, I analyze the use of reporting covenants during the Financial Crisis. Reporting covenants require the debtor to provide the lender with specific information at pre-determined reporting intervals. Such monitoring covenants have become more and more common in the last decade or so. Modern information systems facilitate ever more exacting creditor monitoring of debtor business activities, such that reporting demands have become both more extensive and more frequent. Though imposing a budget on the debtor has always been common, DIP lenders now commonly demand monthly or even *weekly* reporting on budget deviations and cash levels.

Consistent with the findings on loan pricing, I find evidence that reporting covenants became more lender-friendly during the Crisis.¹¹³ In

¹¹¹ I exponentiate the coefficients on Available Credit to generate this range.

¹¹² See Boot, Thakor & Udell, *supra* note 59, at 471 (noting relationship between higher interest rates—and thus credit scarcity—and collateral requirements in loan documents); Bradley & Roberts, *supra* note 48, at 21 (finding that scarcity in credit markets leads to higher number of covenants in loan agreements); Choi & Triantis, *supra* note 60, at 61 (“[P]ractitioners attribute changes in the breadth or tightness of covenants and in the collateral requirements to swings in the relative bargaining or market power caused by changing supply and demand conditions of credit markets.”).

¹¹³ Reporting covenants are very common in DIP loans, so there is relatively slight yearly variation in the use of such covenants. It is for this reason that I focus on the characteristics (rather than the presence) of reporting covenants.

particular, lenders began requiring updates at more frequent intervals. For example, the data set shows requirements for *daily borrowing base* updates only in 2007, 2008, and 2009;¹¹⁴ in other years, the most frequent update required is *weekly*. Similarly, the first observations of *weekly financial statement reporting* appear during the Crisis; in other years, the most frequent update required is *monthly*. Indeed, when we consider the percentage of total available covenants that are at the most stringent level,¹¹⁵ the percentage increases from roughly 8% (2004-2006) to 15% (2007-2009) and then decreases to 10% (2010-2012).¹¹⁶ This finding is consistent with the literature on covenants outside of bankruptcy, which has found that covenants become more prevalent and more restrictive as the rate of interest increases.¹¹⁷

This trend is displayed in Figures 5 and 6 below. The columns (left-hand scale) show by year the number of DIP loans requiring budget and cash reporting, the most common covenants in the sample, as well as the range of their different frequencies. The most common reporting intervals are weekly and monthly, with weekly being the most stringent. The lower solid portion of each column represents the number of weekly reporting covenants by year, while the middle striped portion represents monthly reporting, and the top solid portion represents all other reporting intervals. For both sets of covenants, weekly reporting dominates in 2009, at the height of the Financial Crisis, while monthly reporting is generally more common in 2007 and before. Following the solid line (right-hand scale) in each figure, we also see a spike in the percentage of weekly budget and cash reporting around 2009, and generally less frequent resort to weekly reporting before and after. This pattern roughly tracks Available Credit.

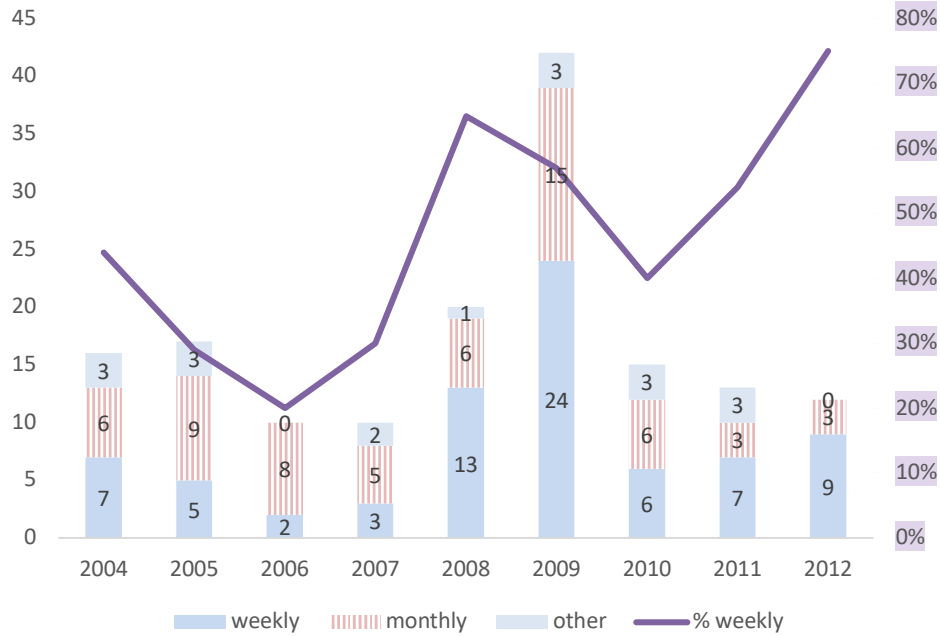
¹¹⁴ A borrowing base most typically includes inventory and accounts receivable as the collateral against which the lender lends. Because the levels and value of inventory and accounts receivable in a going concern are always changing, and the lender does not want to extend more credit than its collateral is worth, borrowing base reports are a common feature of inventory-accounts receivable financing.

¹¹⁵ This analysis includes only reporting covenants relating to financial statements, budgets, borrowing base, and cash—not asset sales. Covenants related to asset sales are omitted because it is difficult to determine the “strictest” level. The ratio reflects the number of covenants at the strictest level relative to the total number of DIP loans in the year multiplied by four (i.e., the total number of these four covenants that could theoretically exist in all DIP loans in that year).

¹¹⁶ Even though I find that the frequency of reporting is sensitive to changes in credit availability, the data also suggest the *use* of reporting covenants may have increased during the Crisis and remained sticky thereafter.

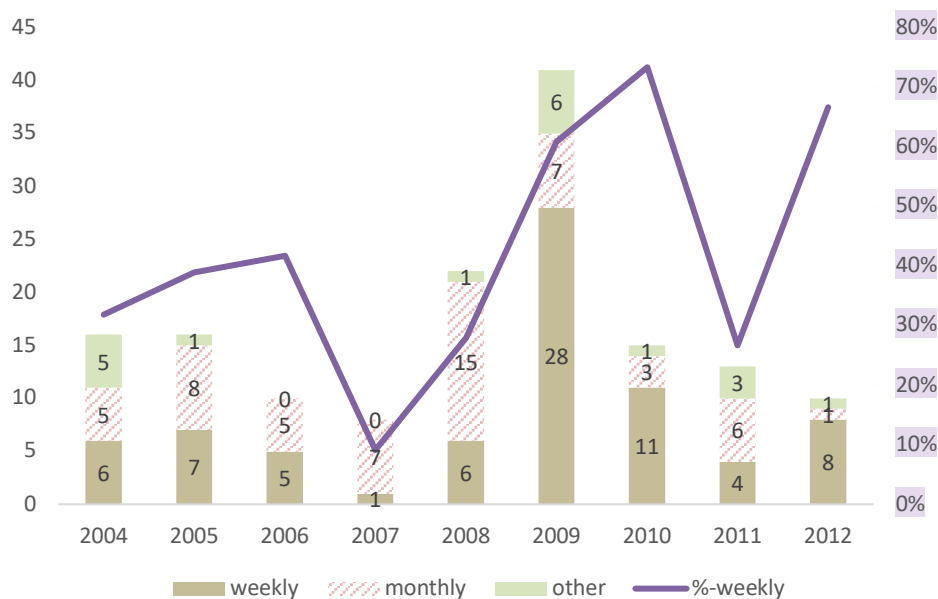
¹¹⁷ Billett, King & Mauer, *supra* note 58; Nini, Smith & Sufi, *supra* note 48; Bradley & Roberts, *supra* note 48.

FIGURE 5: BUDGET REPORTING FREQUENCY



This figure captures the incidence of budget reporting covenants and their required reporting frequencies by year. The two most common frequencies are weekly and monthly. Columns (left-hand scale) represent the number of budget reporting covenants by year. Counts of weekly budget reporting are represented by the lower solid portion of each column; counts of monthly budget reporting are represented in the middle striped portion of each column; all other reporting intervals are represented by the solid upper portion of each column. The solid line (right-hand scale) represents by year the percentage of budget reporting covenants that require weekly reporting, the most stringent reporting interval.

FIGURE 6: CASH REPORTING FREQUENCY



This figure captures the incidence of cash reporting covenants and their required reporting frequencies by year. The two most common frequencies are weekly and monthly. Columns (left-hand scale) represent the number of cash reporting covenants by year. Counts of weekly budget reporting are represented by the lower solid portion of each column; counts of monthly budget reporting are represented in the middle striped portion of each column; all other reporting intervals are represented by the solid upper portion of each column. The solid line (right-hand scale) represents by year the percentage of cash reporting covenants that require weekly reporting, the most stringent reporting interval.

To analyze this pattern in more detail, Table 6 presents a regression analysis of the relationship between cash reporting frequency and Available Credit. The cash reporting covenant is coded according to its reporting interval in days (e.g., a weekly reporting requirement is coded as 7 and a bi-weekly requirement as 14), and each value enters the regression in log form.¹¹⁸ As in Table 5, Column 1 controls for firm and case characteristics, and Column 2 adds controls for DIP loan terms. The variable of interest in both models is Available Credit.

¹¹⁸ I take the natural log of the dependent variable to address concerns that the results might be driven by outliers. Although most covenants require reporting at intervals that range from 7 to 30 days, a few DIP loans include covenants that require only annual reporting. Without taking the log value of the dependent variable, these extreme observations could skew the results. I also note that, in some cases, it is difficult to convert the descriptive data into numeric values that can be input into a regression. For example, it is unclear how one would code a reporting covenant that requires reporting “upon request” or “as needed.” In these cases, I drop the observation.

TABLE 6
CASH REPORTING FREQUENCY AND AVAILABLE CREDIT

	(1) Ln (Cash Reporting)	(2) Ln (Cash Reporting)
Available Credit (%)	0.105** (0.0521)	0.0833 (0.0570)
Prepack	0.0877 (0.184)	0.102 (0.194)
363 Sale	-0.00112 (0.181)	0.0842 (0.211)
Ln (Assets)	0.0318 (0.0869)	0.0730 (0.102)
Leverage	-0.0483 (0.112)	0.132 (0.173)
Fin. Covenants		-0.0387 (0.0798)
Any Milestone		-0.122 (0.162)
Rollup/DIP Loan		0.253 (0.273)
Constant	2.428*** (0.658)	1.985** (0.799)
Industry FE	Yes	Yes
Observations	155	145
R-squared	0.090	0.124

This table presents log-linear regressions testing for associations between the stringency of cash reporting covenants and Available Credit. The dependent variable is the natural log of the reporting interval for the cash reporting covenant, measured in days. Column (1) controls for case and firm characteristics—whether the case involves a prepackaged bankruptcy or a Section 363 sale, firm size as measured by the natural log of total assets, and leverage as measured by total assets divided by total liabilities. As before, assets and liabilities are drawn from the most recently available financial statements filed with the SEC before bankruptcy. Column (2) adds controls for DIP loan terms—the number of financial covenants, whether any milestone is included, and the ratio of Roll-up/DIP Loan. Both models use robust standard errors and control for industry fixed effects using 1-digit SIC codes. Statistical significance of 1%, 5%, and 10% are represented using ***, **, and *, respectively. Robust standard errors are reported in parentheses.

As predicted, Table 6 shows that the frequency of cash reporting has a positive relationship with changes in credit availability, though the Column 2 coefficient on Available Credit is not statistically significant. Cash reporting requirements are less demanding—reporting intervals are longer—with positive changes in credit availability. The Column 1 estimates suggest that, holding all other variables constant, a 1% increase in Available Credit is associated with an 11% increase in the cash reporting interval. This finding,

consistent with the earlier finding on DIP loan pricing, provides further evidence that ordinary loan provisions are related to economic conditions.

C. DIP Loan Terms and the Financial Crisis: Extraordinary Provisions

Here I study Judge Gerber's articulated hope in *Lyondell* that extraordinary provisions in DIP loan arrangements, such as roll-ups and milestones, would become less common as credit markets recovered after the Financial Crisis.

1. Incidence of Roll-ups

My investigation of roll-ups and Available Credit proceeds in two parts. I first focus on roll-ups generally, taking account of all roll-ups in DIP loans. I then investigate roll-ups from a slightly different perspective. This second approach ignores roll-ups of pre-bankruptcy working capital loans, and instead focuses only on roll-ups of pre-bankruptcy term loans and other non-working capital loans.¹¹⁹ It has been suggested that for reasons of practicality and convenience, courts and practitioners may implicitly view roll-ups of pre-bankruptcy working capital loans as less objectionable than roll-ups of other types of pre-bankruptcy debt (e.g., term loans).¹²⁰ Given this possibility, it makes sense to investigate term loan roll-ups separately from roll-ups that include pre-bankruptcy working capital loans.

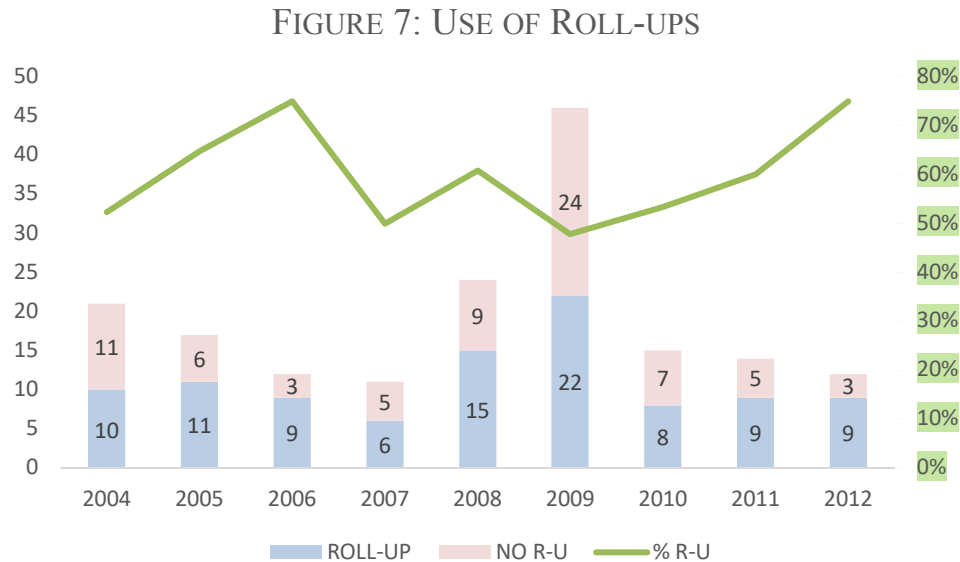
To start, we consider all roll-ups. Figure 7 differentiates the DIP loans in my sample based on whether the loan includes a roll-up. The height of each bar represents the number of DIP loan cases in a given year (left axis). The

¹¹⁹ With a term loan, the borrower borrows a set amount at the inception of the loan and typically makes periodic interest payments on that outstanding amount until it repays or refinances the total amount borrowed. With a working capital loan, by contrast, the borrower enjoys the flexibility to borrow and repay repeatedly as needed, such that the amount owed fluctuates over time. The working capital loan is typically collateralized with the borrower's accounts receivable and/or inventory (i.e., the "working" capital), and the total debt outstanding at any given time is constrained based on the value of the collateral. For convenience, I refer to non-working-capital loans collectively as "term loans."

¹²⁰ Because working capital lines typically rely on accounts receivable and/or inventory for collateral, it may make sense to allow this pre-bankruptcy collateral to turn over as part of the debtor's ordinary course postpetition operations, with the proceeds of this prepetition collateral paying off the pre-bankruptcy working capital debt. Otherwise, the pre-bankruptcy working capital collateral would have to be segregated from postpetition working capital for the duration of the case. This approach would create recordkeeping headaches for the debtor; it also precludes the pre-bankruptcy working capital from actually "working." By contrast, using the DIP loan to refinance the pre-bankruptcy working capital line from the start relieves the debtor from having to distinguish prepetition from postpetition collateral or proceeds. Thanks to Douglas Baird and Rich Levin for pointing me to this issue.

Of course, this administrative convenience does not diminish the potential harm to junior creditors from roll-ups generally. For example, as earlier noted, a creditor whose pre-bankruptcy claim is rolled up has effectively eliminated its reorganization risk. *See supra* note 79. And a secured creditor that is undersecured at the time of the filing could still advantage itself with a working capital roll-up to render the creditor fully secured before the end of the case. *See supra* Part II.A.

lower dark region of each bar captures the number of cases with roll-ups; the upper lighter region of each bar captures the number of cases without roll-ups. The curve above shows the percentage of DIP cases in each year that included a roll-up (right axis). Overall, 99 of the DIP cases (58%) have a roll-up.



This figure shows the use of roll-ups by year. The height of each column represents the number of DIP loans in a given year (left-hand scale). The lower dark part of each column shows the number of DIP loans that include a roll-up, while the upper lighter region of each bar captures the number of DIP loan cases without a roll-up. The curved line (right-hand scale) shows the percentage of DIP loans that include a roll-up.

Based on the descriptive evidence in Figure 7, there does not seem to be a significant relationship between roll-ups and Available Credit. Although the volume of DIP loans and roll-ups increased during the Crisis, there is no obvious change in the percentage of DIP loans that include roll-ups. The percentage of roll-ups is at its *lowest* in 2009, the pivotal Crisis year, and the percentage climbs post-Crisis. This is puzzling. Because judges often cite tightened credit availability when approving roll-ups, we would expect a negative relation between the incidence of roll-ups and Available Credit.

For more formal tests, I rely on two sets of roll-up measures as dependent variables, presented in Table 7 below. The first set applies to roll-ups generally. It includes a dummy variable indicating whether or not a DIP loan includes a roll-up, and two measures that capture the size of roll-ups: (a) the log of the raw dollar amount of the roll-up; and (b) the log odds ratio of the roll-up amount scaled by the total amount of the DIP loan. The proportion of Roll-up/ DIP loan is one that bankruptcy judges care about when deciding whether or not to approve a DIP loan. The ABI posits that a

DIP loan with a roll-up feature should be approved only when the DIP loan “extends substantial new credit to the debtor, and provides more financing on better terms than alternative facilities offered to the debtor.”¹²¹ The second set of roll-up measures applies to term loan roll-ups and is analogous to the first. This second set includes a dummy variable for the presence of a term roll-up, a proxy for the log of the raw dollar amount of a term roll-up, and a variable, *Log odds (Term Roll-up/ Lean DIP)*. This latter variable captures the log odds ratio of the term roll-up amount, scaled by what I refer to as the “Lean DIP,” which is the amount of the DIP loan, *minus* the amount of any working capital roll-up. I subtract any working capital roll-up amount from the DIP loan amount so that in this analysis, we are scaling the term roll-up only by the new DIP money plus the term roll-up.¹²²

TABLE 7: MEASURES OF ROLL-UPS

All roll-ups	Mean	Median	25 th %-ile	75 th %-ile
Roll-up Dummy	0.58	1.00	0.00	1.00
Ln (Roll-up)	4.43	4.38	3.63	5.24
Log odds (Roll-up/DIP Loan)	.42	.42	-.11	1.00
Term roll-ups				
Term Roll-up Dummy	0.23	0.00	0.00	0.00
Ln (Term Roll-up)	4.17	4.21	3.02	4.97
Log odds (Term Roll-up/ Lean DIP)	0.03	0.14	-0.38	0.44

This table describes the various roll-up measures I use as the dependent variable to test for an association between roll-ups and Available Credit. To investigate roll-ups generally, I use *Roll-up Dummy* in a logit model to test for the hypothesized negative association between extraordinary provisions and Available Credit. I also test for roll-up amounts, conditional on the amount being greater than zero. I use *Ln (Roll-up)*, the natural log of the Roll-up amount, and *Log odds (Roll-up/DIP Loan)*, the log odds ratio of *Roll-up/DIP Loan*, as dependent variables in ordinary least squares regressions. To test term roll-ups, I use analogous dependent variables. *Log odds (Term Roll-up/Lean DIP)* is the log odds ratio of *Term Roll-up*, scaled by *Lean DIP*. *Lean DIP* is *DIP Loan* minus the amount of any working capital roll-up. I subtract working capital roll-ups so that in the log odds analysis, we are scaling the term roll-up only by (new money + *Term Roll-up*).

In Table 8 below, I run a series of tests using the three proxies for all roll-ups. These models control for the same variables as the DIP loan pricing regression in Table 5, Column 2, except that here I include separate controls for the three types of milestones (disclosure statement-, plan- and sale

¹²¹ ABI REPORT, *supra* note 1, at 73. I use the log odds transformation in order to render the data suitable for OLS regression.

¹²² So this variable Log odds (Term Rollup/ Lean DIP) (a) scales the term roll-up amount by the amount of new money from the DIP loan plus the term roll-up, and then (b) takes the log odds.

milestones), plus an additional control for the DIP loan amount. As before, robust standard errors are presented in parentheses. Column 1 is a logit model: The dependent variable is an indicator that tests whether the presence of a roll-up is negatively associated with Available Credit, as we would expect given courts' pronouncements justifying resort to roll-ups when credit is scarce. The coefficient on Available Credit turns out to be positive and insignificant, however. It fails to confirm a negative relationship between Available Credit and the presence of roll-ups.

TABLE 8
ALL ROLL-UPS AND AVAILABLE CREDIT: REGRESSION

	(1) Roll-up Dummy	(2) Ln (Roll-up)	(3) Log odds (Roll-up/ DIP Loan)
Available Credit (%)	0.0484 (0.130)	0.136** (0.0629)	0.174* (0.0884)
Prepack	0.120 (0.448)	-0.374 (0.276)	-0.439 (0.304)
363 Sale	0.0138 (0.539)	-0.0418 (0.232)	-0.0374 (0.292)
Ln(Assets)	-0.636** (0.278)	0.700*** (0.129)	-0.366** (0.148)
Leverage	0.0872 (0.281)	-3.460*** (1.258)	-0.704 (1.872)
DIP Loan	0.00195* (0.00107)	0.000234** (0.000105)	0.000170** (8.47e-05)
Fin. Covenants	0.150 (0.166)	0.101 (0.0698)	-0.0246 (0.0777)
Disc. St. Milestone	0.574 (0.654)	-0.485** (0.236)	-0.148 (0.435)
Plan Milestone	-0.500 (0.565)	0.637*** (0.231)	0.390 (0.395)
Sale Milestone	1.416** (0.675)	0.0726 (0.235)	0.144 (0.263)
Constant	4.038** (1.986)	2.881* (1.605)	3.524 (2.393)
Regression	Logit	OLS	OLS
Industry FE	Yes	Yes	Yes
Observations	157	88	88
R-squared		0.681	0.265
Pseudo R ²	0.197		

This table presents tests using three proxies for roll-ups as the dependent variable, with Available Credit as our main variable of interest. Column (1) shows a logit model with *Roll-up Dummy* as an indicator variable for the presence of a roll-up. Columns (2) and (3) present OLS regressions using transformed roll-up data. The

dependent variable in Column (2) is $\ln(\text{Roll-up})$, the natural log of the roll-up amount, while the dependent variable in Column (3) is the log odds of ratio of *Roll-up/DIP loan*. The models control for the same variables as the DIP Loan pricing regression in Table 5, Column (2), except that I include separate controls for the three types of milestones (disclosure statement-, plan-, and sale milestones, plus an additional control for the DIP loan amount (*DIP Loan*). All models use robust standard errors and control for industry fixed effects using 1-digit SIC codes. Statistical significance of 1%, 5%, and 10% are represented using ***, **, and *, respectively. Robust standard errors are reported in parentheses.

Columns 2 and 3 offer more granular tests using OLS regressions. These models test for an inverse relation between roll-up *amounts* and Available Credit, conditional on the roll-up amount being greater than zero. In Column 2, we find that the coefficient on Available Credit is statistically significant, but in the opposite direction from what we would expect: This test shows a *positive* association between Available Credit and roll-up size. Finally, in Column 3 our dependent variable is the log odds ratio of (*Roll-up/DIP loan*). This measure captures judges' concerns that the roll-up amount not be too large relative to the new credit extended by the DIP loan.¹²³ The coefficient on our dependent variable is again positive and significant. The economic effect of these results is also notable. The Column 2 estimate suggests that holding all other variables constant, a 1% increase in Available Credit is associated with a 14.6% *increase* in roll-up size. The tests in Table 8 show no evidence of a negative relationship between Available Credit and roll-ups. Far from it. These tests suggest instead that roll-up size *increases* with Available Credit.

I run a similar analysis in Table 9 below, focusing only on term roll-ups. In Column 1, the logit model tests whether the presence of a term roll-up is associated with Available Credit. We again observe a statistically significant coefficient on the dependent dummy variable in the opposite direction of what we would expect. Here the coefficient on Available Credit suggests a *positive* association between the incidence of term roll-ups and Available Credit. Testing for the size of term roll-ups in Columns 2 and 3 using OLS regressions, we see negative but statistically insignificant coefficients on Available Credit, as well as very large standard errors that preclude us from drawing any conclusions from these tests.

¹²³ See *supra* note 121 and accompanying text.

TABLE 9
TERM ROLL-UPS AND AVAILABLE CREDIT: REGRESSION

	(1) Term Roll-up Dummy	(2) Log (Term Roll-up Amount)	(3) Log odds (Term Roll-up /Lean DIP)
Available Credit (%)	0.337** (0.167)	-0.0855 (0.117)	-0.00425 (0.186)
Prepack	0.432 (0.600)	-0.371 (0.466)	-0.411 (0.621)
363 Sale	0.0540 (0.688)	-0.798* (0.421)	-0.637* (0.360)
Ln(Assets)	-0.249 (0.283)	0.694*** (0.217)	-0.154 (0.266)
Leverage	-0.609 (1.041)	-4.549** (2.040)	0.818 (2.205)
DIP Loan Amount	0.00108 (0.000764)	0.000201* (0.000109)	3.48e-05 (0.000139)
Fin. Covenants	0.195 (0.165)	0.0662 (0.132)	-0.00517 (0.153)
Disc. St. Milestone	0.250 (0.753)	-0.583 (0.419)	0.242 (0.628)
Plan Milestone	-0.0905 (0.622)	-0.148 (0.446)	-0.629 (0.639)
Sale Milestone	0.0297 (0.685)	-0.00992 (0.485)	0.295 (0.579)
Constant	0.325 (2.279)	4.626 (2.709)	0.475 (3.125)
Regression	Logit	OLS	OLS
Industry FE	Yes	Yes	Yes
Observations	156	37	37
R-squared		0.859	0.291
Pseudo R ²	0.116		

This table presents tests using three proxies for term roll-ups as the dependent variable, with Available Credit as our main variable of interest. Column (1) shows a logit regression with *Term Roll-up Dummy* as an indicator variable for the presence of a roll-up. Columns (2) and (3) present OLS regressions using transformed roll-up data. The dependent variable in Column (2) is $\ln(\text{Term Roll-up})$, the natural log of the term roll-up amount, while the dependent variable in Column (3) is the log odds of ratio of *Term Roll-up/DIP loan*. The models control for the same variables as the DIP Loan pricing regression in Table 5, Column (2), except that I include separate controls for the three types of milestones (disclosure statement-, plan-, and sale milestones, plus an additional control for the DIP loan amount (*DIP Loan*). All models use robust standard errors and control for industry fixed effects using 1-digit SIC codes. Statistical significance of 1%, 5%, and 10% are represented using ***, **, and *, respectively. Robust standard errors are reported in parentheses.

I perform a number of robustness checks for the roll-up analyses. In unreported tests, in addition to using multiple proxies for changes in credit

availability,¹²⁴ I use a slew of additional roll-up measures and control variables, as well as year and court fixed effects.¹²⁵ I also check for outliers and run tests dropping successive years from the sample in case a particular year may have outsized influence on the results.¹²⁶ The results remain qualitatively similar. In no event do I find evidence of a statistically significant inverse relationship between Available Credit and any roll-up measure, and as earlier noted, I do find statistically significant evidence of a positive relationship.

2. Incidence of Milestones

Roll-ups are of course only one type of extraordinary provision. Milestones also play an important role in DIP lending, and I examine their usage below. As with my prediction on the use of roll-ups, I expect the use of milestones to decrease as credit markets improve. Overall, 34% of the DIP cases include a reorganization milestone. Recall that reorganization milestones are covenants that place deadlines on specific important events associated with the reorganization process, typically the filing or court approval of the disclosure statement or plan of reorganization. Far fewer of the DIP cases—only 16%—include a sale milestone. Sale milestones are typically used when, instead of attempting an internal reorganization, the DIP lender and the debtor agree that the debtor will sell the business.

Descriptive statistics do not show an obvious relationship between Available Credit and the use of milestones. In Figure 8 below, the lower dark region of each bar captures the number of cases with at least one milestone; the upper lighter region of each bar captures the number of cases without milestones. The curve above shows the percentage of DIP cases in each year that include at least one milestone (right axis). As discussed before, the Crisis began in late 2007 and lasted until mid-2009.¹²⁷ Yet the years 2007 and 2011 had the greatest incidence of milestones, defined as the percentage of DIP loans including a milestone.

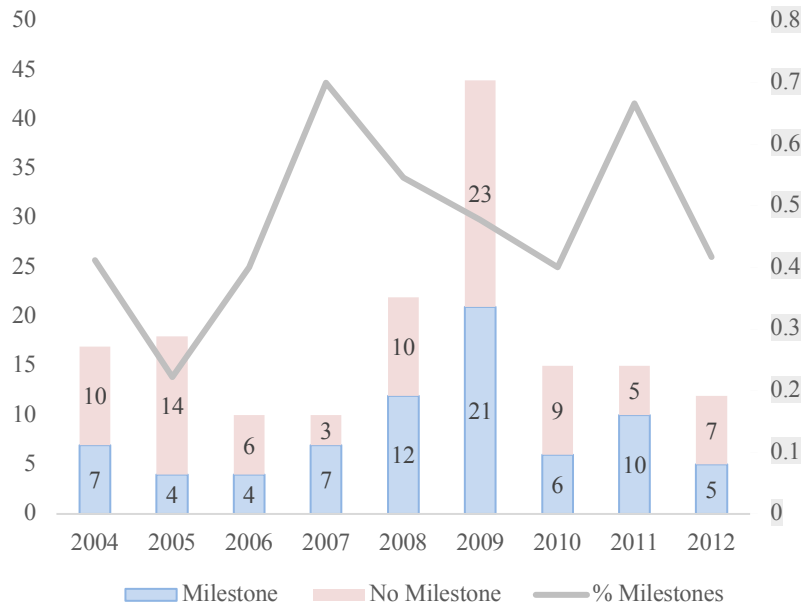
¹²⁴ See *supra* note 98 (describing alternative proxies for changes in credit availability).

¹²⁵ For court fixed effects, I run tests distinguishing the bankruptcy courts in Delaware and the Southern District of New York from other courts and from each other. Tests without industry fixed effects also generate results qualitatively similar to our main results.

¹²⁶ Recall that over 30% of the sample cases were filed in 2009. See *supra* Part III.A **Error! Reference source not found.**

¹²⁷ See *supra* note 99.

FIGURE 8: USE OF MILESTONES



This figure shows the use of milestones by year. The height of each column represents the number of DIP loans in a given year for which milestone data are available (left-hand scale). The lower dark part of each column shows the number of DIP loans that include at least one milestone, while the upper lighter region of each bar captures the number of DIP loan cases without a milestone. The curved line (right-hand scale) shows by year the percentage of DIP loans that include a milestone.

Although I conduct more detailed empirical analysis on the relationship between these milestones and Available Credit, I am unable to identify a significant relationship. Table 10 reflects the correlations among use of milestones and changes in credit availability. None of the correlations between Availability Credit and any milestone are statistically significant, indicating the lack of a strong relationship between these variables in the sample.

TABLE 10: MILESTONES AND AVAILABLE CREDIT

	Available Credit (%)	Disclosure Statement Milestone	Plan Milestone	Sale Milestone	Any Milestone
Available Credit (%)	1				
Discl Stmt Milestone	-0.05 (p<.50)	1			
Plan Milestone	-0.07 (p<.36)	0.70*** (p<.00)	1		
Sale Milestone	0.09 (p<.28)	-0.04 (p<.59)	-0.09 (p<.27)	1	
Any Milestone	-0.01 (p<0.87)	0.59*** (p<.00)	0.74*** (p<.00)	0.47*** (p<.00)	1

This table shows tests for correlations between Available Credit and the use milestones. The left-hand column shows the results of interest. Statistical significance of 1%, 5%, and 10% are represented using ***, **, and *, respectively. *P*-values are shown in parentheses.

In unreported tests, I also run probit regressions testing the relationship between milestones and Available Credit. All controls and other specifications are the same as those used previously. Across all models, I find no evidence of a significant relation between Available Credit and use of milestones, so I omit these results for concision.

IV. IMPLICATIONS AND CONCLUSION

DIP financing is crucial for many debtors, but lenders may understandably be hesitant to lend to firms in severe financial distress. Recognizing this dilemma, the Bankruptcy Code authorizes debtors to offer sweeteners to DIP lenders. But some of these sweeteners—here, roll-ups and milestones—are controversial because they are thought to come at the expense of the firm's other stakeholders, and roll-ups are inconsistent with the Code's distribution scheme. Nonetheless, the volume of these inducements escalated during recent years, leading to growing debate over whether DIP lenders were abusing their power—or whether the terms of DIP loans simply reflected a tighter credit environment.

In this Article, I use a hand-collected dataset to provide the first empirical analysis on the relationship between economic conditions and the terms of DIP loans. As one might expect, the evidence shows that ordinary loan provisions like pricing and covenants are sensitive to economic conditions. But I also find that the kinds of extraordinary loan provisions

often justified as necessary to induce DIP lending—roll-ups and milestones—have no statistically meaningful relationship with changes in credit availability.¹²⁸ With no demonstrable association between changes in credit market conditions and the incidence of roll-ups—and to a lesser extent, milestones—the case for their continuing use seems weak.

As earlier noted, a roll-up has significant effects for both the structuring of plan negotiations and the costs of DIP financing. In addition to being inimical to the Bankruptcy Code's distribution scheme, roll-up significantly augments the DIP lender's influence over the case.¹²⁹ This augmented DIP lender influence correspondingly diminishes the negotiating leverage of the debtor and competing creditors, a result that the drafters of the Code could not plausibly have contemplated, since only through roll-up are these multiple disempowering effects on the debtor and competing creditors realized. The distortive effects of roll-ups on plan negotiation make cross-collateralization seem mild. DIP lenders might understandably feel entitled to outsized influence over the course of a case when credit is scarce. Scarcity may command a premium. But without evidence that the incidence or size of roll-ups respond to Available Credit, resort to roll-ups—and the accompanying control that DIP lenders enjoy—seem hard to justify as a general matter. Offering the DIP financing should not ordinarily entitle the DIP lender to cash out its pre-bankruptcy claim at the beginning of the case, instead of having to negotiate the claim's treatment as do all other pre-bankruptcy creditors.

Besides increased control for the DIP lender, roll-up increases the debtor's financing costs, sometimes dramatically,¹³⁰ by increasing the size of the DIP loan by the amount of the roll-up. Moreover, because the roll-up is not new credit, it contributes nothing to the reorganization effort. Instead, it *detracts* from the endeavor. Between the high interest accrued on the roll-up over the course of the case and the cash required to repay the roll-up at confirmation, roll-up turns out to be quite an expensive proposition, which redounds to the detriment of junior claimants. Roll-up also obfuscates DIP loan costs. Curbing or eliminating reliance on roll-ups would facilitate more transparent pricing of DIP loans across cases. Far better to see new money DIP loan costs transparently in the all-in-spread, without the befogging effect of roll-up. Courts and debtors might more easily compare DIP loan pricing across cases when DIP loans do not harbor rolled-up debt.

What about milestones? Though milestones may tend to intrude on judges' discretion to manage case timetables, milestones may be less

¹²⁸ As earlier noted, the statistically significant associations between Available Credit and roll-up measures found in my tests show only *positive* relations between those variables. See *supra* Part III.C.1.

¹²⁹ See *supra* Part II.A.2.

¹³⁰ See *supra* notes 38-40 and accompanying text.

distortive than roll-ups. DIP lenders may set unrealistic deadlines, but at the same time, a DIP lender would be unlikely to call the DIP loan if the firm is worth saving, especially a DIP lender with an outstanding prepetition claim. In a word, milestones seem relatively easy to renegotiate. By the time a milestone looms large, the parties will have much better information about the firm's prospects than at the case's inception. The parties' various positions and interests will also be well understood. Reasonable milestones may even hasten the reorganization constructively. The judge's experience can be brought to bear when approving milestone provisions.

By providing much needed empirical analysis, I hope to help policymakers, judges, and other bankruptcy participants better evaluate the DIP lending process in order to optimize DIP loan structure going forward. I hesitate to draw too-strong empirical conclusions from these data, given the limited sample size and relatively slight yearly variations.¹³¹ At the same time, my tests do identify significant relationships between both ordinary and extraordinary provisions and Available Credit, so the data do have power. As early noted, it may be difficult for individual judges to police extraordinary provisions one case at a time. The debtor's survival will in many cases be truly on the line, such that DIP financing may be crucial. And the inside lender's dominant advantage in placing the DIP loan gives it enormous leverage. At the same time, however, my results suggest that judges should be skeptical of claims that shrinking credit markets might justify resort to roll-ups.

¹³¹ Moreover, bankruptcy cases are notoriously complicated; there could be relevant unobservable characteristics that I am unable to control for in the models.

APPENDIX

DIP Loan: Effect of a Roll-up

Figure A1 below illustrates. At the time of filing, the company needs, say, \$100 million in cash. The lender already has \$50 million outstanding on its weak (potentially undersecured) pre-bankruptcy loan, so the lender agrees to a fresh loan of \$150 million, advantaged by the super-priority sections of the Code for DIP loans. The DIP loan agreement requires that the debtor will immediately draw \$50 million of the DIP loan to pay off the weak \$50 million pre-bankruptcy loan. By extinguishing the pre-bankruptcy loan in this way, the payoff “rolls up” the \$50 million amount into the highly prioritized DIP loan, effectively converting the DIP lender’s pre-bankruptcy loan into a fully secured postpetition claim that gets cashed out at plan confirmation.

Comparing DIP Loans with and without Roll-up

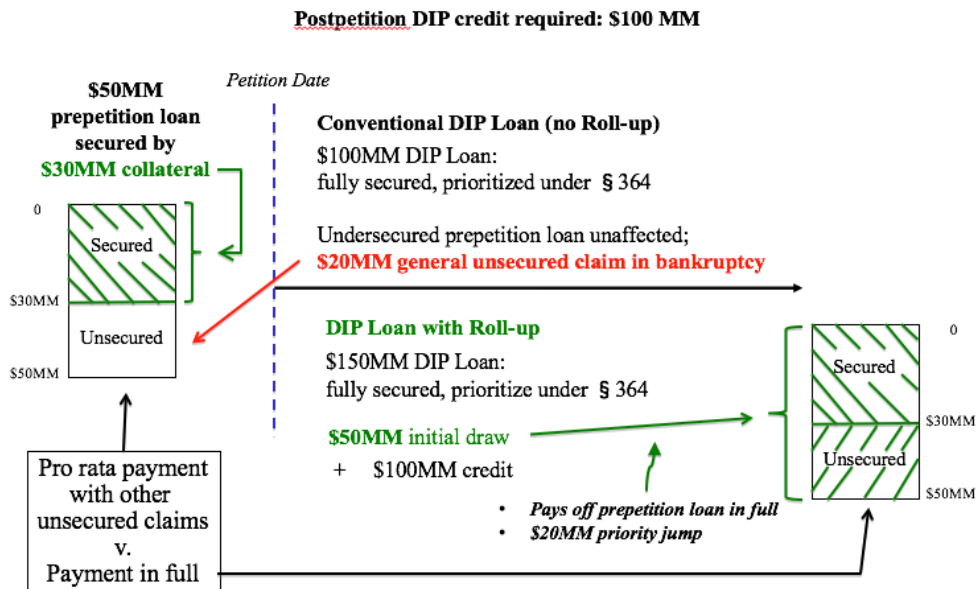


FIGURE A1