

DO ECONOMIC CONDITIONS DRIVE DIP LENDING?: EVIDENCE FROM THE FINANCIAL CRISIS

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ABSTRACT

When contemplating Chapter 11, the first step for many firms is 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 highly effective in attracting financing. But because these sweeteners are thought to come at the expense of other stakeholders, the Code permits these inducements only if the judge determines that 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. DIP 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.

In this Article, I examine the relationship between economic conditions and DIP loan terms. Using a hand-collected dataset reflecting contractual detail in DIP loans, I study changes in DIP terms during the Crisis. As one might expect, I find that ordinary loan provisions like pricing and reporting covenants are sensitive to economic conditions. By contrast, I also find that so-called “extraordinary provisions,” often justified as necessary to induce DIP lending, have no statistically meaningful relationship with economic conditions. These findings have important implications for bankruptcy policymakers and judges struggling to evaluate whether the sweeteners extracted by DIP lenders are truly necessary to induce lending.

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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. To induce such lending, the Bankruptcy Code authorizes the debtor to provide prospective lenders with sweeteners that make DIP financing attractive. But because these inducements are thought to 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.

In response to anecdotal evidence 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 (American Bankruptcy Institute 2014). In response, defenders of DIP lenders note a simple explanation for this seeming increase in inducements: reduced credit availability during the Financial Crisis (e.g., Barnett & Brian 2010). When credit is tight, of course lenders need more sweeteners—which is why judges have explicitly relied on credit-market conditions to justify their approval of so-called “extraordinary” lending inducements.¹

In this Article, I examine whether credit availability explains 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 these terms and credit availability. I show that standard terms, like loan pricing and reporting covenants,² are indeed sensitive to economic conditions. But I also offer evidence that the extraordinary inducements found in DIP loans are unrelated

¹ See *infra* note 24 and accompanying text.

² 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., Debtor-in-Possession Credit Agreement, dated as of January [], 2012, among Eastman Kodak Company and Kodak Canada Inc., as Borrowers, The U.S. Subsidiaries of Eastman Kodak Company Party Hereto, as U.S. Subsidiary Guarantors, and The Subsidiaries of Kodak Canada Inc. Party Hereto, and the Lenders Named Herein, as Lenders, and Citicorp North America, Inc., as Agent and Collateral Agent, and Citicorp North America, Inc., as Syndication Agent, and Citigroup Global Markets Inc., as Sole Lead Arranger and Bookrunner, at 79.

to the broader economic conditions that have been cited to justify judicial approval.

I focus on two extraordinary lending inducements that some judges and lawyers have found troubling: “roll-ups” and case milestones (American Bankruptcy Institute 2014, 73-83). 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 use 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.³ 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 and the bankruptcy court.⁴ For example, a common milestone sets a drop-dead date for the filing or court approval of the reorganization plan.⁵ Milestones are controversial because too-tight deadlines may advantage senior creditors—like DIP lenders—at the expense of junior creditors.⁶ Neither roll-ups nor case milestones are specifically authorized in the Bankruptcy Code. They may even contradict specific provisions of the Code (United States Bankruptcy Court for the Southern District of New York 2002).

Although these extraordinary provisions have been justified as a response to credit market conditions, my empirical analysis fails to identify a significant relationship between these variables. 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 credit availability and extraordinary provisions, I find no association between the use of extraordinary inducements and economic conditions during the sample period.

³ Pre-bankruptcy claims typically get paid at the end of the case, and typically with promises of future payment that may 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. Moreover, 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.

⁴ In a traditional Chapter 11 reorganization, the debtor and its multiple creditors negotiate over the financial (and sometimes operational) restructuring of the firm. 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. Eventually a plan of reorganization memorializes this multiparty bargain; the plan requires both creditor consent and judicial approval, *see* 11 U.S.C. § 1129.

⁵ 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.

⁶ 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. Lynn M. Lopucki & Joseph W. Doherty, *Bankruptcy Fire Sales*, 106 MICH. L. REV 106 (2007).

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 extraordinary provisions 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, if the proposed DIP loan is the only one on offer—as debtors and their prospective DIP lenders typically profess—rejection of the DIP loan would spell doom for the debtor. These judges quite understandably hesitate to reject DIP loans under these circumstances, and instead reluctantly approve the arrangements on the view that the terms were necessary to induce critical lending. At the policy level, recognizing the potentially problematic nature of extraordinary provisions, the American Bankruptcy Institute’s recent Chapter 11 reform proposals offer guidelines to curb or delay the effects of such DIP loan provisions (American Bankruptcy Institute 2014, 79-83).

My paper matters for bankruptcy and its participants because of the causal claims made to justify resort to extraordinary provisions. I subject these claims about economic phenomena to robust scrutiny, and I find them wanting. I provide, to my knowledge, the first empirical evidence questioning the longstanding and widely held assumption that extraordinary provisions are a function of 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.

The rest of the paper is organized as follows: Part I offers conceptual and institutional background along with a review of the relevant literature. Part II describes extraordinary provisions, their perceived harms, and policy responses. Part III describes the data and empirical results. Part IV concludes.

I. BACKGROUND AND LITERATURE REVIEW

This Part first offers a conceptual understanding of the role of loan covenants and the effects on loan covenants of changing credit market conditions. Though no study has examined these dynamics in the bankruptcy context, we would expect DIP loan terms to behave similarly to loan contracts outside of bankruptcy, as more fully described below. This Part then details the institutional context in which DIP lending occurs, a setting that makes it difficult for judges to police DIP loan terms.

A. Loan Covenants and Credit Markets

1. Adverse Selection, Moral Hazard, and Covenants

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 the loan is made. Covenants are the most visible contractual constraint on borrower risk-taking. 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.⁷ 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,⁸ as is a requirement that the borrower maintain adequate insurance.

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.⁹ 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. In essence, covenants determine control rights over

⁷ 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 (Roberts & Sufi 2009b, 172).

⁸ 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. Nini, Smith & Sufi (2009, 405) find 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 contract may mandate loan prepayments to the extent the borrower finds itself with “excess” cash, as defined in the contract. Bradley & Roberts (2004, 11) 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.

⁹ 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.

the borrower's assets.¹⁰ 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 (Demiroglu & James, 2010; Gârleanu & Zwiebel, 2009). 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 (Demiroglu & James, 2010), 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 (Rajan & Winton, 1995). 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 lender should specific negative events occur.¹¹ 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 (Boot, 2000; Fama, 1985). 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 (Black, 1975; Fama, 1985). 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 (Roberts & Sufi, 2009b). In addition, when

¹⁰ 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 (Honigsberg, Katz & Sadka 2014). I do not focus on collateral, however, because there is little variation in collateral coverage across the sample firms.

¹¹ 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

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 (Bradley & Roberts 2004, 21). Covenants become more numerous and more restrictive as the risk-free rate of interest increases (Billett, King & Mauer 2007, 708; Nini, Smith & Sufi 2009, 408). A similar association exists with respect to collateral requirements (Boot, Thakor & Udell 1991, 471).

Choi and Triantis (2013) offer a nuanced explanation of the interaction between price and non-price terms. While lender-friendly changes in credit markets move both pricing 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.

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.¹²

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 renegotiated just as with non-bankruptcy loans.¹³ 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.¹⁴

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

Evaluating whether a DIP loan's terms are the best available is no small task for a judge. Institutional features of DIP lending may make it difficult for the court or junior creditors to object to aggressive lender protections. These institutional features give an edge to the debtor's pre-bankruptcy secured lender in capturing the DIP loan. Therefore, in many cases, there may be no real competition to offer DIP financing.

The pre-bankruptcy 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,¹⁵ and it enables the lender to advantage its pre-bankruptcy claim as part of the deal.¹⁶ It also endows the inside lender with enormous

¹² See *infra* note 45 and accompanying text.

¹³ See, e.g., *infra* note 75 and accompanying text (discussing mid-stream covenant modifications in *Lyondell* case).

¹⁴ 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 2013, 66).

¹⁵ 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.

¹⁶ 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), 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, dated July 7, 2009, at 7-12.

influence over the debtor and the bankruptcy proceedings.¹⁷ Bharath, Panchapegesan & Werner (2010) identify DIP financing as one important avenue by which creditors have gained influence over the reorganization process.¹⁸

In addition to this incentive structure, the pre-bankruptcy lender also enjoys an 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*. A pre-bankruptcy lender also typically has pre-bankruptcy liens on all the debtor's assets, so the debtor may have no free assets to offer an outside lender as collateral.¹⁹ 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, 75% of the DIP loans in my sample come from inside lenders. For 72% of those defensive DIP loans, the pre-bankruptcy lenders enjoyed pre-bankruptcy liens on all of the debtor's assets.

Besides the typically weak competition for any given DIP loan, a rushed approval process at the outset of the case may make it more 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.²⁰ Though the subsequent hearing on the final DIP order may be more considered, the

¹⁷ 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.

¹⁸ 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.

¹⁹ 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). 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.

²⁰ It is for this reason that important bankruptcy courts and the ABI discourage interim approval of extraordinary provisions like roll-ups and milestones. *See infra* Part II.C.

interim approval creates a certain momentum favoring the status quo.²¹ The final order might possibly modify some terms, but the possibility of an alternative lender is basically foreclosed.

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.²² Chatterjee, Dhillon & Ramirez (2004) find that 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. Dahiya, et al. (2003) find that DIP lending is associated with a higher likelihood of the debtor's emergence from bankruptcy and a shorter time in bankruptcy. 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.²³ 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.

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. Judge Gerber's reluctant approval of the hotly contested \$8.5 billion DIP loan in the *Lyondell* case—the second

²¹ 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). 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.

²² This is consistent with findings outside the bankruptcy context that obtaining a bank loan is typically good news for a firm (Best & Zhang 1993; Billett, Flannery & Garfinkel 1995; James 1987; Slovin, Johnson & Glascock 1992; Lummer & McConnell 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 (Baird & Rasmussen 2006, 1233). 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.

²³ Researchers also find a positive association between DIP loan size and creditor recovery rates, consistent with efficient lender monitoring (Dahiya, et al. 2003; Carapeto 2003; Chatterjee, Dhillon & Ramirez 2004, 3099).

largest commercial DIP loan in history at the time—well illustrates judges’ predicament. The loan, extended during the depths of the Financial Crisis, included steep pricing, strict covenants, a \$3.25 billion roll-up, and draconian milestones.

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.²⁴

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 authorizes such conventional inducements as payment priority and new liens, which may even enjoy seniority over existing pre-bankruptcy liens.²⁵

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,²⁶ that the “vast majority” of DIP agreements include these types of provisions (LSTA 2015, 23). 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.

²⁴ Griffiths, *supra* note 68. Appendix B contains a fuller account of the battle over the *Lyondell* DIP loan.

²⁵ 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.

²⁶ See *infra* Part III.A.3.

Though Section 364 is mute on extraordinary provisions, it does suggest a general constraint on the use of inducements: The debtor may extend only as much inducement as is 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. It 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.²⁷ This essentially refinances the pre-bankruptcy debt with DIP debt, which both greatly improves the prospects for repayment of the debt and further enhances the DIP lender's already significant influence over the reorganization process.

To the extent the pre-bankruptcy debt was undersecured at the time of the bankruptcy filing, the benefit of a roll-up is clear. The unsecured pre-bankruptcy deficiency claim enjoys a priority jump by getting paid in full in cash at the outset of the case—better treatment than even pre-bankruptcy secured claims enjoy (Roe & Tung, 2013). Even fully secured pre-bankruptcy debt can benefit from a roll-up by eliminating potential challenges to the validity of that pre-bankruptcy debt (Roe & Tung 2013; Triantis 2016). A roll-up effectively transforms the DIP lender's pre-bankruptcy claim into a fully secured,²⁸ interest-bearing,²⁹ high priority post-bankruptcy claim, which will effectively get cashed out at the end of the case.³⁰ Figure A1 in the

²⁷ Seventy-three percent of the roll-ups in the sample roll up all of the DIP lender's pre-bankruptcy claim. These 100% roll-ups comprise 43% of the DIP loans in the sample. Almost 80% of the roll-ups involve defensive DIP loans.

²⁸ The DIP loan will typically be fully secured, with back-up administrative priority in case the security later turns out to be insufficient (Bussell & Klee, 2009; Roe & Tung, 2013; White 2004).

²⁹ The DIP roll-up debt earns interest during the bankruptcy along with the new money DIP debt. By contrast, interest would have accrued with respect to the pre-bankruptcy debt only if and to the extent it was oversecured. 11 U.S.C. § 506(b).

³⁰ 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

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 like unsecured creditors, since fewer assets are available to pay off juniors at the back of the line for distribution.

Roll-ups are controversial because the practice enjoys no clear authority 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.³¹

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.³² The purpose of this exclusivity provision is to fix the debtor as the focal party in managing restructuring

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 Appendix B, *infra* (discussing *Lyondell* case).

³¹ Moreover, allowing the lender to pay off its pre-bankruptcy debt may change the dynamics of plan negotiation by eliminating the risk that the pre-petition lender will be subject to "cramdown." 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. 11 U.S.C. § 1129(b)(2)(A). But once the DIP lender's pre-bankruptcy loan is paid off via roll-up, that 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 have other devices in their arsenal to reduce the risk of cramdown besides the roll-up. For example, it is not uncommon that a DIP loan agreement will prohibit the debtor from filing a plan not approved by the DIP lender. See \$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).

³² 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.

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.

C. Policy Responses to Extraordinary Provisions

The costs and benefits of extraordinary provisions are an open empirical question. 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 interim order absent "substantial cause shown, compelling circumstances and reasonable notice."³³ Extraordinary provisions include roll-ups and any provisions "that divest the Court of its power or discretion in a material way"³⁴ (e.g., milestones). Delaware's Bankruptcy Court, the most popular venue for public company Chapter 11s, adopted a similar local rule.³⁵

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.³⁶ 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 (2014) also considered the proliferation of extraordinary provisions in DIP loans in its comprehensive 2014 report reviewing Chapter 11 practices. Skeptical that these provisions are necessary to induce DIP financing, the Commission

³³ 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]. The General Order also applies to cash collateral motions under § 363 of the Code. *Id.* 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;³³ (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 II.A.

³⁴ *Id.* at II.A.4.

³⁵ District of Delaware Bankruptcy Court, Local Rule 4001-2.

³⁶ The guidelines highlight "the loss to the state of the opportunity to satisfy the prepetition secured debt otherwise in accordance with applicable provisions of the Bankruptcy Code." SDNY General Order, *supra* note 33, at II.A.2(b). 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).

proposed significant restrictions echoing the approach of the New York and Delaware bankruptcy courts.³⁷

The ABI report prompted a response from the LSTA (2015): the ABI's approach to reform, "while well-intentioned and informed by much hard work and debate, is misguided." 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 that milestones may improve efficiency by shortening the debtor's time in bankruptcy when assets are deteriorating (LSTA 2015, 56).

Given the evidence of the positive effects of DIP loans generally,³⁸ it may be that roll-ups and milestones are worth the potential costs. 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.³⁹ If this is correct, then any potential negative side-effects may be insignificant compared to the benefits of the DIP loan. Ultimately, whether the potential benefits outweigh the costs is an empirical question that has yet to be answered. Lawyers and judges have debated the use of extraordinary provisions for more than a decade, but have been unable to reach consensus. Moreover, although courts and the ABI have promulgated guidelines for their use, many of these guidelines are highly discretionary.

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

³⁷ The Commission recommended that several extraordinary provisions, including roll-ups and milestones, not be permitted in interim orders. 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.

³⁸ See *supra* Part I.B.4.

³⁹ 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. Del. L. Bankr. R. 4001-2(a)(i) (2002). New York requires a hearing to approve a roll-up. N.Y. L. Bankr. R. 4001-2. In sum, courts permit them, but are skeptical. *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 (Bankr. S.D. Tex. 2000) (denying DIP financing that utilized roll-up but permitting certain pre-petition claims to be paid during automatic stay).

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 were resolved as of February 7, 2013, giving us 292 cases. Of these, DIP loans are present in 182 cases (62% of all cases).

I also rely on BRD for many firm and case 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 Reuter's 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").⁴⁰ I also use additional measures of credit availability in unreported robustness tests.⁴¹ Results are generally consistent across all measures. As shown in Figure 1 below, my measure of Available Credit (i.e., liquidity) appears largely consistent with the conventional wisdom about the timing of the Crisis.⁴² Total credit rose steadily from 2004 through mid-2007, when it

⁴⁰ I obtain the total credit for non-financial corporations from the Bank for International Settlements. This estimate includes all credit to U.S. private and public non-financial corporations and reflects credit "provided by domestic banks, all other sectors of the economy and nonresidents." For a discussion of the variable, see http://www.bis.org/statistics/totcredit/credpriv_doc.pdf.

⁴¹ I use the following measures of credit: (1) Credit availability for the non-financial sector; (2) credit availability for the entire U.S., including households and governments; and (3) credit availability for all U.S. domestic corporations. I also run tests using the Credit Suisse High-Yield Bond Fund (CHY). I run all tests using both the level of each variable and the percentage change from quarter to quarter. 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.

⁴² 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.

peaked. A sharper decline followed, bottoming out in late 2009, after which it rose gradually through 2012.

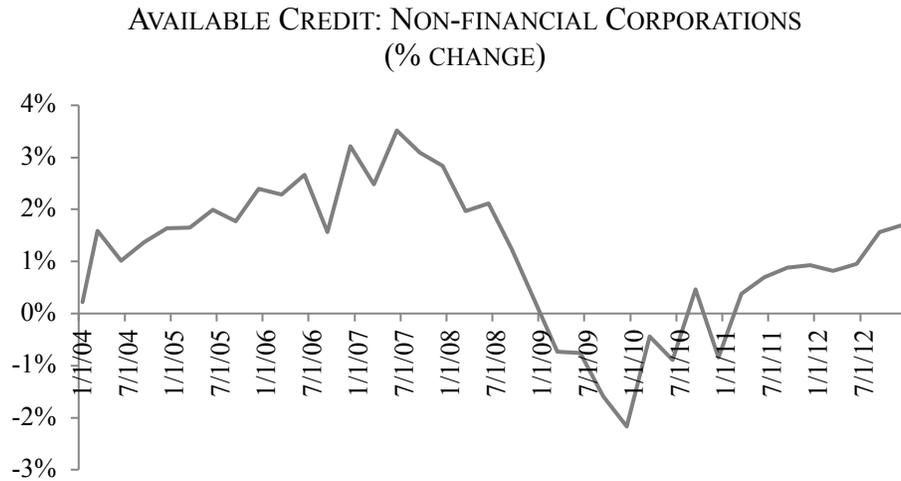


FIGURE 1

3. Descriptive Statistics

Of the 288 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 46%, respectively, on the right axis), consistent with the credit scarcity implied by the trough we observe in total credit in Figure 1.

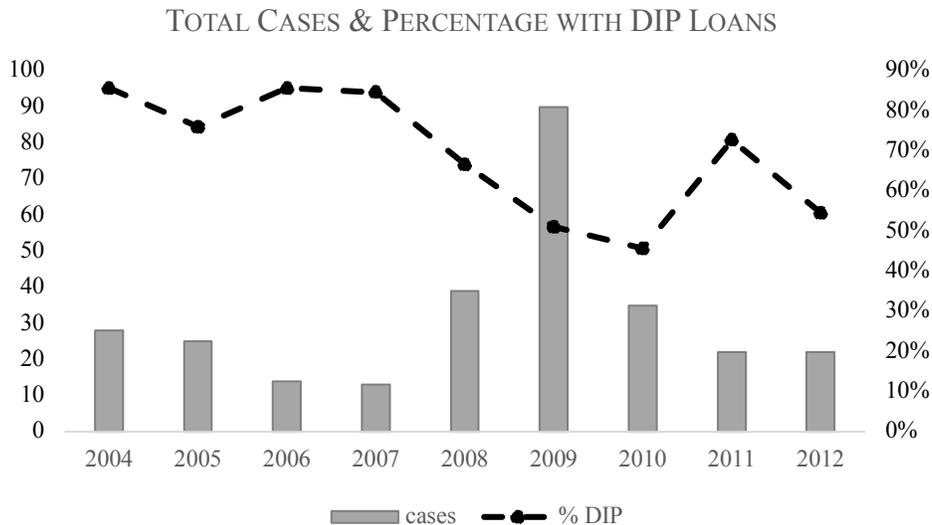


FIGURE 2

Of the 182 DIP loans, 160 contain a covenant requiring regular reporting of cash; 154 contain a covenant requiring regular budget reconciliations; 98 contain roll-ups; 56 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. See Figure 3.⁴³

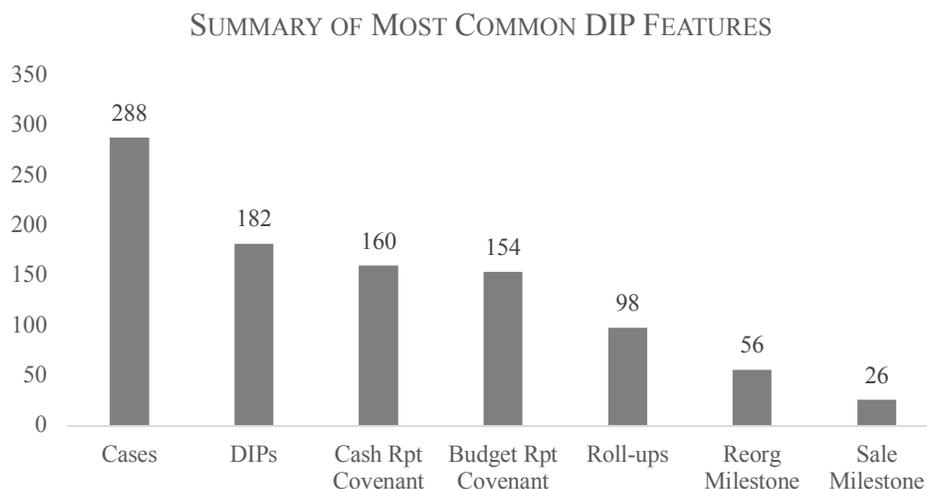


FIGURE 3

B. DIP Loan Terms and the Financial Crisis

The Financial Crisis offers a shock to the credit markets that facilitates investigation of the relation between credit availability and the terms of DIP financing. In this section, I provide, to my knowledge, the first empirical evidence on this relationship. In particular, I examine changes in four specific DIP loan terms: Pricing, roll-ups, milestones, and loan covenants.

⁴³ 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. (LoPucki's BRD database codes a successful emergence as long as at least one operating company continues to exist post-bankruptcy. BRD Protocols, Feb. 3, 2016, at 31, available at: <http://lopucki.law.ucla.edu/protocols.htm>.) These figures are comparable to a study by the Loan Syndications and Trading Association (LSTA), which found a 69% reorganization rate among firms with DIP financing and a 52% rate among firms without. See *supra* Part II.C.

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 1 below shows the average pricing for all corporate bonds and DIP loans issued in each of the sample years.⁴⁴ I measure pricing as the all-in-spread (“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.

TABLE 1
PRICING OF DIP LOANS VERSUS CORPORATE BONDS

	2004	2005	2006	2007	2008	2009	2010	2011	2012
	DIP 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.	13.00	15.00	6.00	5.00	15.00	31.00	6.00	5.00	3.00
	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 high-quality-junk-bond pricing for DIP loans is perhaps surprising because DIP loans have much lower historical rates of default than junk bonds (Skeel 2004, 1906; Huebner 2005, 33). To my knowledge, only

⁴⁴ In order to compare DIP pricing with corporate bonds, the DIP spread in Table 1 includes LIBOR. The numbers in Table 1 therefore differ from those in Figure 5 below.

two DIP loans have ever experienced a payment default.⁴⁵ By comparison, corporate bonds with similar ratings have experienced average annual default rates of 10% or more.⁴⁶ Of course, default risk is only one component of loan pricing. Liquidity risk (Longstaff, Mithal & Neis, 2005; Chen et al., 2015) and the cost of lender monitoring⁴⁷ also affect pricing, and both of these factors are intuitively more costly for DIP loans than for corporate bonds. In addition, as earlier noted,⁴⁸ institutional features 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.⁴⁹ And the graph for Available Credit from Figure 1 is superimposed on the left axis.

⁴⁵ Moody's Global Corporate Finance, Moody's Comments on Debtor-in-Possession Lending, October 2008, available at: <https://www.moodys.com/sites/products/Research/2007300000539803.pdf>, at 4. One of those DIP loans was ultimately repaid in full. *Id.*

⁴⁶ See S&P's 2014 Annual Global Corporate Default Study And Rating Transitions study, available at https://www.nact.org/resources/2014_SP_Global_Corporate_Default_Study.pdf 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. For Moody's pricing, see <https://www.moodys.com/sites/products/DefaultResearch/2007400000578875.pdf>.

⁴⁷ 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 from their borrowers. 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 lender must not only monitor and understand the DIP's business, but must monitor and understand the impact of Chapter 11 on the debtor's business. See Supplemental Written Statement of Mark Shapiro: ABI Winter Leadership Conference Field Hearing Before the ABI Commission to Study the Reform of Chapter 11, at 2-3, (Nov. 30, 2012).

⁴⁸ See *supra* Part I.B.

⁴⁹ AIS in Figure 5 is reported as spread above LIBOR, whereas AIS reported in Table 1 includes LIBOR.

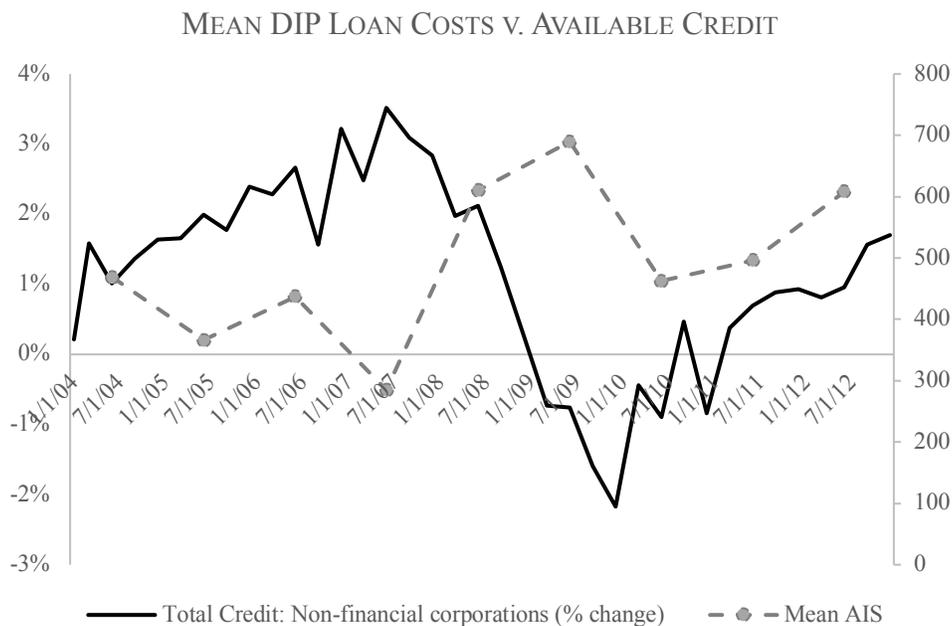


FIGURE 4

For most of the sample period, not surprisingly, the costs of DIP borrowing look to be moving inversely with Available Credit. As Available Credit grows 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. Consistent with this inverse relationship, the correlation between my liquidity measure and AIS is -0.24 (statistically significant at 5%).⁵⁰ Although the 2010-12 period in Figure 4 presents something of a puzzle, as DIP loan costs appear to rise right along with Available Credit, the sample includes only 14 DIP cases in that period. The apparent anomaly could be an artifact of the details of specific cases, so it would be perilous to attempt broad conclusions.

To incorporate case-specific characteristics, I use regression analysis. In Table 2 below, I provide two models testing the relationship between AIS and credit availability. The first model includes only standard controls, which

⁵⁰ Notably, the correlation between the level of credit extended (as opposed to the percentage change in credit) is even greater— - 0.37 (significant at 1%).

allows me to keep all 100 observations containing AIS,⁵¹ and the second model contains additional loan terms that may affect pricing.⁵²

⁵¹ I control 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 assets divided by total liabilities. Both are calculated using the most recently available financial statements filed with the SEC. Both models use robust standard errors and control for industry fixed effects using 1-digit SIC codes. Statistical significance of 1%, 5%, and 10% is represented using ***, **, and *, respectively, and robust standard errors are reported in parentheses.

⁵² The second model includes additional controls for the total financial covenants included in the loan, the dollar value of the roll-up relative to the dollar value of the pre-petition lender's claim, and dummy variables indicating whether the loan includes milestones relating to the disclosure statement, reorganization plan, or asset sales.

TABLE 2
DIP LOAN PRICING AND AVAILABLE CREDIT

	(1)	(2)
	All-in-Spread (AIS) Above LIBOR	
Available Credit (%)	-70.66***	-52.16***
	(1,874)	(1,911)
Prepack	-42.79	-53.65
	(66.41)	(69.39)
363 Sale	38.50	71.11
	(62.93)	(97.60)
Ln(Assets)	2.044	-11.92
	(22.05)	(29.30)
Leverage	302.8	327.7
	(451.4)	(438.6)
Num. Covenants		2.892
		(18.00)
Disc. St. Milestone		100.9
		(124.1)
Plan Milestone		24.42
		(124.0)
Sale Milestone		3.262
		(117.7)
Rollup/Claim		-0.886
		(0.694)
Constant	191.6	294.8
	(485.6)	(491.2)
Industry FE	Yes	Yes
Observations	100	90
R-squared	0.199	0.275

Table 2 shows a significant inverse relationship between AIS and credit availability during the Crisis. For a 1% increase in the change in Available Credit, AIS decreases by an estimated 52-70 basis points. It makes sense that a greater supply of credit generally reduces DIP borrowing costs and vice versa. Indeed, empirical studies confirm that loan contracts outside of bankruptcy include higher pricing (Choi & Triantis 2013) and more lender-protective features when credit is scarce (Bradley & Roberts 2014, 21; Boot, Thakor & Udell 1991, 471).

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.

Consistent with the findings on loan pricing, I find evidence that reporting covenants became more lender-friendly during the Crisis.⁵³ In particular, lenders began requiring updates at more frequent intervals. For example, we see requirements for *daily borrowing base* updates only in 2007, 2008, and 2009;⁵⁴ 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,⁵⁵ the percentage increases from roughly 8% (2004-2006) to 15% (2007-2009) and then decreases to 10% (2010-2012).⁵⁶ This finding is consistent with literature on covenants outside of bankruptcy, which has found that covenants become more prevalent and more restrictive as the rate of interest increases (Billett, et. al 2007; Nini, et al. 2009; Bradley & Roberts 2004).

This trend is displayed in Figures 5 and 6 below, which show the annual range of different reporting frequencies for budgets and cash, the most common covenants in the sample. The two patterns are quite similar. In particular, we see dips around 2006-2007 and spikes around 2009 in the most

⁵³ 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.

⁵⁴ A borrowing base most typically involves inventory and accounts receivable, which are 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.

⁵⁵ 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).

⁵⁶ Even though I find that the frequency of reporting is sensitive to credit availability, the data suggest the *use* of reporting covenants may have increased during the Crisis and remained sticky thereafter. This is consistent with the descriptive evidence that the incidence of roll-ups and milestones was highest in 2011 and 2012. Only time will tell, but it seems plausible that certain lender-friendly provisions become commonly accepted during crisis periods and remain a staple of DIP financing thereafter.

stringent reporting demands—weekly reconciliations of budgets and cash. This pattern, which holds true for both raw numbers and percentages, roughly tracks Available Credit.

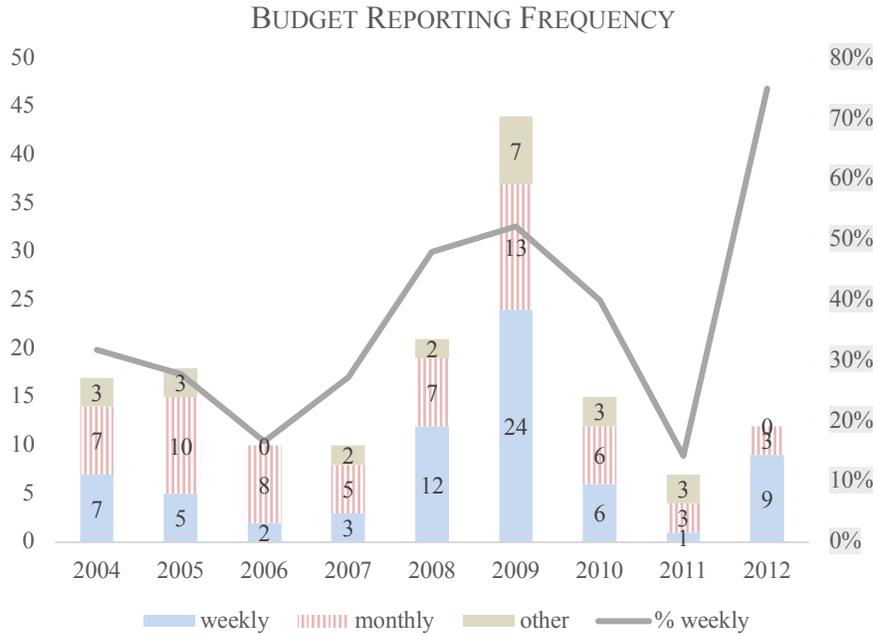


FIGURE 5

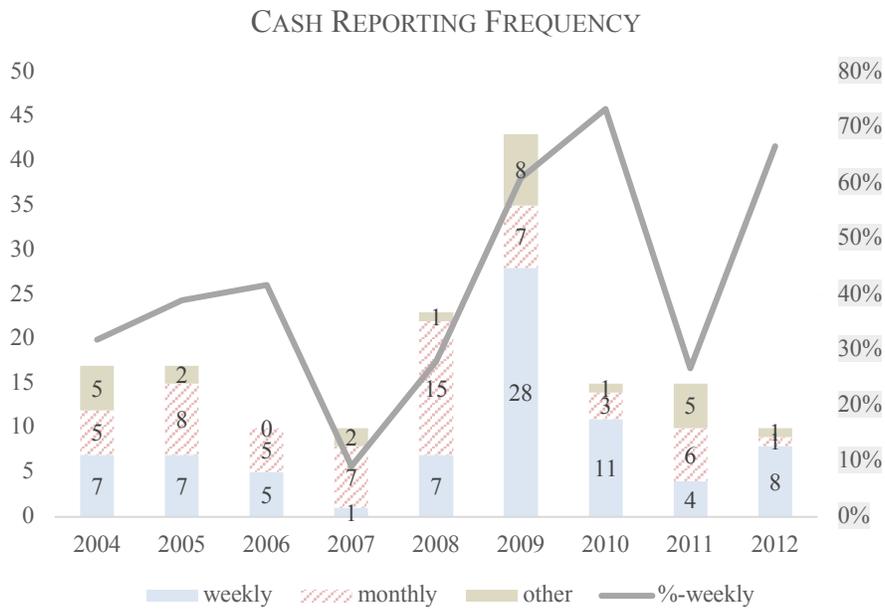


FIGURE 6

To analyze this pattern in more detail, Table 3 presents a regression analysis of the relationship between reporting frequency and economic conditions. Each 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.⁵⁷ Model (1) studies required budget reporting frequency, and Model (2) studies required cash reporting frequency.⁵⁸ The variable of interest in both models is Available Credit (Credit (%)).

⁵⁷ 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.

⁵⁸ The models in Table 3 include the same control variables as described in Tables 2 and 6. As before, I use robust standard errors.

TABLE 3
REPORTING FREQUENCY AND AVAILABLE CREDIT

	(1) Budget Reporting Frequency	(2) Cash Reporting Frequency
Available Credit (%)	8.69* (4.96)	9.22* (5.37)
Prepack	0.37* (0.19)	0.10 (0.20)
363 Sale	-0.24 (0.19)	-0.03 (0.21)
Ln(Assets)	0.11 (0.07)	0.12 (0.10)
Leverage	-0.78 (1.30)	0.48 (1.31)
Num. Fin. Covenants	-0.03 (0.07)	-0.09 (0.08)
Disc. St. Milestone	-0.26 (0.28)	-0.17 (0.36)
Plan Milestone	0.42* (0.23)	-0.04 (0.33)
Sale Milestone	-0.06 (0.2)	0.01 (0.20)
Rollup/Claim	0.00 (0.00)	0.00* (0.00)
Constant	2.45 (1.55)	1.29 (1.51)
Industry FE	Yes	Yes
Observations	149	145
R-squared	0.171	0.141

As predicted, Table 3 shows that the frequency of reporting has a significantly positive relationship with credit availability. That is, reporting is less frequent when credit is more available. This finding, which is consistent with the earlier finding on DIP loan pricing, provides further evidence that ordinary loan provisions are related to economic conditions.

3. Incidence of Roll-ups

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

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 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, 98 of the DIP cases (54%) have a roll-up.

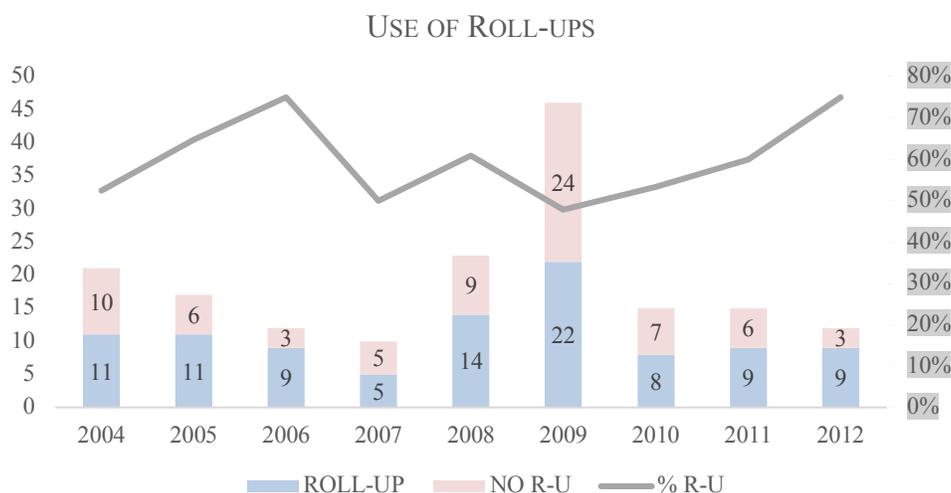


FIGURE 7

Based on the descriptive evidence in Figure 7, there does not seem to be a significant relationship between roll-ups and credit availability. 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. If anything, the percentage of roll-ups appears greatest post-crisis. This is puzzling. Because judges often cite restricted credit availability when approving roll-ups, we would expect a negative relation between the frequency of roll-ups and credit availability.

In search of more evidence, I devise four different measures of roll-ups, presented in Table 4, to incorporate into empirical tests. The first measure is simply a dummy variable indicating whether or not a DIP loan includes a roll-up; the other three measures are more granular. They capture the size of roll-ups using (a) the raw dollar amount of the roll-up; (b) the amount of the roll-up relative to the amount of the DIP lender’s pre-bankruptcy claim; and (c) the amount of the roll-up relative to the total amount of the DIP loan.

TABLE 4
MEASURES OF ROLL-UPS

	Mean	Median	25 th Percentile	75 th Percentile
Roll-up Dummy	0.57	1.00	0.00	1.00
Roll-up Amount (millions)	99.77	18.50	0.00	86.50
Roll-up/Claim (%)	0.45	0.14	0.00	1.00
Roll-up/DIP Loan (%)	0.33	0.39	0.00	0.63

Using these four measures, Table 5 shows simple correlations between roll-ups and Available Credit. As shown, all four roll-up proxies are positively correlated with credit availability—two at statistically significant levels. This is surprising; if anything, we would expect a correlation in the opposite direction.

TABLE 5
ROLL-UPS AND AVAILABLE CREDIT: CORRELATION

	Available Credit (%)	Roll-up Dummy	Roll-up Value	Roll- up/Claim	Roll-up/DIP Loan
Available Credit (%)	1				
Roll-up Dummy	0.09 (p<.25)	1			
Roll-up Amount	0.06 (p<.43)	0.29*** (p<.00)	1		
Roll-up/Claim	0.13* (p<.09)	0.82*** (p<.00)	0.19** (p<.02)	1	
Roll-up/DIP Loan	0.14* (p<.07)	0.90*** (p<.00)	0.27*** (p<.00)	0.82*** (p<.00)	1

Next, as shown in Table 6 below, I run a series of regressions using all four roll-up proxies. These models control for the same variables as the DIP loan pricing regression in column (2) of Table 2. As before, robust standard errors are presented in parentheses. I find no evidence of a negative relationship between Available Credit and roll-ups.⁵⁹ In all specifications, the coefficient on Available Credit is positive but not significant. As such, I find

⁵⁹ In unreported tests, I used a slew of additional control variables and the alternative measures of credit liquidity. See note 41 and accompanying text. I found no evidence of a statistically significant inverse relationship in any of the models.

no evidence that roll-ups result from tight credit availability. Instead, their use seems completely unrelated to economic conditions.

TABLE 6
ROLL-UPS AND AVAILABLE CREDIT: REGRESSION

	(1) Roll-up Dummy	(2) Roll-up Value	(3) Roll-up/ Claim	(4) Roll-up/ DIP
Available Credit (%)	2.48 (2.52)	1,444 (946.5)	365.6 (242.6)	2.54 (1.64)
Prepack	0.05 (0.10)	-45.61 (33.30)	4.40 (9.25)	-0.00 (0.06)
363 Sale	-0.02 (0.11)	34.33 (50.07)	-9.71 (9.74)	-0.05 (0.07)
Ln(Assets)	-0.02 (0.04)	123.6** (58.17)	-4.63 (3.38)	-0.03 (0.02)
Leverage	0.38 (0.67)	-332.8* (198.2)	-2.78 (71.62)	0.46 (0.46)
Num. Covenants	0.05* (0.03)	17.89 (11.05)	5.20* (3.13)	0.035* (0.02)
Disc. St. Milestone	0.10 (0.13)	75.74 (67.02)	-8.52 (13.97)	0.07 (0.09)
Plan Milestone	-0.09 (0.11)	1.538 (44.81)	5.38 (11.28)	-0.02 (0.08)
Sale Milestone	0.25** (0.12)	-20.21 (42.98)	23.76** (10.61)	0.21*** (0.08)
Constant	0.25 (0.78)	-425.8 (430.9)	76.10 (78.08)	0.03 (0.53)
Industry FE	Yes	Yes	Yes	Yes
Observations	158	158	155	155
R-squared	0.20	0.23	0.23	0.23

The lack of a significant inverse relationship between roll-ups and liquidity causes one to question the accepted wisdom that the use of these extraordinary provisions is driven by credit availability. 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.

4. Incidence of Milestones

As with my prediction on the use of roll-ups, I expect the use of milestones to decrease as credit markets improved. Overall, 34% of the DIP cases include a reorganization milestone. Recall that reorganization milestones 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 to a third party.

The descriptive statistics do not show an obvious relationship between credit availability 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 late 2009. Yet, the years 2007 and 2011 had the greatest incidence of milestones, defined as the percentage of DIP loans including a milestone.

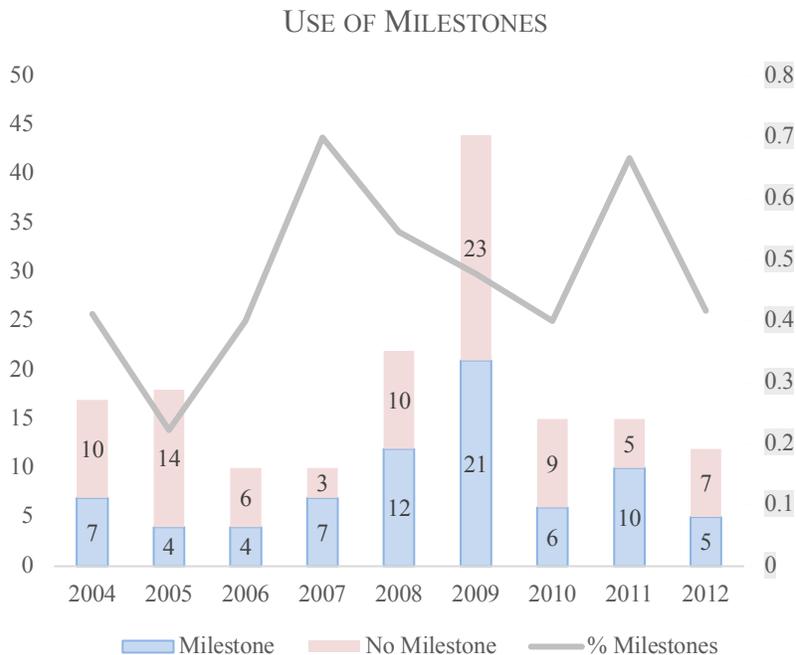


FIGURE 8

Although I conduct more detailed empirical analysis on the relationship between these milestones and credit availability, I am unable to identify a significant relationship. Table 7 reflects the correlations among use of milestones and changes in credit availability. None of the correlations between credit availability and any milestone are statistically significant, indicating the lack of a strong relationship between these variables in the sample.

TABLE 7
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		
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

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

I hesitate to draw too-strong conclusions from these data, given the limited sample size and relatively slight yearly variations.⁶⁰ At the same time, my tests do identify a significant relationship between ordinary provisions and Available Credit, so the data do have power. It could be that extraordinary provisions such as roll-ups and milestones are here to stay. Judges and lawyers, the repeat players in bankruptcy, may have acclimated to a new status quo, despite the cautionary exhortations of the Delaware and New York bankruptcy courts and the ABI.⁶¹ Over time, what was once extraordinary may have become commonplace.

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.

⁶⁰ Moreover, bankruptcy cases are notoriously complicated; there could be relevant unobservable characteristics that I am unable to control for in the models. The sample also includes only public companies. The vast majority of Chapter 11s involve private companies that are generally smaller than the companies in my sample.

⁶¹ See *supra* Part II.C.

Recognizing this dilemma, the Bankruptcy Code authorizes debtors to offer sweeteners to DIP lenders. But these sweeteners are controversial because they are thought to come at the expense of the firm's other stakeholders and arguably violate the Code's priority 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 tighter economic conditions.

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 have no statistically meaningful relationship with credit availability.

My findings have important implications for bankruptcy policymakers and judges struggling to evaluate whether the sweeteners extracted by DIP lenders are really necessary to induce lending. Ideally, judges would approve extraordinary provisions when they are necessary to induce funding, but deny them when the DIP lender extracts excessively generous terms that lead to inefficient decisions and harm other pre-petition creditors. However, policymakers attempting to set guidelines for distinguishing these scenarios have struggled—as have judges facing the difficult decision of approving potentially excessive terms or denying the debtor the critical financing needed to restructure. 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.

APPENDIX

A. 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

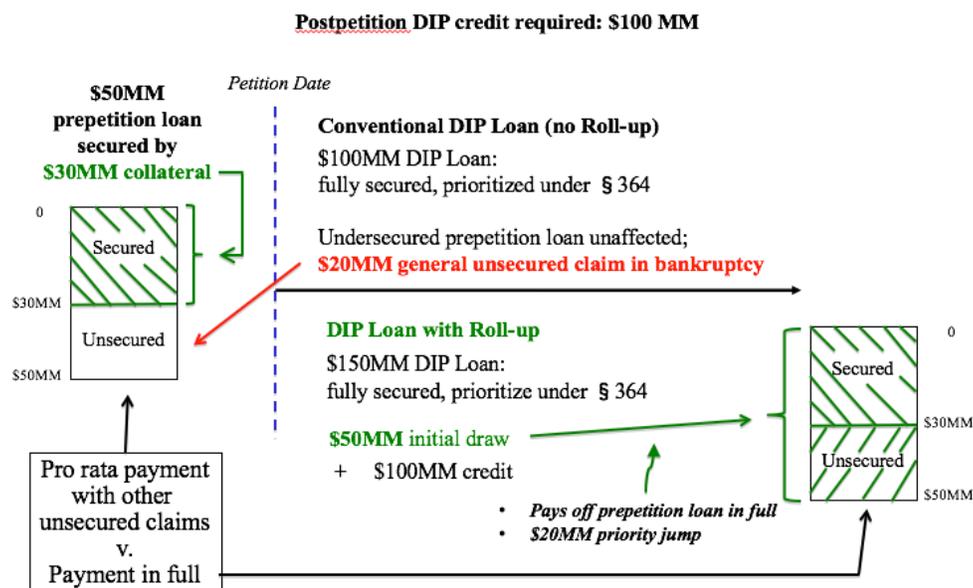


FIGURE A1

B. Lyondell: Credit Scarcity and Creditor Control

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, 2009,⁶² during the depths of the Financial Crisis. Aggressive DIP lending inducements included steep pricing, strict covenants, and what may be the largest roll-up in history.

About a year earlier, when Lyondell was the third largest independent publicly traded chemical company in North America,⁶³ 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.⁶⁴ Shortly after this transaction, steeply rising oil prices, a global recession, and a rough 2008 hurricane season for the Gulf coast combined to preclude Lyondell from meeting its debt obligations, forcing it into bankruptcy.⁶⁵

On the day of its bankruptcy filing, Lyondell moved for an order authorizing an \$8.5 billion DIP loan, the largest commercial DIP loan in history.⁶⁶ With global credit markets extremely tight at the time, 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,⁶⁷ consisting of \$3.25 billion of "new money"—actual new credit for the

⁶² 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, March 12, 2010 [hereinafter Lyondell Disclosure Statement] at 42.

⁶³ *Id.* at 25.

⁶⁴ 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).

⁶⁵ Lyondell Disclosure Statement, *supra* note 62, at 39.

⁶⁶ 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. 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), January 8, 2009. 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.

⁶⁷ The other \$2 billion was in the form of a revolving credit facility. 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, (II) Granting Adequate Protection to Pre-petition

debtors—and a \$3.25 billion roll-up. The roll-up debt refinanced \$3.25 billion of the DIP lenders' pre-bankruptcy secured debt, conferring a higher interest rate on the former pre-bankruptcy debt, as well as new fees to the DIP lenders.⁶⁸

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 example, the debtors were given only seven months to deliver a draft plan of reorganization and disclosure statement to the DIP lenders.⁶⁹

The hearing on the final order approving the DIP loan was hotly contested, lasting three days.⁷⁰ 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!⁷¹ Finally, the Committee objected to the

Secured Parties Pursuant to 11 U.S.C. §§ 361, 362, 363 and 364, March 1, 2009 [hereinafter Lyondell Final DIP Order].

⁶⁸ While the rolled-up debt would ordinarily also enjoy a near-certainty of repayment, since all DIP debt has to be repaid at plan confirmation, Lyondell's DIP loan included an option for the debtors to refinance their roll-up debt with a five-year debt security offering the equivalent of cramdown treatment. *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; David Griffiths, *Roll-up, Roll-up, Read All about It!*, Weil Bankruptcy Blog, October 6, 2010, available at: <http://business-finance-restructuring.weil.com/dip-financing/roll-up-roll-up-read-all-about-it/> (visited Mar. 1, 2016).

⁶⁹ 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.

⁷⁰ Griffiths, *supra* note 68.

⁷¹ 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,

proposed granting of liens to the DIP lenders in the debtors' avoidance actions,⁷² as well as the proposed waiver of the debtors' rights under § 506(c) to surcharge the collateral.⁷³

Though Judge Gerber shared many of the Committee's concerns, he approved the \$8.5 billion DIP loan nonetheless, recognizing the thinness 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.⁷⁴

The DIP loan agreement was amended several times over the course of the case to extend the loan's maturity and applicable milestones,⁷⁵ and Lyondell's plan was ultimately confirmed. It emerged from bankruptcy on April 30, 2010, having spent about sixteen months in Chapter 11. 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.⁷⁶

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 18 (February 22, 2009; Case No. 09-10023 (REG)).

⁷² *Id.* at 27.

⁷³ *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* SDNY General Order, *supra* note 33, at II.A.5.

⁷⁴ *See supra* Part II.B.

⁷⁵ Lyondell Disclosure Statement, *supra* note 62, at 47.

⁷⁶ *Id.* at 9.

C. Testing Roll-ups without Working Capital

It has been suggested that courts and practitioners tend to distinguish roll-ups of working capital lines from roll-ups of other forms of pre-bankruptcy debt (e.g., term loans).⁷⁷ According to this approach, working capital roll-ups should be considered less objectionable than other roll-ups for reasons of practicality and convenience. On this view, because working capital lines typically rely on accounts receivable and/ or inventory for collateral, it makes 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 would have to be segregated from postpetition working capital for the duration of the case, which creates recordkeeping headaches for the debtor and also precludes the pre-bankruptcy working capital from "working."

For an even cleaner approach, using the DIP loan to refinance the pre-bankruptcy working capital line from the start relieves the debtor from having to worry at all about distinguishing prepetition versus postpetition collateral or proceeds.⁷⁸

Given this apparently common rationale for rolling up working capital lines apparently common

To account for the possibility that the incidence of roll-ups might correlate with credit scarcity once when we account for roll-ups of prebankruptcy working capital lines, I rerun the regressions from Table 6 considering only roll-ups of non-working-capital loans.

⁷⁷ Thanks specifically to Douglas Baird and Rich Levin for pointing me to this issue.

⁷⁸ Or course, this administrative convenience does not diminish the potential harm to junior creditors from roll-ups generally. *See supra* Part II.A.

REFERENCES

American Bankruptcy Institute Commission to Study the Reform of Chapter 11. 2014. *Final Report and Recommendations*.

Ayotte, Kenneth M. & Edward R. Morrison. 2009. Creditor Control and Conflict in Chapter 11, 1 *J. Legal Analysis* 511-51.

Baird, Douglas G. & Robert K. Rasmussen. 2003. Chapter 11 at Twilight, 56 *Stan. L. Rev.* 673-99.

Baird, Douglas G. & Robert K. Rasmussen. 2006. Private Debt and the Missing Lever of Corporate Governance, 154 *U. Penn. L. Rev.* 1209-51.

Barnett, Robert H. & Brian J. Grant, Credit Crisis Puts Focus on Out-of-Court Restructurings, *J. Corp. Renewal*, June 14 2010.

Best, Ronald & Hang Zhang. 1993. Alternative Information Sources and the Information Content of Bank Loans, 48 *J. Fin.* 1507-22.

Billett, Matthew T., Mark J. Flannery & Jon A. Garfinkel. 1995. The Effect of Lender Identity on a Borrowing Firm's Equity Return, 50 *J. Fin.* 699-718.

Billett, Matthew T., Tao-Hsien Dolly King & David C. Mauer. 2007. Growth Opportunities and the Choice of Leverage, Debt Maturity, and Covenants, 62 *J. Fin.* 697-730.

Boot, Arnoud W.A. 2000. Relationship Banking: What Do We Know, 9 *J. Fin. Intermed.* 7-25.

Boot, Arnoud W.A., Anjan V. Thakor & Gregory F. Udell. 1991. Secured Lending and Default Risk: Equilibrium Analysis, Policy Implications and Empirical Results, 101 *Econ. J.* 458-472.

Black, Fisher. 1975. Bank Funds Management in an Efficient Market, 2 *J. Fin. Econ.* 323-39.

Bradley, Michael & Michael R. Roberts. 2004. The Structure and Pricing of Corporate Debt Covenants, working paper, *available at* <http://ssrn.com/abstract=466240>.

Bussell, Daniel J. & Kenneth N. Klee. 2009. Recalibrating Consent in Bankruptcy, 83 *Am. Bankr. L.J.* 663-748.

Carapeto, Maria. 2003. Does Debtor-in-Possession Financing Add Value?, working paper, available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.197.6324&rep=rep1&type=pdf>.

Chatterjee, Sris, Upinder S. Dhillon & Gabriel G. Ramirez. 2004. Debtor-in-Possession Financing, 28 *J. Banking & Fin.* 3097-3111.

Chen, Hui, Rui Cui, Zhiguo He & Konstantin Milbradt. 2016. Quantifying Liquidity and Default Risks of Corporate Bonds over the Business Cycle, working paper, available at <http://www.mit.edu/~huichen/bondliquidity.pdf>.

Choi, Albert & George Triantis. 2012. The Effect of Bargaining Power on Contract Design, 98 *Va. Law. Rev.* 1665-1744.

Choi, Albert & George Triantis. 2013. Market Conditions and Contract Design: Variations in Debt Contracting, 88 *N.Y.U. Law. Rev.* 51-82.

Dahiya, Sandeep, Kose John, Manju Puri & Gabriel Ramirez. 2003. Debtor-in-Possession Financing and Bankruptcy Resolution: Empirical Evidence, 69 *J. Fin. Econ.* 259-80.

DeFond, Mark & Jieying Zhang. 2009. The Asymmetric Magnitude and Timeliness of the Bond Market Reaction to Earnings Surprises, working paper, available at http://saf.uwaterloo.ca/seminars/DeFond_Zhang_042809_6.pdf.

Fama, Eugene F. 1985. What's Different About Banks?, 15 *J. Monetary Econ.* 29-39.

Gande, Amar & Anthony Saunders. 2012. Are Banks Still Special When There Is a Secondary Market for Loans?, 67 *J. Fin.* 1649-1684.

Honigsberg, Colleen., Sharon Katz & Gil Sadka. 2014. State Contract Law and Debt Contracts, *J. Law. Econ.* 1031-1061.

Huebner, Marshall S. 2005. Debtor-in-Possession Financing, *RMA J.* 30-33.

James, Christopher. 1987. Some Evidence on the Uniqueness of Bank Loans, 19 *J. Fin. Econ.* 217-235.

Loan Syndications and Trading Association (LSTA). 2015. The Trouble with Unneeded Bankruptcy Reform: The LSTA's Response to the ABI Chapter 11 Commission Report, *available at* <http://www.lsta.org/uploads/DocumentModel/1860/file/lsta-abi-10615-final.pdf>.

Longstaff, Francis A., Sanjay Mithal & Eric Neis. 2005. Corporate Yield Spreads: Default Risk or Liquidity? New Evidence from the Credit Default Swap Market, 60 *J. Fin.* 2213-2253.

Lummer, Scott L., and John J. McConnell. 1989. Further Evidence on the Bank Lending Process and the Capital-Market Response to Bank Loan Agreements, 25 *J. Fin. Econ.*, 99-122.

Nini, Greg, David C. Smith & Amir Sufi. 2009. Creditor Control Rights and Firm Investment Policy, 92 *J. Fin. Econ.* 400-20.

Nini, Greg, David C. Smith & Amir Sufi. 2012. Creditor Control Rights, Corporate Governance, and Firm Value, 25 *Rev. Fin. Stud.* 1713-1761.

Roberts, Michael R. & Amir Sufi. 2009a. Control Rights and Capital Structure, 64 *J. Fin.* 1657-1695.

Roberts, Michael R. & Amir Sufi. 2009b. Renegotiation of Financial Contracts: Evidence from Private Credit Agreements, 93 *J. Fin. Econ.* 159-184.

Roe, Mark J. & Frederick Tung. 2013. Breaking Bankruptcy Priority: How Rent-Seeking Upends the Creditors' Bargain, 99 *Va. L. Rev.* 1236-90.

Slovin, Myron B., Shane A. Johnson & John L. Glascock. 1992. Firm Size and the Information Content of Bank Loan Announcements, 16 *J. Banking & Fin.* 1057-1071.

Skeel, Jr., David A. 2004. The Past, Present and Future of Debtor-in-Possession Financing, 25 *Cardozo L. Rev* 1905-1934.

Triantis, George. 2016. Debtor-in-Possession Financing in Bankruptcy.

Tung, Frederick. 2009. Leverage in the Board Room: The Unsung Influence of Private Lenders in Corporate Governance, 57 *UCLA L. Rev.* 115-181.

White, James J. 2004. Death and Resurrection of Secured Credit, 12 *Am. Bankr. Inst. L. Rev.* 139-192.

United States Bankruptcy Court for the Southern District of New York 2002. Guidelines for Financing Requests, *International Insolvency Institute* 8.