Concentration of Control Rights in Leveraged Loan Syndicates*

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Abstract

Corporate loan contracts frequently concentrate control rights with a subset of lenders. In a large fraction of leveraged loans with a revolving line of credit and a term loan, the revolving lenders have the exclusive right and ability to monitor and renegotiate the financial covenants in the governing credit agreements. Concentration is more common in loans that include nonbank institutional lenders and in loans originated subsequent to the financial crisis. We conclude that concentrated control rights maintain the benefits of lender monitoring and minimize the costs of renegotiation associated with larger and more diverse lending syndicates.

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One striking development in the $4.5 trillion syndicated loan market has been the marketing of bank-originated term loans to nonbank intermediaries such as hedge funds, collateralized loan obligations (CLOs), and mutual funds.\(^1\) Another closely related development has been the marketing of so-called “covenant-lite” loans—loans without traditional financial covenants—first during the period of credit expansion in 2005-7 and more recently, as the pace of commercial lending quickened in 2012-2014. Some observers have interpreted covenant-lite loans as sign of a decline in the role of banks in monitoring and renegotiating contracts.\(^2\) Moreover, the rapid growth of leveraged lending in the recent period has caught the attention of bank regulators concerned about the possibility of declining credit standards, which prompted regulators to impose restrictions on the origination of leveraged loans in 2013.\(^3\)

In this paper, we empirically examine the nature of financial covenants in a large set of credit agreements governing leveraged loans issued during the years 2005 through 2014. Although we do confirm a sharp rise in loan tranches lacking traditional financial covenants, we also show that very few loan deals are issued without any financial covenants. A common structure of a leveraged loan deal includes multiple tranches, most commonly a term loan marketed to nonbank investors and a revolving line of credit, which remains predominately funded by commercial banks. Even if the term loan lacks financial covenants, the line of credit nearly always contains traditional financial covenants. Despite sharing similar cash flow rights, including a senior and secured position in the borrower’s capital structure, the revolving lenders are often given the unilateral right to waive or amend the covenants without consulting the term lenders. The consequence of this structure is to concentrate control rights with revolving lenders, which we refer to as split control rights.\(^4\)

Figure 1 highlights the difference between deals with split control rights and deals that lack covenants entirely. Based on a sample of more than 1,000 leveraged loan deals that we describe more below, the figure shows the annual fraction of deals that contain split control rights (red, solid line), meaning that the revolving lenders have the unilateral right to waive or amend the financial

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\(^1\)The league tables provided by Thomson Reuters reports $4.7 trillion of syndicated loan issuance during 2015. See http://share.thomsonreuters.com/general/PR/Loan-4Q15-(E).pdf.

\(^2\)For example, Becker and Ivashina (2016) and Billet, et al (2016). We discuss the literature in Section I.C.

\(^3\)In March 2013, the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation issued “Interagency Guidance on Leveraged Lending,” which proposed “sound practices for leveraged finance activities.” The original guidance pointed to “the absence of meaningful maintenance covenants in loan agreements” and “the participation of unregulated investors” as factors motivating the new guidelines. See https://www.federalreserve.gov/bankinforeg/srletters/sr1303a1.pdf for details.

\(^4\)In our sample, nearly all leveraged loan deals include a revolving tranche.
Figure 1: Covenant-Lite Tranches and Deals

Note: The figure shows the annual proportion of leveraged loan deals that contain no financial maintenance covenants in any tranche (blue, dashed line) and that contain: (i) a term loan with no financial covenants but a revolver with at least one financial maintenance covenant; or (ii) contain a financial covenant that applies to all tranches but give the revolving lenders the unilateral right to waive or amend the covenant (red, solid line).

covenants, and the fraction of deals that contain exclusively covenant-lite tranches (blue, dashed line). The incidence of split control rights rose sharply following the financial crisis, from near zero in 2009 to about 35 percent by 2014. However, the incidence of completely covenant-lite deals barely changed in recent years and remained less than 2 percent across all deals in our sample.

We begin our analysis by showing that borrowers with loans that have split control rights are still subject to the discipline of financial covenants. We examine the realized frequency of covenant violations and find borrowers with split control rights violate covenants at a similar rate to borrowers with financial covenants on all tranches in the deal. We conclude that split control rights is best interpreted as a concentration of control rights rather than a relaxation of monitoring by lenders.

We next show that the usage of split control rights is concentrated in deals that have a term loan tranche designed for funding by institutional lenders, which includes lenders such as CLOs and
mutual funds. Across our whole sample, the rate of split control rights is nearly four times as large among deals with an institutional tranche. Moreover, all of the rise in usage following the financial crisis occurs in institutional deals. For deals without an institutional tranche, the incidence of split control rights has remained about a constant 5 percent of deals.

We conjecture that split control rights help minimize bargaining frictions generated by the presence of a large set of nonbank institutional investors. Institutional tranches of leveraged loans have a larger and more diverse set of lenders, fewer repeat interactions to foster relationship benefits, and a secondary market that permits lenders to change during the life of the loan. Since loans are frequently renegotiated, including following a covenant violation, removing the covenants from the institutional tranche helps to minimize the costs of renegotiation. Split control rights maintains the benefits of borrower monitoring by giving the revolving lenders sole discretion following a covenant violation, including the decision whether to waive the violation, amend the terms of the agreement, or enforce additional rights granted by the event of default.5

We offer support for this hypothesis in several ways. First, we show that the relationship between institutional lending and split control rights is robust to controlling for a host of borrower and lender characteristics. We find no evidence that the nature of leveraged lending borrowers has changed over time, which suggests that changes in the covenant structure is not due to changes in loan demand or borrower characteristics. Second, we show that two additional contract provisions have evolved in a similar fashion to split control rights. We collect data on contract features that permit borrowers to renegotiate the maturity or pricing of only a portion of their existing debt, which is change from the traditional requirement that lenders must unanimously agree to changes in these loan terms. These provisions were nearly non-existent prior to the financial crisis but are now used in about one-half of deals. As with split control rights, the rise is concentrated in deals with an institutional tranche, and the provisions are frequently used in the same deal, suggesting that minimizing renegotiation costs is the common motivation for the provisions. Finally, we show that deals with institutional tranches have experienced no changes in other contract terms—interest rate, amount, or maturity—that would suggest alternative explanations for the rise in split control rights. For example, institutional tranches tend to have higher interest rate spreads, largely due to

5These rights include the ability to demand immediate repayment of any outstanding loan balances. This outcome is unusual, however, since cross-default clauses in in other debt, including the term loan, would bring other lending parties into the negotiation. Waiving the default, however, avoids tripping cross-default clauses.
the risk of the borrower and longer maturity of the institutional tranche, but there is no evidence that spreads on institutional tranches have narrowed over time as would be expected if the rise in split control rights was due to a positive supply shock to institutional loans.

Based on this evidence, we attribute the growth in split control rights, which appears as growth in covenant-lite institutional tranches, to updating by market participants about the difficulties of renegotiation with a large set of participating lenders. The emergence of nonbank investors provided a positive shock to the supply of leveraged loans that drove the first wave of leveraged lending (Ivashina and Sun (2011); Nadauld and Weisbach (2012)). But especially during the financial crisis in which many syndicate members were severely financially contrained, loans marketed to nonbank intermediaries also experienced problems compared to those held exclusively by banks. Researchers have found that loans funded by nonbanks experienced defaults with greater frequency than loans syndicated to only banks, that negotiations to remedy defaults were more difficult, and that firms with these loans were more likely to end up in bankruptcy. This experience accelerated the adoption of split control rights as a way to maintain the traditional benefits of bank lending—monitoring and renegotiation—while accommodating the presence of institutional lenders that provide a substantial portion of the supply of term loans.

Our analysis is based on the credit agreements that govern a sample of nearly 1,100 leveraged loan deals. We manually read the credit agreements to avoid relying on standard databases for information about covenants. We describe the actual contracts in detail in Section I.B and provide examples of the covenant provisions that we code in the Appendix. Our sample covers the years 2005 through 2014, which includes the initial expansion of institutional lending and enough experience post crisis to draw inferences on how contracts have changed. A methodological contribution of our analysis is to carefully account for all of the borrowings of a single firm.

In Section I, we provide some background on the growth of the leveraged loan market, discuss the contractual provisions that are the main topic of our paper, and discuss some of the relevant literature. Section II contains a detailed description of our data and sample construction. In section III, we document the frequency of split control rights and show that firms with split control rights are still monitored by covenants. Section IV shows that the incidence and growth of split control rights are concentrated in deals with institutional investors, and Section V explores further

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6 We discuss the evidence in detail below in our review of the literature in Section I.C.
the evolution of contract changes. Section VI offers some conclusions and directions for further research.

I. Background

A. Leveraged Loan Market

A syndicated loan is characterized by a syndicate of lenders jointly providing funding to a single borrower. A typical deal is arranged by a single or small set of lead lenders who solicitates the syndicate members and structures the lending arrangement. After the original financing, a single lender will serve as the agent for the syndicate to help coordinate payments, the flow of information between the borrower and the lenders, and any renegotiations. Each lender, however, retains the authority to vote on any changes to the governing agreement during the life of the loan.

The leveraged loan market refers to those syndicated loans made to relatively risky borrowers, much as the junk bond market is the portion of the corporate bond market for relatively risky bond issuers. Although there is no universal definition of a leveraged loan, Loan Pricing Corporation (LPC) defines a leveraged loan as a syndicated loan that is rated BB+ or lower, or an unrated loan with an interest-rate spread larger than 150 basis points. We adopt this definition throughout the paper.

A unique feature of the leveraged loan market since the early 2000s has been the increase in participation of institutional investors such as CLOs and mutual funds. Figure 2 shows the amount of syndicated loans funded by mutual funds and CLOs from 2000 through 2015. There was a sharp rise in funding between 2004 and 2008, as the amount of CLOs outstanding increased roughly 6-fold. Since the sharp drop following the financial crisis, the amount of CLOs outstanding has been relatively stable, but there has been notable growth in the amount of loan-backed mutual funds.

In response to the emergence of institutional investors, the arrangers of leveraged loans began to design a tranche of the deal intended specifically for institutional investors. As described in Taylor et al. (2006), an “institutional term loan (term loan B, C, or D) is a term loan facility carved out for nonbank institutional investors.” This tranche is different from the so-called “pro rata” tranches that are traditionally funded by banks, which include a revolving credit facility and, possibly, a

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7 This cutoff has been adjusted over time with market conditions.
Figure 2: Institutional Investors in Syndicated Loans

Note: The figure shows the quarterly level of outstanding syndicated loans financed by issuers of asset-backed securities and mutual funds. The data is from the Financial Accounts of the United States, and the sample is quarterly from 2001:Q1 through 2015:Q4.
“term loan A.”

As an example of a typical leveraged loan deal, consider the March 2016, $1.2 billion loan financing a spinoff by Manitowoc Foodservice. The deal was arranged by JP Morgan, who serves as the administration agent for the deal, Citibank, HSBC, and Goldman Sachs. The deal includes a $225 million revolver with a 5 year maturity and a $975 million term loan B with a 7 year maturity. Each tranche pays a floating rate of interest tied to LIBOR; the revolver pays an additional spread of 275 basis points, and the term loan pays an additional spread of 475 basis points. Each is a senior, secured obligation of the borrower backed by a lien on all of the firm’s assets.

We take the “term loan B” moniker to indicate a tranche intended for institutional investors. Although this definition surely does not capture perfectly which lenders are funding the tranches, it likely does indicate the tranches most likely to be funded by institutional investors. For the Manitowoc deal described above, CLOs owned more than $200 million of the term loan B by the fall of 2016. Additionally, we think the intended investor is the important distinction since the contract will be tailored with the intended investor in mind.

Figure 3 shows the quarterly time series of syndicated loan issuance from 2003 through the end of 2015. As the figure shows, loan issuance fell sharply around the financial crisis and subsequent recession. Leveraged loans, in particular, show two periods of sharp growth, the first from 2004 through 2007 and the second beginning in 2012 and reaching a peak in early 2014. The first wave subsided with the financial crisis, and the second wave receded for a number of reasons. Probably the most significant reason was the collapse of oil prices and an attendant series of financial shocks to the high-yield debt markets. Much of the time series variation in the leveraged loan market is due to swings in the institutional portion of the market, which grew faster during the waves and fell further during the crisis.

B. Financial Covenants

We collect the details of the financial covenants from the credit agreements that govern a sample of leveraged syndicated loans. The underlying sample is a set of leveraged loans that include both a term loan and a revolving line of credit. We describe the sample further in section II.A. Here we

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8These tranches are referred to as “pro rata” since lenders typically fund the identical proportion of each tranche.
9This is based on data from CLO-i.com. The ownership data is based on reports from September, October, and November 2016. The CLOs did not own any of the revolver.
Figure 3: Issuance of Syndicated Loans

Note: The figure shows the 4-quarter moving averages of issuance of syndicated loans. The sample is from Dealscan from 2003:Q4 through 2015:Q4.
describe each of the covenants we collect from the contracts. Since we examine the covenants for all tranches in each loan deal, we pay special attention to carefully aggregating the covenants that vary across tranches.

Covenants generally come in three forms: affirmative covenants, negative covenants, and financial covenants. Affirmative covenants refer to the set of activities that the borrower must make, such as paying taxes or complying with laws. Negative covenants specify actions that the borrower can not take, such as disposal of assets or granting liens on existing assets. Financial covenants refer to accounting-based conditions that test the borrower’s financial position or recent performance. In each case, failure to comply with a covenant, including a financial covenant, leads to an event of default, which provides the lenders with additional legal rights, including the right to call the loan.\footnote{See Wight et al. (2009) for additional discussion of loan covenants and the rights granted in the event of a default.}

Financial covenants can be one of two types, depending on when the firm needs to be in compliance with the test. \textit{Incurrence covenants} are only triggered if some contractually specified event actually occurs. For example, a widely used incurrence covenant limits the leverage ratio of the borrower in the event that the borrower issues additional debt above some level. Absent the occurrence of a triggering event, the incurrence-based financial covenants do not apply. \textit{Maintenance covenants}, on the other hand, require that the borrower needs to maintain compliance at periodic intervals over the life of the loan, regardless of whether any events occur. Financial maintenance covenants are typically monitored quarterly but the monitoring frequency is determined by the contracting parties.

Borrowers need to comply with maintenance-based covenants at regular intervals, which creates more scope for violation and the need to renegotiate, as compared with incurrence covenants. Traditionally, bank loans have relied on maintenance-based financial covenants, and corporate bonds have utilized incurrence-based financial covenants, reflecting the wider investor base and broader secondary market for bonds. We collect data on maintenance financial covenants, since the common definition of a covenant-lite loan is that the loan lack maintenance covenants. Our experience suggests that tranches without maintenance covenants do have incurrence covenants, but we leave the study of incurrence covenants to future research.
B.1. Specific Covenants

Financial covenants can refer to almost any item on a firm’s balance sheet or income statement, but there are a few standard covenants that appear in many contracts. The most common covenants are tied to an agreed definition of the borrower’s cash flow available for debt service, typically defined as earnings before the deduction of interest, taxes, depreciation and amortization (EBITDA).\textsuperscript{11} There are other types of financial maintenance covenants that are based on net worth, asset coverage, and various liquidity measures.

We collect data on the existence of any financial covenants and the level of five of the most standard covenants. We focus on the five covenants that are the most common types seen in our sample of loan agreements. Conditional on having at least one maintenance covenant, 97\% of the loans has at least one of the five types.\textsuperscript{12} In the Appendix, we provide an example of the contract language that defines a typical financial covenant.

1. A minimum EBITDA covenant requires the borrower to maintain a level of EBITDA above a specified level.

2. A maximum leverage ratio specifies that the borrower may not exceed a specified ratio of debt to EBITDA.

3. A maximum senior leverage ratio specifies that the borrower may not exceed a specified ratio of senior-secured debt to EBITDA.

4. A minimum interest coverage ratio requires the borrower to maintain a ratio of EBITDA to interest expense above a specified level.

5. A minimum fixed charge coverage ratio requires that the borrower cannot permit the ratio of EBITDA to some measure of fixed charges to fall below some specified level. A common set of fixed charges includes interest expense, capital expenditures, dividends and other distributions, and scheduled payments of principal.

Financial covenants frequently vary over the life of the loan, with the strictness of the covenant usually tightening about once per year. In our data collection, we collect the tightest and the

\textsuperscript{11}In many cases, the definition of EBITDA for the purpose of loan covenants is different than the GAAP definition.

\textsuperscript{12}When deciding whether a loan facility has maintenance covenants, we consider all types of financial covenants, not just the five covenants for which we collect the level.
loosest levels of each covenant, and in the subsequent analysis, we examine only the loosest level under the assumption that this is the level that applies at the origination of the loan.

If multiple loan tranches are governed by a single credit agreement, there is at most one set of financial covenants that would constrain the borrower. If the borrower has multiple contracts, however, the financial covenants may differ across the contracts. In this case, we use the stricter of the covenants as the measure of covenants at the deal level.

B.2. Split Control Rights

As we discovered in the process of reading the credit agreements, the provisions of a loan contract can be different for separate tranches in the same deal. In particular, the financial covenants in a deal can protect only a subset of the tranches in a deal. We refer to this case as split control rights, since the arrangement means that the financial covenant can be waived or modified by only a subset of the syndicate lenders. In the event of a covenant violation, these lenders have the unilateral right to negotiate with the borrower about how to cure the default. In most cases, the event of default is waived during the renegotiation process so that any cross-default provisions in other tranches (or other debt agreements) are not triggered.

Split control rights can be accomplished through two means. First, the deal can be governed by multiple credit agreements that have different financial covenants. For example, a firm with a pre-existing revolving credit agreement may issue a new term loan that does not have any financial maintenance covenants. If the revolving loan contains financial maintenance covenants, then the revolving lenders are still protected by the covenants and the associated contingent control rights. Roughly two-thirds of deals with split control rights are accomplished through multiple contracts.\(^{13}\)

Second, a single credit agreement that contains financial maintenance covenants can give the lenders in a specific tranche the unilateral right to decide on whether to waive or modify the financial covenant. Credit agreements specify the number of lenders required to modify terms in the contract, typically defined as the “required lenders.” Required lenders are often defined as any set of lenders holding greater than 50% of the sum of outstanding loans and unused credit commitments. In a credit agreement covering multiple tranches without split control rights, the required lenders would

\(^{13}\)In a small number of deals, about 2%, the term loan and revolver each have maintenance covenants but the level of the covenants is different. In each case the level is tighter for the revolving loan, so we consider these deals to have split control rights.
include lenders from all of the tranches. In a credit agreement with split control rights, only a majority of the lenders from a specific tranche are required to waive or modify a default on the financial covenants. The Appendix provides an example of split control rights accomplished within a single credit agreement. We collect data on the presence of split control rights and the tranches excluded from the protection of the financial covenants. Roughly one-third of deals with split control rights are accomplished within a single contracts.

In our sample of deals with split control rights, we did not find a single case in which the revolving lenders were excluded from covenant-related decisions. There are some deals that include more than two tranches, typically a revolver and multiple term loan tranches. In some of these cases, one of the term loan tranches does have control rights in the event of a covenant violation. This is usually a term loan A tranche that is not intended for institutional lenders.\footnote{Since the revolving credit is funded primarily by banks, the term loan A is also funded by banks, due to the pro rata nature of the tranches. The term loan B was designed to be distinct from the term loan A.} In the subsequent analysis, reference to split control rights should be interpreted as excluding from the covenants the term loan tranche intended for institutional investors.

C. Literature Review

There is a broad literature that identifies covenants and renegotiation as essential features of bank lending. Following the classic paper by Smith and Warner (1979), a number of theoretical models show that covenants act as tripwires that trigger monitoring by the lender, who can then either impose default or renegotiate the terms of the contract.\footnote{See, for example, Aghion and Bolton (1992); Berlin and Mester (1992); Gorton and Kahn (2000); Garleanu and Zwiebel (2009).} Subsequently, a series of papers have established empirically that covenant violations occur frequently outside of serious financial distress and they typically trigger renegotiation.\footnote{See, for example, Beneish and Press (1995); Dichev and Skinner (2002); Roberts and Sufi (2009); Roberts (2015).} Furthermore, covenant violations lead to significant changes in firm behavior, evidence that actual and prospective covenant violations act as a trigger for bank monitoring.\footnote{See for example, Chava and Roberts (2008); Nini et al. (2009); Roberts and Sufi (2009).} Consistent with a large literature that has consistently found positive abnormal positive stock returns when a firm announces a new bank loan issue—beginning with James (1987)—Nini et al. (2012) has documented that bank monitoring through covenants benefits other firm claimants. More generally, Roberts (2015) has shown empirically that renegotiation of

\footnote{Since the revolving credit is funded primarily by banks, the term loan A is also funded by banks, due to the pro rata nature of the tranches. The term loan B was designed to be distinct from the term loan A.}

\footnote{See, for example, Aghion and Bolton (1992); Berlin and Mester (1992); Gorton and Kahn (2000); Garleanu and Zwiebel (2009).}

\footnote{See, for example, Beneish and Press (1995); Dichev and Skinner (2002); Roberts and Sufi (2009); Roberts (2015).}

\footnote{See for example, Chava and Roberts (2008); Nini et al. (2009); Roberts and Sufi (2009).}
bank loans is pervasive quite apart from actual or prospective covenant violation.

The growth of the institutional loan market poses serious challenges for this well documented model of bank lending, in which monitoring and renegotiation are closely related features of bank lending. We expect a large syndicate composed of institutional investors holding small shares of the loan to have difficulties in coalescing around a common bargaining stance, much less renegotiating loan terms every nine months as documented by Roberts (2015). And there is empirical support for the view that leveraged loans with institutional lenders have suffered from bargaining frictions, particularly during the financial crisis. In a study of financially distressed firms, Demiroglu and James (2015) show that bankruptcy was more likely for firms with syndicates including nonbank lenders, especially syndicates including CLOs, while out-of-court restructurings were more likely for bank-only syndicates. Focusing on loans made prior to the financial crisis, Osborn (2014) finds that loans held by nonbanks were more likely to experience payment default and bankruptcy during the crisis.

Our empirical evidence that institutional loan syndicates have evolved to concentrate control rights to mitigate bargaining frictions and to facilitate monitoring has some similarities and some fundamental differences from other recent research on leveraged lending. Like Becker and Ivashina (2016), we emphasize that loan syndicates with nonbank investors face serious bargaining frictions. In their interpretation, covenant-lite loans mitigate bargaining frictions by reducing the set of states of the world in which bargaining occurs by banishing covenants from the term loans and turning the term loan into an instrument more like a bond. In contrast, our evidence supports the view that covenant-lite term loans are best interpreted as a mechanism to concentrate control rights with the revolving lenders. Apart from our view that that a firm’s term loans and revolving lines of credit should not be viewed in isolation, our evidence shows that covenant violations do not occur less frequently in those contracts with split control rights. That is, covenant violations are not less likely when the term loan is covenant-lite. Furthermore, we show that institutional loans contain a number of other contractual mechanisms designed to mitigate bargaining frictions by concentrating renegotiations on subsets of the syndicate.

Our interpretation and empirical evidence also differs from Billett et al. (2016), who view a covenant-lite contract as an optimal contract when the agent bank’s share of the loan falls below some level, which exacerbates intra-syndicate conflicts due to the agent bank’s inefficient incentive
to avoid imposing a default in loan renegotiations. In their model, the bank no longer monitors and
renegotiates contracts in covenant-lite contracts, inconsistent with our evidence that when all of
the firms’ loan contracts are taken into account, firms are still governed by covenants monitored by
banks. Our view that all of the borrower’s loan contracts must be taken into account also differs from
the model of Ayotte and Bolton (2011), who view covenant-lite loans as a way of reducing reading
costs for nonbank syndicate members. Empirically, the term loan contracts often contain references
to the revolving line of credit—strongly suggesting that institutional investors are aware of the
covenants in the revolving loan—and they are typically bound by cross default clauses—evidence
that term loan payoffs depend crucially on the covenant structure on the revolving loan.

Our findings also shed some light on models of multi-creditor lending. Our evidence that
institutional loan contracts are designed to mitigate bargaining frictions when there are many
creditors is generally inconsistent with the model in Bolton and Scharfstein (1996), in which firms
with risky cash flows borrow from multiple creditors to create intra-creditor bargaining frictions
and harden budget constraints. Our empirical results also raise questions for multi-creditor models
in which the lender who monitors and renegotiates with the borrower has a short-term claim with
priority over the long-term creditors, for example, Park (2000) and Diamond (1993). For the deals
we examine, contracts are designed to concentrate control rights with the revolving lenders, but
the term loan creditors have equal priority.

II. Loan Issuance Data

This section describes the sample of loan deals that we construct. The ultimate goal is to generate
a sample of loan financing events along with data on the contract choices settled on by the borrower
and lenders.

A. Loan Contract Sample

We begin by constructing a sample of loan “deals” using LPC’s Dealscan database, where a deal
is defined as the set of loan facilities that are current on the same day to the same borrower.\textsuperscript{18} In
most cases, but not all, a deal corresponds to a single credit agreement. We use the concept of a
\textsuperscript{18}In terms of fields in Dealscan, we identify a deal using facilityStartDate and borrowerCompanyID. A deal does
not correspond perfectly to a loan package, since a borrower can have multiple packages beginning on the same date.
deal under the assumption that the contracts governing these facilities are designed with mutual awareness. We examine only deals that contain at least one term loan facility and at least one facility considered a leveraged loan. We define a leveraged loan based on the market segment identified in Dealscan; we use any facility with a market segment marked as “Leveraged,” which LPC defines as a loan rated BB+ or lower or an unrated loan with an interest-rate spread larger than 150 basis points.\(^\text{19}\) Although excluding deals comprised exclusively of a line of credit removes about 30% of the leveraged loan sample, this restriction concentrates the sample on the most relevant loans.\(^\text{20}\) According to Dealscan, less than 1% of the revolver-only deals are intended for the institutional market, whereas 70% of the term loan-only deals are intended for the institutional market.\(^\text{21}\)

Our sample spans from 2005 through 2014. Because we hand-collect data from the underlying credit agreements, we limit the span of the sample to minimize data collection. However, as shown in Figure 3, issuance of institutional loans was fairly low prior to 2005, and the years 2012 through 2014 provide sufficient data to make inferences on the state of the market following the financial crisis. As we show below, there are notable time series trends.

In order to examine a fairly homogeneous set of loans, we make the following restrictions on the set of deals: (i) we include only deals where all of the facilities are secured with collateral and syndicated in the U.S.; (ii) we exclude any deal with a facility that is not a term loan or a revolving line of credit, which excludes any deal with facilities classified as a bond, note, bridge loan, or other unique loan types\(^\text{22}\), (iii) we exclude all deals comprised exclusively of second-lien loans, and (iv) we exclude all loans to borrowers with an SIC code indicating that the borrower is a financial firm or government-related.\(^\text{23}\) After these restrictions, we are left with slightly more than 9,400 deals.

We next attempt to collect the credit agreement that governs each of the facilities in the loan deals. Public firms are required by the Securities and Exchange Commission to disclose material contracts, which includes credit agreements.\(^\text{24}\) We gather the agreements from three secondary sources. First, we use LPC’s loanconnector website, which provides credit agreements along with a

\(^{19}\) LPC varies the definition somewhat over time to account for market conditions.

\(^{20}\) For the leveraged loans during our sample period, 32% of issues contain only a revolving line of credit, 13% contain only a term loan, and the remainder have at least one of each loan type.

\(^{21}\) We use the market segment “Institutional” to define an institutional tranche.

\(^{22}\) We identify lines of credit as a loan type of “Revolver/Line < 1 Yr.,” “Revolver/Line >= 1 Yr.,” or “364-Day Facility.”

\(^{23}\) We use Dealscan’s SIC code and drop borrowers with a 1-digit SIC code of 6 or 9.

\(^{24}\) Credit agreements typically are disclosed as exhibits 8-K, 10-K, or 10-Q filings, as governed by item 601(b) of Regulation S-K.
link to the underlying issue since the agreements are organized by borrower and issue date. Second, we collect credit agreements from Practical Law’s comprehensive deal database, which we merge to the issue data using CIK code and date. Finally, we use S&P’s Capital IQ system to manually search for any remaining contracts. In total, we find contracts for more than 1,100 of the deals.

Since we have a credit agreement for only about 11% of the full sample, Table I provides some summary statistics to assess the representativeness of our sample credit agreements. Column 1 provides sample means for the set of deals for which we have a contract, and column 2 provides sample means for all other deals. Based on the sample means, the deals with a contract are significantly larger and less risky, based on the differences in interest rate spreads and loan amounts. The most notable difference, however, is that deals with a contract are significantly more likely to have a public borrower. Nearly 90% of deals without a contract are for private borrowers. Based on this evidence, we conclude that the predominant reason that we fail to find a loan contract is that the borrower is not a public firm so the agreement is not publicly available.

Column 3 of Table I provides sample means for the set of deals without a contract but for which the firm is likely public. Within the set of public firms, we have a contract for a much larger fraction of issues (55% versus 11%). Moreover, the means for loan spread and loan amount are much closer in columns 1 and 3, suggesting that the set of loans for which we have a contract is fairly representative of the set of loan to public borrowers. Furthermore, the smaller fraction of sponsored loans in our contract sample reflects the fact that many sponsored deals are for private firms. Finally, according to Dealscan’s measure of whether a loan is covenant-lite, our sample of deals with contracts has a similar fraction of covenant-lite term loans and revolvers as the sample of firms without contracts. We conclude that our results concerning the prevalence of financial covenants are not driven by the restriction that we only observe contracts for public firms.

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25 We find a borrower’s CIK code using the borrower’s gvkey and Compustat. The Practical Law data provides the borrower’s CIK code.

26 We define a public borrower as a borrower for which we have a gvkey providing a link to Compustat and a non-missing value for total assets from the fiscal quarter immediately following the loan origination. Thank you to Michael Roberts for providing the gvkey link data used in Chava and Roberts (2008).

27 We suspect our indicator that the firm is public is not perfectly measured. Many of the firms we consider public may not have been public at the exact time the loan was originated.

28 Table I uses Dealscan’s covenant-lite indicator, but our own subsequent analysis defines covenant-lite directly from our reading of the sample of contracts.
Table I: Comparison of Deals With and Without a Contract

<table>
<thead>
<tr>
<th></th>
<th>Deals with a Contract (N = 1,064)</th>
<th>Deals without a Contract (N = 8,319)</th>
<th>Deals without a Contract, Public Firm (N = 883)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Term Loan Tranches</td>
<td>1.3</td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Deal Includes Revolver</td>
<td>90%</td>
<td>80%</td>
<td>78%</td>
</tr>
<tr>
<td>Borrower has Prior Revolver</td>
<td>10%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Spread on Term Loan (bps)</td>
<td>325</td>
<td>404</td>
<td>332</td>
</tr>
<tr>
<td>Spread on Revolver (bps)</td>
<td>271</td>
<td>349</td>
<td>276</td>
</tr>
<tr>
<td>Maturity of Term Loan (months)</td>
<td>66</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>Maturity of Revolver (months)</td>
<td>55</td>
<td>54</td>
<td>49</td>
</tr>
<tr>
<td>Amount of Term Loan ($) millions</td>
<td>392</td>
<td>218</td>
<td>447</td>
</tr>
<tr>
<td>Amount of Revolver ($) millions</td>
<td>224</td>
<td>105</td>
<td>305</td>
</tr>
<tr>
<td>Covenant Late Term Loan</td>
<td>12%</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Covenant Late Revolver</td>
<td>4%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Institutional Term Loan</td>
<td>63%</td>
<td>54%</td>
<td>66%</td>
</tr>
<tr>
<td>Institutional Revolver</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Public Borrower</td>
<td>70%</td>
<td>11%</td>
<td>100%</td>
</tr>
<tr>
<td>Sponsored</td>
<td>20%</td>
<td>58%</td>
<td>29%</td>
</tr>
</tbody>
</table>

**Note:** This table reports summary statistics for the full set of leveraged loan deals. A loan deal refers to all facilities issued on the same date. A Deal with a Contract is an issue for which we have the governing loan agreement; an issue without a contract is all other issues. A Deal without a Contract, Public Firm is the subset of issues with a likely public borrower. The data are from Dealscan.
**B. Contract Data**

For the deals for which we have a credit agreement, we also manually determine whether the agreement includes a term loan and revolving line of credit.\textsuperscript{29} In about 1\% of the observations, we find that the deal does not contain a term loan, so we drop these deals.\textsuperscript{30} In the remaining cases, we find that about 15\% of the deals contain only a term loan. For these firms, we search for a previously issued revolving credit agreement that is still outstanding at the time of the new deal. In two-thirds of these cases, we find a previous credit agreement and code the contract as if it was issued on the same day.\textsuperscript{31} For the remaining 5\% of deals, we cannot find a revolving loan contract and believe that many of these are for firms that truly do not have a line of credit. We exclude these from our analysis, including in column (1) of Table I.

The small fraction of deals without a line of credit should not be surprising. Sufi (2009) finds that roughly 85\% of public firms have a line of credit, and that this fraction is even higher for firms that have debt outstanding, as all firms in our sample do. Table I shows that 80\% of all leveraged loan deals include a line of credit in the deal, and Dealscan has data on a previously issued a revolver in three-quarters (15\% of 20\%) of the remaining deals, suggesting that only about 5\% of leveraged loan borrowers do not have a revolver. For the deals that we do not have a contract, we do not explicitly search a prior revolver outstanding on the date of the new deal, nor do we drop any deals from the sample for not having an existing revolver. For this reason, the sum of Deal Includes Revolver and Borrower has Prior Revolver are less than 100\% in columns (2) and (3) of Table I.

For each of the 1,094 leveraged loan deals, we manually read all of the contracts related to the deal, including any previously issued revolving loans, if needed. In total, we have covenant-related data from 1,251 contracts that we aggregate to the deal level according to the logic in Section I.B. The final output is a set of three unique pieces of data for each deal in our sample:

1. An indicator that the deal contains any financial maintenance covenants, or equivalently, an

---

\textsuperscript{29}We found that Dealscan did not perfectly capture this information.

\textsuperscript{30}These deals have already been removed from Table I.

\textsuperscript{31}Our underlying assumption is that the term loan credit agreement is determined with complete knowledge of the existing revolving agreement. Consistent with this assumption, many of the term loan agreements refer explicitly to the prior revolver agreement in the contract. Furthermore, we are focusing on public firms that report their contracts to the SEC. It is implausible that lenders and firms (and their lawyers) negotiating a loan contract do so without complete knowledge of the terms of all existing credit agreements.
indicator that the deal contains zero financial maintenance covenants;

2. An indicator that the deal contains split control rights, which denotes that a term loan tranche is excluded from negotiations related to financial covenants;

3. If available, the level of each of the five most common financial covenants.

The advantage of having the hand-collected data is that we have more accurate data on covenants than is available in other sources. For example, we believe our covenant data are more complete and more accurate than reported by the Dealscan database, which is a widely used source for syndicated loan covenants.

C. Additional Data

We also use Dealscan to provide some additional data about the facilities covered by the credit agreements. Dealscan provides information on the amount, maturity, and pricing of the individual tranches. Almost all of the loans have a floating interest rate tied to the London Interbank Offered Rate (LIBOR), and Dealscan provides information on the spread over LIBOR that the borrower must pay. We collect this information for all term loan tranches and all revolving tranches separately. Dealscan also provides information on whether the term loan is marketed to institutional investors and whether the borrower has a financial sponsor.\(^\text{32}\)

Finally, we merge our sample of borrowers to Compustat and Capital IQ, using the first fiscal quarter immediately following the deal origination date. Using Compustat and Capital IQ, we collect data on the balance sheets, income statement, and debt structure for the borrowers shortly after the loan was issued. We use data following the origination of the loan to account for the impact of the loan on the borrower’s balance sheet. We successfully merge the deals for about 70% of the sample.

III. Concentration of Control Rights

We begin by documenting the concentration of control rights through the presence of split control rights. We refer to split control rights as a concentration of control since the revolving lenders have

\(^{32}\text{We use the market segment data to identify institutional tranches and sponsored issues.}\)
the unilateral right to renegotiate with the borrower to amend or waive any financial covenants.

The annual time series of the frequency maintenance covenants and split control rights is presented in Table II. Column (1) shows that the vast majority of deals contain at least one maintenance covenant, meaning that most borrowers must be in regular compliance with some financial covenant. Across the entire sample, the frequency of deals with no maintenance covenants is only 2% and rises only very slightly in recent years. Column (2) shows, however, that the frequency of split control rights has risen sharply in recent years. Across the 10 year sample, 15% of deals have split control rights, but the incidence has been more than twice that rate during 2013 and 2014. By the end of the sample, more than one-third of leveraged loan deals have split control rights.

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**Table II: Concentration of Control Rights**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Issues</th>
<th>No Maintenance Covenant</th>
<th>Split Control Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>187</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>2006</td>
<td>170</td>
<td>1%</td>
<td>8%</td>
</tr>
<tr>
<td>2007</td>
<td>164</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>2008</td>
<td>37</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>2009</td>
<td>34</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2010</td>
<td>56</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>2011</td>
<td>60</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>2012</td>
<td>125</td>
<td>2%</td>
<td>15%</td>
</tr>
<tr>
<td>2013</td>
<td>144</td>
<td>3%</td>
<td>31%</td>
</tr>
<tr>
<td>2014</td>
<td>117</td>
<td>2%</td>
<td>36%</td>
</tr>
<tr>
<td>Total</td>
<td>1,094</td>
<td>2%</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Note:** This table reports the annual frequency of deals with no maintenance covenants and split control rights in the sample of leveraged loan deals that include both a term loan and a revolver. Column (1) reports the fraction of deals with no maintenance covenant in any tranche in the deal, and column (2) reports the frequency deals with split control rights, meaning that the revolving lenders have the unilateral right to waive or amend a covenant. The data are compiled by the authors from the credit agreements governing the loans.

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33These are the data shown in Figure 1.
A. Are Loans with Split Control Rights still Monitored?

In order to bolster our interpretation that split control rights serve to concentrate control rights rather than reduce creditor monitoring, we examine the realized frequency of covenant violations following the issuance of the leveraged loan. We compare realizations between deals with and without split control rights and ask whether borrowers with loans that have split control rights violate covenants less often.

We borrow the methodology from Nini et al. (2012) to identify violations. For each deal in our sample, we find in EDGAR the two 10-K filings immediately following the loan origination date. Next, we search the filings for the word “covenant” within 100 words of the following phrases: “waiv,” “viol,” “in default,” “modif,” and “not in compliance.” We then manually read the passages related to confirm whether the firm violated a covenant.

Table III reports summary statistics for the results of this exercise, separated by whether the deal has split control rights or not. The table reports the mean number of hits of the word “violation” along with the frequency that a 10-K filing has zero mentions of a violation. Overall, less than 20% of 10-K filings fail to discuss covenants at all, likely reflecting that our sample of firms have high leverage and strict covenants. The average 10-K mentions covenants in about 3 different sections of the filing. In our experience, firms discuss covenants in the risk section, in the management discussion and analysis, and in debt-related footnotes to the balance sheet. The frequency of firms in violation of a covenant, roughly 8% in each of the first and second years after the deal, is higher than that reported in Nini et al. (2012), again likely due to the high leverage of the borrowers in our sample.

Although the presence of split control rights certainly concentrates control with the revolving lenders, there is no evidence that the discussion of covenants or reported violations are lower for borrowers with split control rights. Based on the differences reported in Table III and the associated standard errors, there is no evidence that borrowers with split control rights are less likely to discuss covenants or less likely to report a covenant violation. We conclude that split control rights serves to concentrate control rights with revolving lenders rather than relax the monitoring scrutiny provided by bank loans.

34 The additional terms near the word covenant reduce the number of false positive hits of the word “covenant” unrelated to covenants in loan agreements.
Table III: Realized Covenant Related Disclosures

<table>
<thead>
<tr>
<th></th>
<th>First Year after Deal</th>
<th>Second Year after Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mentions of &quot;Covenant&quot;</td>
<td>No Mentions of &quot;Covenant&quot;</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Deals with Split Control Rights</td>
<td>78</td>
<td>3.2</td>
</tr>
<tr>
<td>Deals without Split Control Rights</td>
<td>651</td>
<td>2.7</td>
</tr>
<tr>
<td>Difference</td>
<td>0.4</td>
<td>-5.3%</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.4</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Note: This table reports summary statistics from disclosures related to covenants in 10-K filings in the first and second years subsequent to the issuance of a leveraged loan. "Mentions of 'Covenant'" is the mean frequency that the word covenant appears in the filing; "No Mentions of 'Covenant'" is the percentage of filings with zero mentions of covenants; "Covenant Violations" is the frequency of filings indicating that the borrower violated a financial covenant. The row “Deals with Split Control Rights” includes all deals with split control rights, meaning that the revolving lenders have the unilateral right to waive or amend a covenant. The row “Deals without Split Control Rights” includes all other deals. The data are compiled by the authors from 10-K filings available in EDGAR.

IV. The Role of Institutional Investors

In this section we examine the role of institutional investors in the design of a loan to have split control rights. We hypothesize that the presence of an institutional tranche creates scope for renegotiation difficulties, which split control rights can mitigate. By concentrating the ability to renegotiate with revolving lenders, split control rights can minimize some of the expected costs of renegotiation, subject to maintaining the ability to renegotiate in some states of the world.

As shown in Table I, a significant fraction of leveraged loan deals contain an institutional tranche. Although the presence of an institutional tranche is an imperfect proxy for the number and diversity of the lending syndicate, it remains a useful proxy for expected bargaining difficulties at the time the loan is originated. Indeed, Demiroglu and James (2015) and Osborn (2014) show that the presence of a CLO increases the likelihood that a distressed firm will enter Chapter 11 rather than restructure outside of bankruptcy.\(^\text{35}\) The institutional tranche is designed to appeal to institutional investors, with the expectation that the tranche will be widely held and trade in a secondary market. It is this expectation that drives the structure of the credit agreement at the time the loan is originated.

\(^\text{35}\)Dealscan has limited data on the participants in the syndicate at loan origination and no data on trades in the secondary market.
Table IV: Comparison of Issues With and Without an Institutional Tranche

<table>
<thead>
<tr>
<th></th>
<th>Deals with Institutional Tranche</th>
<th>Deals without Institutional Tranche</th>
<th>p-value for difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>N</td>
</tr>
<tr>
<td>Split Control Rights</td>
<td>687</td>
<td>0.21</td>
<td>407</td>
</tr>
<tr>
<td>Spread on Term Loan (bps)</td>
<td>684</td>
<td>330</td>
<td>391</td>
</tr>
<tr>
<td>Spread on Revolver (bps)</td>
<td>665</td>
<td>273</td>
<td>394</td>
</tr>
<tr>
<td>Maturity of Term Loan (months)</td>
<td>687</td>
<td>73</td>
<td>407</td>
</tr>
<tr>
<td>Maturity of Revolver (months)</td>
<td>679</td>
<td>57</td>
<td>407</td>
</tr>
<tr>
<td>Amount of Term Loan ($ millions)</td>
<td>687</td>
<td>523</td>
<td>407</td>
</tr>
<tr>
<td>Amount of Revolver ($ millions)</td>
<td>687</td>
<td>242</td>
<td>407</td>
</tr>
<tr>
<td>Borrower Assets ($ millions)</td>
<td>474</td>
<td>3,631</td>
<td>293</td>
</tr>
<tr>
<td>Borrower Debt / Assets</td>
<td>474</td>
<td>0.54</td>
<td>293</td>
</tr>
<tr>
<td>Borrower OIBDP / Assets</td>
<td>344</td>
<td>0.11</td>
<td>237</td>
</tr>
<tr>
<td>Borrower Rated BB</td>
<td>474</td>
<td>0.30</td>
<td>293</td>
</tr>
<tr>
<td>Borrower Rated B</td>
<td>474</td>
<td>0.43</td>
<td>293</td>
</tr>
<tr>
<td>Borrower Rated CCC</td>
<td>474</td>
<td>0.03</td>
<td>293</td>
</tr>
<tr>
<td>Borrower Unrated</td>
<td>474</td>
<td>0.24</td>
<td>293</td>
</tr>
</tbody>
</table>

Note: This table reports summary statistics for a set of leveraged loan deals with a loan contract, split on whether the deal contains an institutional tranche. The data are compiled from credit agreements, Dealscan, and Compustat.

Table IV reports the univariate comparison of deals that contain an institutional tranche with deals that do not. A striking difference is the frequency with which the deals have split control rights. Across the entire sample period, the frequency of split control rights is four-times as great within deals that have an institutional tranche, 21% versus 5%. Split control rights is a contractual mechanism that excludes institutional lenders from the renegotiation process related to financial covenants.

The table also reveals other differences between deals with and without an institutional tranche. Deals with an institutional tranche are much larger and used by larger borrowers. The term loan tranches are also about 1.5 years longer, on average, for deals with an institutional tranche. The borrowers are also significantly more leveraged and much more likely to have a credit rating. Conditional on having a credit rating, institutional borrowers are slightly more likely to be B-rated, rather than BB-rated. We conclude that institutional deals are utilized more heavily by larger and riskier borrowers who have access to the bond market by virtue of having a credit rating.

A. Regression Results

In order to ensure that the relationship between institutional loans and split control rights is not due to the other unique characteristics of deals with an institutional tranche, we estimate a
multivariate regression to control for other observable differences between the deal types. In the most inclusive specification, we include time period fixed effects, industry fixed effects, rating fixed effects, and borrower-specific controls for size and credit risk. The coefficient estimates from the linear probability model are shown in Table V.

Specification (1) confirms the univariate 16 percentage point difference in the likelihood that a deal with an institutional tranche includes split control rights. Specification (2) adds year and industry fixed effects to account for systematic changes over time and potential differences across industries. The estimated difference grows to nearly 20 percentage points. Specification (3) repeats the same specification for the set of deals for which we have data from Compustat. The estimated difference shrinks somewhat to 14 percentage points. Specification (4) adds controls for borrowers’ size and leverage, and specification (5) adds a set of indicators for the credit rating of the borrower. Although none of the additional controls are independently statistically significant, they do reduce the estimated impact of an institutional tranche to about 10 percentage points. Nevertheless, there remains a statistically strong relationship between a deal containing an institutional tranche and the underlying loan contracts having split control rights.

B. Changes over Time

The time series evidence in Table II shows that the prevalence of split control rights has grown over time. Figure 4 shows that the trend is evident only in deals containing an institutional tranche. The figure plots the annual frequency of split control rights for the set of deals with an institutional tranche and those without. The figure shows a sharp difference between the experience of the two groups. For deals without an institutional tranche, split control rights is very uncommon and has not become more common in recent years. For deals with an institutional tranche, however, split control rights has become much more common over time.

In order to better assess the difference in trends between deals with an institutional tranche and other deals, we run yearly versions of the regressions in Table V. The series of regressions generates an annual estimate for the Institutional Tranche coefficient, which we present in Figure 5. Panel A plots the estimates, along with a 95% confidence interval, for specification (2), which uses the full sample and includes only fixed effects for industry and calendar quarter. Panel B uses specification (5), which includes controls for borrower characteristics and so is based on the smaller
Table V: Institutional Tranche and Split Control Rights

<table>
<thead>
<tr>
<th></th>
<th>Dependent Variable: Split Control Rights</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>Institutional Tranche</td>
<td>0.161***</td>
</tr>
<tr>
<td></td>
<td>(4.190)</td>
</tr>
<tr>
<td>Ln(Assets)</td>
<td>0.016</td>
</tr>
<tr>
<td></td>
<td>(1.440)</td>
</tr>
<tr>
<td>Debt / Assets</td>
<td>0.035</td>
</tr>
<tr>
<td></td>
<td>(0.670)</td>
</tr>
<tr>
<td>Borrower Rated BB</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrower Rated CCC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrower Unrated</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Year-Quarter FE</td>
<td>No</td>
</tr>
<tr>
<td>Industry FE</td>
<td>No</td>
</tr>
<tr>
<td>N</td>
<td>1,094</td>
</tr>
<tr>
<td>r2</td>
<td>0.048</td>
</tr>
</tbody>
</table>

*Note*: This table displays coefficient estimates from linear probability regressions where the independent variable is an indicator that a deal has split control rights. Year-Quarter FE refers to fixed effects for the calendar quarter the deal was originated, and Industry FE refers to Fama-French 30 industry classification based on SIC code. Standard errors are clustered by calendar quarter. Absolute t statistics in parentheses.

* p < 0.10, ** p < 0.05, *** p < 0.01
Figure 4: Split Control Rights and Institutional Investors

Note: The figure shows the annual proportion of leveraged loan deals that contain split control rights, meaning that the revolving lenders have the unilateral right to waive or amend a covenant. The red, solid line is for deals with an institutional tranche, and the blue, dashed line is for deals without an institutional tranche.
The results show that the relationship between institutional lending and split control rights is being driven by deals from the latter few years of the sample. Indeed, during the years prior to the financial crisis, there is very limited evidence that institutional tranches were more likely to contain split control rights.

As a final way of confirming that changes in borrower characteristics are not responsible for the rise in the use of split control rights, Figure 6 plots the time series of average borrower size (\(\text{Ln}(\text{Assets})\)) and the average book value of leverage (\(\text{Debt} / \text{Assets}\)) for deals with and without an institutional tranche. The figure confirms that larger and riskier borrowers are more likely to use an institutional tranche. However, the difference between the types shows no discernable pattern over time. Controlling for these factors in regressions has very little impact on the time series relationship between the use of split control rights and the presence of an institutional tranche.\(^{36}\)

V. Why Have Split Control Rights become More Common?

Our interpretation of the relationship between institutional loans and split control rights is that deals with institutional tranches create bargaining frictions that can be mitigated through split control rights. This explanation cannot explain, by itself, why the usage of split control rights has risen over time. As shown in Figure 3, the frequency of institutional loans is not larger in recent years than in the years prior to the financial crisis, and the analysis in Section IV shows that the frequency of split control rights has risen conditional on the deal having an institutional tranche.

We argue that the experience during the financial crisis and subsequent recession offered market participants the opportunity to learn about the costs and benefits of renegotiation and to redesign contracts based on the updated assessment. As a result, the contracts we observe have changed despite any other changes in supply or demand fundamentals.

Practitioner anecdotes suggest that bargaining frictions were quite important in the years following the crisis, as lenders were often reluctant to renegotiate as easily as prior to the crisis. In a discussion of the 2014 Model Credit Agreement Provisions (MCAP), a model syndicated loan contract produced by the Loan Syndications and Trading Association, one observer said, “During

\(^{36}\)Much of the difference between panels A and B in Figure 6 is due to the different samples.
Figure 5: Time Series Relationship between Institutional Tranche and Split Control Rights

**Note:** The figures show the estimate of the Institutional Tranche coefficient from annual versions of the regressions in Table V. Panel A uses specification (2), an Panel B uses specification (5). The vertical lines represent 95% confidence intervals for the estimated coefficient.
Figure 6: Borrower Characteristics and Institutional Investors

Note: The figure shows annual sample means for borrower characteristics. Borrower Size is defined as the natural log of total assets, and Borrower Leverage is defined as the ratio of the book value of debt to total assets. The balance sheet data is from the fiscal quarter immediately following the origination of the loan. In each graph, the red, solid line is for deals with an institutional tranche, and the blue, dashed line is for deals without an institutional tranche.
the financial crisis, borrowers not surprisingly encountered difficulty achieving unanimous consent from lenders that would modify provisions.”37

One concern with this interpretation is that deals with an institutional tranche might be different for reasons other than bargaining frictions. Two alternatives seem plausible. First, as highlighted in Table IV, deals with an institutional tranche are for borrowers that are observably larger and riskier. Although we can control for these factors in the regressions, the controls may be imperfect or there may be other unobservable factors that are unique to institutional tranches. To the extent that these factors also influence the likelihood that a loan has split control rights, we may be incorrectly attributing the effect to the role of institutional lenders. Second, it could be that an institutional tranche makes split control rights optimal for reasons unrelated to bargaining frictions. For instance, it could be that institutional lenders became willing in recent years to give up contractual control rights in exchange for a higher loan spread.

We try to assess the accuracy of our hypothesis in two ways. First, we examine two additional contract provisions that facilitate renegotiation. To the extent that the crisis prompted changes in contracts due to learning, we expect that these additional contract features should show a strong correlation with split control rights. Second, we examine the standard features of loan contracts—interest rate spread, maturity, and amount—to assess the viability of alternative explanations for the changes we see among deals with an institutional tranche.

A. Additional Changes in Contracts

We collect data from our loan agreements on two additional contract features that facilitate renegotiation. The provisions are unrelated to covenant violations, which helps provide an independent check on our conclusions drawn from split control rights. Since these provisions concern changes to the maturity and pricing of the loan, the considerations of lenders and borrowers are somewhat distinct than those related to covenant violations. However, the provisions share a similarity with split control rights in that each permits a subset of lenders to renegotiate unilaterally.

Amend and Extend. An amend and extend provision allows a borrower to extend the maturity of a portion of a loan without having to obtain the consent of all lenders at the time of the extension. A standard loan agreement requires unanimous consent from all lenders to change

37Quote taken from Goodstein (2014).
the maturity date of the loan. However, with an amend and extend provision, a subset of lenders is permitted to extend the maturity of their own portion of the loan without the requiring the consent of non-extending lenders. Without this provision, even a small minority of lenders can stop a firm from extending the maturity of any portion of the loan. This provision would allow just a portion of institutional lenders to extend the maturity of the institutional tranche. The Appendix contains an example of an amend and extend provision.

**Refinancing Facility.** A refinancing provision permits the borrower to add a new loan tranche using an existing credit agreement, meaning that the terms will be nearly identical, provided that the proceeds be used to refinance a portion of the existing loan. Most syndicated loans allow the borrower to prepay a loan with little or no penalty, but a credit agreement without a refinancing facility requires that any prepayments must be made on a pro-rata basis to all existing lenders. A refinancing provision permits a borrower to refinance only a portion of the existing loans, usually to obtain a lower interest rate. The Appendix contains an example of a credit agreement that permits a refinancing facility.

Since a refinancing facility can also extend the maturity of the loan, a refinancing facility is similar to an amend and extend provision. Indeed, we find that the provisions are frequently used in the same agreement to provide the borrower the flexibility to change the terms of just a portion of existing loans. For this reason, we create a single indicator that a deal has either an amend and extend provision or permits a refinancing facility.

Figure 7 plots the annual frequency of deals that have an amend and extend provision or a refinancing facility option. These provisions were extremely rare prior to the financial crisis in 2008. Following the crisis, however, the frequency of these provisions has risen steadily over time, particularly for deals with an institutional investor. Compared with the trends for split control rights, shown in Figure 4, these provisions start rising earlier and are ultimately used more frequently. However, the similarity is striking. In each case, the frequency of the provisions rises in the years following the crisis and continues rising through 2013 and 2014. The rise is considerably more dramatic for deals with an institutional investor.

We view the similarity in the patterns as evidence that the same underlying force is responsible for both trends. Given that the provisions all serve to facilitate renegotiation, we conclude that deals with institutional investors create renegotiation costs, and that recognition of these costs
Figure 7: Institutional Investors and Alternative Contract Provisions

Note: The figure shows the annual proportion of leveraged loan deals that contain an amend and extend or refinancing provision. The red, solid line is for deals with an institutional tranche, and the blue, dashed line is for deals without an institutional tranche.
increased following the crisis.

The correlation between the contract provisions provides a final piece of evidence that considerations related to renegotiation explain are the underlying force driving the changes in contracts. During the three year period at the end of our sample (2012-2014), the frequency of an amend and extend or refinancing provision is 47%. However, for deals that contain split control rights, the frequency increases to 77%. Even within deals with an institutional tranche, the frequency of an amend and extend or refinancing facility increases from 69% to 80% when the deal also has split control rights. These provisions are strongly positively correlated, which we take as evidence that they are addressing the same underlying frictions.

B. Other Changes over Time

We next plot the time series of several additional deal characteristics in Figure 8, where we again compare deals with and without an institutional tranche. The goal of this exercise to look for clues from changes in other features of the loan to corroborate or refute alternative explanations for the changes in institutional loan tranches.

We examine the difference in interest rate spreads between the term loan tranche and the revolving tranche in the same deal. Even within the same deal, the term loan typically pays a higher spread, often about 50 basis points. In recent years, Figure 8 shows that the spread differential for deals with an institutional tranche has widened compared with deals that do not have an institutional tranche. If the rise in split control rights was due to an increase in the supply of credit from institutional lenders, we would expect that the spread differential would compress. The widening of the difference suggests that a large increase in supply is not responsible for the growth in split control rights.

Next we examine the difference in the maturity of term loans as compared with the revolver in the same deal. Term loans typically have a longer maturity, particularly institutional tranches, where the term loans are about 1.5 years longer. The difference in maturity has widened a bit over time, which could reflect an increased willingness of institutional lenders to make riskier loans. However, lengthening the maturity also reduces the frequency of renegotiation, which makes the

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38 We do not report similar numbers for deals without an institutional tranche, since split control rights are so uncommon for these deals.
trend also consistent with minimizing renegotiation costs.

Finally, we examine the share of the deal comprised by the term loan tranches. For institutional deals, term loans typically comprise about 70% of the total deal amount, which is about 20 percentage points more than for deals without an institutional deal. The difference in term loans shares has not grown over time, again suggesting that there has not been a large increase in the supply of institutional term loans.

In total, there is no evidence of a positive shock to the supply of credit from institutional investors that could account for the growth in split control rights.

VI. Conclusions

In this paper, we construct a unique dataset of covenant provisions in a large sample of leveraged loan deals for the years 2005 through 2014. We take into account all of the borrowing firm’s loans when measuring the presence of covenants, including both its revolvers and its term loans. While it is common for firms to include multiple facilities in a single contract, firms often have separate revolving loan contracts and term loan contracts or treat the facilities differently within the same contract. Our evidence suggests that contractual differences across the tranches are quite common and have important implications for the allocation of bargaining power and control rights.

For this sample, we find that syndicated loan contract terms have evolved to concentrate control rights with revolving lenders. We postulate that these contractual changes are designed to alleviate coordination problems that became painfully apparent during the financial crisis. The most notable change is that a number of contractual terms can be adjusted with the approval of only a minority of lenders, which prohibits the ability of a small set of lenders from preventing a renegotiation. The syndication of term loans to nonbank intermediaries was an innovation that expanded the supply of credit; however, the expansion of loan syndicates beyond the banking sector likely raised the costs of renegotiating loan contracts, a key advantage of loans vis-a-vis other types of debt. In turn, loan contracts adjusted to facilitate renegotiation by treating traditional bank lenders differently from the nonbank intermediaries. The continued presence of nonbank investors suggests that altering the contracts is preferred to returning to bank-only lending syndicates.

The significant change in contract terms suggests that the contracts observed in practice evolve
Figure 8: Other Loan Terms and Institutional Investors

Note: The figure shows annual sample means for differences in loan terms across term loans and revolvers in the same deal. The “Difference in Spreads” is the term loan spread less the revolver spread, and the “TL Share of Deal” is the ratio of the term loan tranche to the total amount of the deal. In each graph, the red, solid line is for deals with an institutional tranche, and the blue, dashed line is for deals without an institutional tranche.
as market participant learn and adjust to experience. This is important for research that assumes, either implicitly or explicitly, that contracts are always set optimally and search for changes in fundamental sources of supply and demand to explain changes in observed contracts. We document substantial changes in covenants despite very few changes in other loan terms, such as prices, quantity, or maturity. We conclude that the changes are not due to evolving fundamental factors but rather learning by market participants that the earlier contracts could be improved.

Our results also have important implications for understanding the growth in covenant-lite loans. We show that the prevalence of borrowers with exclusively covenant-lite loans is significantly lower than either the financial press or some of the recent literature on syndicated loans would suggest. In our sample, nearly zero firms are free of financial maintenance covenants in all states of the world. We find that when all of a firm’s full borrowings are taken into account, that is, when we include a firm’s revolving loans along with its term loans, there is essentially no covenant-lite lending. We conclude that the covenant-lite loans serve an important role of concentrating control rights in a smaller set of lenders—the revolving lenders, who are usually banks— in order to reduce bargaining costs. Contracts appear to have evolved to give agents with an advantage in monitoring borrower performance more negotiation power and reduce the costs of renegotiation for other syndicate members.
References


Becker, Bo, and Victoria Ivashina, 2016, Covenant-light contracts and creditor coordination, *Available at SSRN 2756926*.


Appendix

A. Covenant Examples

A. Financial Covenants

• Minimum EBITDA Covenant. As an example of such a covenant, consider the following covenant from the February 3, 2009 credit agreement for MTM Technologies.

Each Borrower covenants that as of the last day of each fiscal quarter, for the fiscal quarter then ended, Borrowers’ EBITDA shall not be less than the amounts set forth in the table below:

<table>
<thead>
<tr>
<th>The Fiscal Quarter Ending On</th>
<th>Minimum EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 31, 2008</td>
<td>$540,000</td>
</tr>
<tr>
<td>March 31, 2009</td>
<td>$720,000</td>
</tr>
<tr>
<td>June 30, 2009</td>
<td>1,800,000</td>
</tr>
</tbody>
</table>

• Maximum Leverage Ratio, Minimum Interest Coverage Ratio, Minimum Fixed Charge Ratio. As an example of a credit agreement that includes a financial covenant constraining leverage, interest coverage, and fixed charge coverage, consider the May 12, 2005 credit agreement for Sinclair Broadcast Group.

SECTION 7.11. Certain Financial Covenants. (a) Interest Coverage Ratio. The Borrower will not permit the Interest Coverage Ratio on any date to be less than the ratio set forth below opposite the period during which such date falls:

<table>
<thead>
<tr>
<th>Period:</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the Second Restatement Effective Date through December 31, 2005</td>
<td>1.60 to 1</td>
</tr>
<tr>
<td>From January 1, 2006 through December 31, 2007</td>
<td>1.75 to 1</td>
</tr>
<tr>
<td>From January 1, 2008 and at all times thereafter</td>
<td>1.90 to 1</td>
</tr>
</tbody>
</table>

(b) Fixed Charges Ratio. The Borrower will not permit the Fixed Charges Ratio on any date to be less than or the ratio set forth below during which such date falls:
(c) Senior Indebtedness Ratio. The Borrower will not permit the Senior Indebtedness Ratio on any date to be greater than 3.50 to 1.

(d) Total Indebtedness Ratio. The Borrower will not permit the Total Indebtedness Ratio on any date to be greater than the ratio set forth below opposite the period during which such date falls:

<table>
<thead>
<tr>
<th>Period</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the Second Restatement Effective Date through December 31, 2005</td>
<td>1.00 to 1</td>
</tr>
<tr>
<td>From January 1, 2006 and at all times thereafter</td>
<td>1.10 to 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the Second Restatement Effective Date through December 31, 2005</td>
<td>7.25 to 1</td>
</tr>
<tr>
<td>From January 1, 2006 through December 31, 2006</td>
<td>7.00 to 1</td>
</tr>
<tr>
<td>From January 1, 2007 through December 31, 2007</td>
<td>6.75 to 1</td>
</tr>
<tr>
<td>From January 1, 2008 and at all times thereafter</td>
<td>6.25 to 1</td>
</tr>
</tbody>
</table>

B. Borrowing Base

The November 30, 2017 credit agreement for Smith & Wesson Holding Corporation contains a borrowing base. The amount of borrowing under the line of credit is limited to the borrowing base, which is defined as “the sum of (a) 80% of Eligible Accounts at such time, plus (b) the lesser of (i) Twelve Million Dollars ($12,000,000), or (ii) 60% of Eligible Inventory, valued at the lower of cost or market value, determined on a first-in-first-out basis, at such time.” The agreement also requires the borrower to disclose every month a borrowing base certificate that outlines the accounts receivable and inventory that are eligible to be included in the borrowing base.

C. Springing Covenant

In the following excerpt from Scientific Games’ October 18, 2013 credit agreement, the senior leverage ratio covenant binds only when the usage of revolving commitment exceeds 15%.

Financial Covenant. As of the end of each fiscal quarter of Holdings (commencing with the first full fiscal quarter after the Closing Date) and so long as the aggregate
amount of L/C Obligations in respect of Specified Letters of Credit, Revolving Loans and Swingline Loans outstanding as of the end of such fiscal quarter (with respect to L/C Obligations in respect of Specified Letters of Credit, to the extent not cash collateralized by the Borrower to at least 103% of their maximum stated amount) equals or exceeds 15.0% of the aggregate amount of all Revolving Commitments, permit the Consolidated Net First Lien Leverage Ratio as of the end of such fiscal quarter of Holdings and its Restricted Subsidiaries to be greater than 5.25:1.00 or, beginning with the fourth fiscal quarter of Holdings of 2014, 5.00:1.00.

D. Split Control Rights

As an example of contract that contains split control rights accomplished within a single contract, consider the event of default section from the July 1, 2014 agreement for ServiceMaster Co:

(c) Any Loan Party shall default in the observance or performance of any agreement contained in Section 7 of this Agreement (subject to, in the case of the financial covenant contained in subsection 7.10, the cure rights in subsection 8.2); provided that in the case of any Event of Default under subsection 7.10 (a “Financial Covenant Event of Default”), such default shall not constitute a default with respect to any Term Loans unless and until the Revolving Loans have been declared due and payable and the Revolving Commitments have been terminated by the Required Revolving Lenders pursuant to subsection 8.1; provided, however that if (i) Required Revolving Lenders irrevocably rescind such acceleration and termination in a writing delivered to the Administrative Agent within 20 Business Days after such acceleration and termination and (ii) Required Lenders (including the Term Loan Lenders) have not accelerated the Loans, the Financial Covenant Event of Default shall automatically cease to constitute an Event of Default with respect to the Term Loans from and after such date;

E. Amend and Extend

For an example of an amend and extend provision, J. Crew Group’s March 5, 2014 credit agreement agreement contained the following provision:
SECTION 2.14. Extensions of Loans. (a) Notwithstanding anything to the contrary in this Agreement, pursuant to one or more offers (each, an “Extension Offer”) made from time to time by the Borrower to all Lenders of Loans with a like Maturity Date on a pro rata basis (based on the aggregate outstanding principal amount of the respective Loans with the same Maturity Date) and on the same terms to each such Lender, the Borrower may from time to time with the consent of any Lender that shall have accepted such offer extend the maturity date of any Loans and otherwise modify the terms of such Loans of such Lender pursuant to the terms of the relevant Extension Offer (including, without limitation, by increasing the interest rate or fees payable in respect of such Loans and/or modifying the amortization schedule in respect of such Loans) (each, an “Extension”, and each group of Loans as so extended, as well as the original Loans not so extended, being a “tranche”; any Extended Loans shall constitute a separate tranche of Loans from the tranche of Loans from which they were converted), so long as the following terms are satisfied: (i) no Default shall exist at the time the notice in respect of an Extension Offer is delivered to the Lenders, ..., (ii) except as to interest rates, fees, amortization, final maturity date, premium, required prepayment dates and participation in prepayments (which shall, subject to immediately succeeding clauses (iii), (iv) and (v), be determined by the Borrower and set forth in the relevant Extension Offer), the Loans of any Lender (an “Extending Lender”) extended pursuant to any Extension (“Extended Loans”) shall have the same terms as the tranche of Loans subject to such Extension Offer ..., (iii) the final maturity date of any Extended Loans shall be no earlier than the then Latest Maturity Date at the time of extension ..., (iv) the Weighted Average Life to Maturity of any Extended Loans shall be no shorter than the remaining Weighted Average Life to Maturity of the Loans extended thereby, (v) any Extended Loans may participate on a pro rata basis or on a less than pro rata basis (but not on a greater than pro rata basis ... in any voluntary or mandatory prepayments hereunder, ..., (vi) if the aggregate principal amount of Loans (calculated on the face amount thereof) in respect of which Lenders shall have accepted the relevant Extension Offer shall exceed the maximum aggregate principal amount of Loans offered to be extended by the Borrower pursuant to such Extension Offer, then the Loans of such Lenders shall be extended.
ratably up to such maximum amount based on the respective principal amounts ..., (vii)
all documentation in respect of such Extension shall be consistent with the foregoing,
(viii) any applicable Minimum Extension Condition shall be satisfied unless waived by
the Borrower and (ix) the interest rate margin applicable to any Extended Loans will be
determined by the Borrower and the lenders providing such Extended Loans.

F. Refinancing Facility

As an example, the February 19, 2014 credit agreement for Diamond Foods, Inc.,
including the following refinancing provision:

2.14 Specified Refinancing Debt. (a) The Borrower may, from time to time, and
subject to the consent of the Administrative Agent, add one or more new term loan
facilities to this Agreement (“Specified Refinancing Debt”) pursuant to procedures rea-
sonably specified by the Administrative Agent and reasonably acceptable to the Borrower,
to refinance all or any portion of the Loans or New Term Loans of any tranche then
outstanding under this Agreement pursuant to a Refinancing Amendment; provided that
such Specified Refinancing Debt: (i) shall rank pari passu in right of payment with the
other Loans and New Term Loans hereunder; (ii) will not be Guaranteed by any Person
that is not a Guarantor; (iii) will be unsecured or secured by the Collateral on an equal
and ratable basis with the Obligations (or on a second-lien basis pursuant to intercred-
itor arrangements reasonably satisfactory to the Administrative Agent); (iv) will have
such pricing and optional prepayment terms as may be agreed by the Borrower and the
applicable Lenders thereof; (v) will have a maturity date that is not prior to the date
that is 91 days after the scheduled maturity date of, and will have a Weighted Average
Life to Maturity that is not shorter than 91 days longer than the Weighted Average Life
to Maturity of, the Loans or New Term Loans being refinanced (provided that, notwith-
standing the foregoing, if such Specified Refinancing Debt is secured by the Collateral on
an equal and ratable basis with the Obligations, it will have a maturity date that is not
prior to the maturity date of, and will have a Weighted Average Life to Maturity that
is not shorter than the Weighted Average Life to Maturity of, the Loans or New Term
Loans being refinanced); (vi) subject to clauses (iv) and (v) above, will have terms and
conditions that are substantially identical to, or less favorable to the Lenders providing such Specified Refinancing Debt than, the terms and conditions of the Loans or New Term Loans being refinanced; and (vii) the Net Cash Proceeds of such Specified Refinancing Debt shall be applied, substantially concurrently with the incurrence thereof, to the pro rata prepayment of outstanding Loans or New Term Loans being so refinanced pursuant to Section 2.03; provided, however, that such Specified Refinancing Debt shall not have a principal amount (or accreted value) greater than the Loans or New Term Loans being refinanced (excluding any such principal issued or incurred to provide funds for the payment of accrued interest, fees, discounts, premiums or expenses payable in connection with the relevant prepayment).