Weak Credit Covenants

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Abstract

Using novel data on 1,240 credit agreements for large corporate loans, we show that while inclusion of negative covenants that restrict new debt issuance, payments, asset sales, affiliate transactions and investments is widespread, clauses that weaken these restrictions are almost as common. We measure the deductibles for the core covenants in terms of their potential impact on overall leverage and show that they are large, and concentrated in already highly levered transactions. We analyze the cross-sectional variation in contractual weaknesses introduced through deductibles and carveouts to negative covenants and show that such contractual provisions are characteristic of leveraged buyouts, and more prevalent when banks have a low skin in the game or institutional capital is abundant in the loan market. An event study on a recent court decision enforcing weakening clauses suggests that such contractual design corresponds to a value transfer from creditors to shareholders.

Keywords: Loan contracts; Debt Covenants; Creditor Governance; Leveraged Buyouts

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1 Introduction

Corporate indentures, and especially loan agreements are long and complex documents. Their scope goes well beyond defining the basic credit terms. As pointed out by Smith and Warner (1979), much of the contracting complexity results from the covenant structure which is designed to reduce the conflict of interests between creditors and equity holders. While, the economic principals behind the contracting framework have been well understood for nearly forty years, the empirical advances in measuring contractual strength has been limited due to the qualitative and complicated nature of the contractual language used in the debt space.

Recent theoretical work also explores how the control rights to enforce claims implemented during an asset price boom are weaker than the ones of more normal times (Diamond et al., 2017), which can have long-drawn adverse effect in a downturn.

In this paper, we rely on a novel data set that parses 1,240 credit agreements (senior secured debt) for large corporate transactions. We analyze the full scope of negative covenants included in a typical credit agreement and provide their first comprehensive mapping, by covering the six main categories of restrictions: (i) restrictions on liens (or restrictions on use of collateral), (ii) restrictions on indebtedness, (iii) restrictions on affiliate transaction, (iv) restrictions on capital expenditure, (v) restrictions on asset sales, and (vi) restrictions on payments to investors. We show that restrictions on this set of actions is the norm. Importantly, the mere existence of these restrictions does not necessarily grant full protection to the lender in that regard, as each of these restrictions can be significantly weakened contractually. In particular, we show that two mechanisms: deductibles (or "baskets" in the industry jargon) and carve-outs are used to weaken core negative covenants.

Overall, we are able to document a much more nuanced view of the strength of contractual terms regarding the protection of lenders against borrowers' actions. While restrictions to prevent actions from the issuer that increase risk for the lender are widespread, clauses that weaken these restrictions are almost as frequent. Moreover, they are large, and are concentrated on the most direct actions: re-pledging the collateral and issuing additional debt. As a result, we see that, at the origination, about half of the companies have Total debt/EBITDA below 5x, however, *through use of deductibles and exemptions*, over 70% of contracts allow the borrower to issue additional senior secured debt in excess of 5x EBITDA. Similarly, over three quarters

of firms with 5x EBITDA leverage at the loan origination are allowed to issue debt in excess of 6x EBITDA. About the same fraction of firms with objectively high 6x EBITDA leverage can actually issue debt in excess of 7x EBITDA. This flexibility is unconditional on the performance of the company. A senior secured creditor needs to be aware that their claim on an already highly levered firm might end up being substantially diluted in distress. The consequences for subordinated debt are even more severe.

Measuring financial contract strength and understanding the underlying economic mechanism is also of key interest to the regulators. Although recently under fire, the Interagency Guidance on Leveraged Lending issued on March 21, 2013 is one of the most important macroprudential tools that was developed following the 2008 financial system collapse.[1] The goal of the Guidance is to assist financial institutions in providing leveraged lending to creditworthy borrowers in a safe-and sound manner. Its practical application is still far from clear and likely to change over time, but one of the red flags raised in 2015 under the Guidance was the focus on loans with Total Debt/EBITDA in excess of 6:1 (see Zinder et al. (2016)). While the intention of the regulation is to include the allowed deductibles (the Guidance offers no methodological guidance on how to do it), our study shows concrete magnitudes, and suggests the time varying nature of a potential mis-measurement implied in the naive approach.

The second insight that emerges from our study is that there is substantial cross-sectional variation in the use of clauses that weaken covenants, with buyout transactions standing out as the most intensive users of these provisions. Weakening clauses in loan contracts appear also more common when banks keep a low skin in the game in the loan, and when institutional investor capital is abundant in the loan market. These facts are consistent with private equity sponsors having a higher bargaining power towards lenders, especially in large transactions and at times of high capital supply, as well as a potentially higher level of expertise in writing contracts than institutional investors.

The third insight from our study is that while the higher risk for creditors resulting from these weakening clauses is at least partially priced in at issuance, the market as a whole updates its view on the value effects of such weakening clauses following a court decision enforcing them. The value transfer towards shareholders suggests that the incremental risk for creditors resulting from these clauses is not fully priced in at issuance.

[1] https://www.federalreserve.gov/supervisionreg/srletters/sr1303a1.pdf.

Our work relates to a set of studies that use elements of debt contracting to assess contractual strength/weakness. However, a large fraction of studies exclusively focuses on financial covenants, evaluating the slack implied in such restrictions based on borrower accounting information. Most closely, our paper relates to Demiroglu and James (2010), Bradley and Roberts (2015), and Billett et al. (2007). These studies go beyond financial covenants and instead try to integrate multiple contractual features in a holistic measure of contractual strength by aggregating dummies indicating whether some core contractual categories are present in a given contract. This approach has three limitations, which ties to the source of data used in these studies. First, studies looking at credit agreements have a narrow coverage of contractual provisions. Second, the variables on contractual provisions exhibit a majority of missing values, creating the risk of significant composition effects.[2] Third, such methodology misses the variation in contractual weakness conditional on having a given negative covenant. We are able to substantially improve on all of these dimensions.[3] Consistent with our assessment, we show that while directionally correlated, measures used in the previous literature, collectively or individually, capture very little as compared to our variables of contractual weakness.

This paper is organized as follows: Section II provides institutional details on credit agreements. Section III introduces the dataset and assesses its representativeness. Section IV presents stylized facts from the mapping of restrictions and their corresponding weakening clauses. Section V explores cross-sectional determinants of these contractual terms. Section VI focuses on leveraged buyouts transactions. Section VII concludes.

2 Elements of a Covenant Structure

Although much of the bank-originated debt is senior secured (the safest claim on the firm), the intensity of contracting depends on the nature of the collateral. Senior secured debt can thus be divided in two segments: assets-backed loans ("ABL") and cash-flow based loans. A car loan provides a simple illustration: while some basic screening of the borrower's income is typical, there are no negative covenants written in such contracts. The lending process relies primarily on the value of the collateral. If the borrower defaults, the collateral –the car– is

[2] For instance, in Dealscan the variable on asset sales sweep exhibits 96.7% of missing values for the transactions over $100 million since 2011

[3] We provide a detailed discussion of the related literature in Section V.

ceased and liquidated in a routine procedure. ABL is the corporate equivalent of this type of loan.[4] However, not all firms possess large enough "commodity" collateral. Yet almost all firms have other types of assets, and it is common to use the totality of these other assets as collateral as they generate cash flows, despite the fact that tracking, valuing, and selling such assets is a costly and uncertain process. Indeed, as indicated by Lian and Ma (2018), roughly 80% of syndicated loans are cash-flow based. The majority of large corporate loans therefore derive their value to the creditors primarily through interest payments and debt amortization (and not through the liquidation value of the collateral). Given the emphasis on the ongoing operations in a cash-flow based credit, negative covenants become a central governance mechanism because they restrict the actions of the borrower and facilitate state-contingent control rights allocation to senior secured creditors.

The covenants structure of a loan contract, therefore, is designed to manage potential conflict of interest between debt holders and equity holders. Besides protecting the integrity of the collateral backing the loans, cash-flow based loans should aim to address core economic channels through which managers of a firm could transfer value from debt holders to equity holders. The value of firm's equity (E) is a call option on its assets (V), with the exercise prices equal to the face value of its debt (F) (Black and Scholes (1973)). The value of debt, thus, is its value as risk-free minus a default put. Following notation in Myers (2003):

$$E = V - D = V - D(riskfree) + P(V, \sigma, t, F), \tag{1}$$

where σ is the standard deviation of assets and t is debt maturity. Equation (1) helps to formalize the four channels of potential value transfer from creditors to shareholder. In particular:

- $\frac{dP}{d\sigma} > 0$: equity holders could benefit from higher volatility of cash flows at the expense of debt holders (Jensen and Meckling, 1976), so the credit agreement should seek to prevent risk shifting or asset substitution;

- $\frac{dP}{dV} < 0$: if equity is under water, firm's management might pass on positive NPV projects, i.e., underinvest, if the benefits accrue to the debt (Myers, 1977), thus credit agreement

[4]Examples of assets used for ABL include receivables (and especially credit-card receivables common for restaurants and retailers), real estate, planes, and heavy-equipment.

should seek to influence the investment policy;

- $\frac{dP}{dF} > 0$: equity holders benefit from diluting the claim of the existing debtholders, so the credit agreement should seem to prevent issuance of additional debt;

- $\frac{dP}{dt} > 0$: credit agreement should seek to set tight covenant provisions that would allow them gain control rights and make sure that they are receiving accurate information.

While there is no exclusive mapping of the typical covenants to economic principals outlined above, protection of collateral and desire to manage the four sources of misalignment of incentives between equity and debt underpin most of the provisions included in a cash-flow based credit agreement.

The negative covenants typically included in credit agreements can be divided into six main categories: (i) restrictions on liens; (ii) restrictions on indebtedness, (iii) restrictions on asset sales, (iv) restrictions on payments, (v) restrictions on capital expenditures, and (vi) restrictions on affiliate transactions. Restrictions on liens prevent the borrower from re-pledging its assets in other secured transactions. Restrictions on indebtedness limit borrower's ability to incur additional debt. Restrictions on asset sales limit borrower ability to sell its assets, which would reduce the collateral of the loans, and may also change the risk profile of the business. Restrictions on payments limit certain types of cash outflows, typically dividend payments, to focus the cash flows towards debt repayment. Restrictions on capital expenditure regulate the use of funds, limiting the borrower's ability to invest into a potentially risky project. Lastly, restrictions on affiliate transactions limit the borrowing entity ability to enter into transactions with other entities of the same economic group that are not necessarily covered by the credit agreement.

A unique feature of our study is that we can assess not only whether the above provisions are included in the loan contract, but actually measure the weakness of these provisions. The two main channels for weakening a negative covenant are the introduction of deductibles (or "baskets") and "carve-outs" (these are not contractual terms, but terms commonly used by practitioners like "cov-lite".) A deductible on a covenant creates a threshold until which the restriction does not apply. For instance, the 2007 Credit Agreement backing the 2007 buyout of Outback Steakhouse includes the following terms: [5]

[5]Credit Agreement Dated as of June 14, 2007, for OSI Restaurant Partners, LLC.

- Indebtedness: General deductible of $100 million;

- Liens: General deductible of $40 million;

- Asset Dispositions: Deductible of $35 million;

- Investments: Deductible of $100 million;

- Restricted Payments: Deductible of $50 million.[6]

A carve-out lifts the restriction without a limit for a specific subset of actions. For instance, a contract can include a carve-out on the restriction on additional indebtedness for subordinated debt, which means that the restriction does not apply for this type of debt. In the case of Outback Credit Agreement, principal accreted under paid-in-kind debt is excluded (i.e., carved-out) for purposes of calculating Total Leverage Ratio.

As mentioned earlier, the focus of our study is on large corporate loans, which is by far the most detailed and multi-dimensional contractual debt space. In part, this is due to the relatively concentrated creditor base, and the ability to share confidential information (as loans are excluded from the 1933 Securities Act and are covered by a confidentiality agreement). Bonds have a dispersed and heterogeneous creditor base, which makes renegotiation in case of contractual violations very difficult (Bolton and Scharfstein, 1996). As a result, the allocation of control rights to bondholders through a tight covenant structure might not be desirable (e.g., Becker and Ivashina; and Green (2018)). This difference between bond and loan contracts is also consistent with the prediction in Park (2000) that monitoring should be delegated to senior secured debt, i.e., banks.

On the other hand, creditors hold alternative non-contractual governance mechanisms for small borrowers, because information asymmetry is large in this space and these firms are dependent on bank financing. The intensity of contractual differences for small cap vs. large cap loans are easily notable even with a simple page count. Albeit, credit agreements for small and medium firms are not readily available, we were able to obtain a representative credit agreement from a regional bank for a term loan granted in April 2016 to firm with roughly $2.2m in EBITDA. The length of this agreement is 53 pages. Similarly, Gompers and Broussard

[6] A general deductible on a restriction includes any type of actions falling under this covenant, while some deductibles only cover a set of actions defined in the Credit Agreement.

(2009) provide an actual credit proposal for a small firm (EBITDA equivalent to $27 million in 2016): the proposal -which is intended to specify the key terms- is five pages long. Neither example, contains a definition of EBITDA. By comparison, the main text of the 2017 Credit Agreement for Outback Steakhouse (EBITDA equivalent to $450 million in 2016) is 170 pages long. The definition of EBITDA alone takes 1,733 words. This anecdotal evidence is consistent with the importance of relationship banking for small firms. Due to heightened information asymmetry of small borrowers, lender substitution is costly (e.g., Dell'Ariccia and Marquez (2004)), putting much of the bargaining power on the lender side and reducing the need for contractual governance. For an overview of the literature on this subject, see Berger and Udell (1995) or, more recently, Saunders and Steffen (2011).

3 Data and Sample Representativeness

This study uses a novel dataset developed by a private FinTech firm specialized in contract covenant visualization, Street Diligence. This data is targeted towards credit investors, private equity firms and investment banks to improve the speed and accuracy of their benchmarking and due diligence, and covers a large sample of loans. Street Diligence builds its database from SEC filings and contributions from its clients. For each credit agreement, Street Diligence breaks down and aggregates the key covenant terms in an objective, verifiable and highly granular manner. While datasets used in the literature, such as DealScan, focus on financial covenants or a limited set of easily identified clauses, this data provides the first comprehensive coverage of the loan contractual terms, as the whole credit agreement is parsed out through a proprietary methodology that mixes algorithmic and manual actions. We should acknowledge that being a start-up company, the Street Diligence contract sourcing and processing capacity are quickly evolving. The description of the data presented here is specific to the data shared with us as of 2016 and might not be representative of their current coverage of the loan space.

Each observation in our sample corresponds to a loan package described by a given Credit Agreement. We conduct our analysis at this level as only the maturity and coupon varies at the facility level within a given loan package, while contract covenants are defined at the package level by the credit agreement. We combine this dataset on contractual terms with issuance characteristics from DealScan, and issuer financial data from Compustat. The resulting dataset

covers 1,240 packages and 1,857 facilities, spanning the period from 2011 to 2016. Table 1 shows summary statistics for our data sample and compares them to two benchmark groups: all loan packages over $100 million in DealScan issued after 2011, and all leveraged loan packages issued after 2011, as defined by DealScan market segment information.

Between 74% and 87% of loans in our sample fall within the "Leveraged" segment based on DealScan classification, depending on the definition used. According to Standard and Poor's (2014), leveraged borrowers are "issuers whose credit ratings are speculative grade and who are paying spreads (premium above LIBOR or another base rate) sufficient to attract the interest of nonbank term loan investors, typically LIBOR + 200bps or higher, though this threshold moves up and down depending on market conditions." The threshold also varies across different data providers. The coverage of the data over time is not uniform; this being a new data source, the earlier years are less represented in the data (8% of leveraged loans in 2011 vs. 45% of leveraged loans in 2014). For this reason, much of our analysis will be cross-sectional in nature. Consistent with the sample being composed primarily of leveraged loans, Total Debt/EBITDA leverage ratio is close the to the DealScan leveraged subsample. However, our sample is biased toward larger loans: loans covered in our sample are comparable to the syndicated loans above $100 million. This bias is consistent with the primary source of credit agreements being SEC filings.

[Insert Table 1]

4 Aggregate Stylized Facts

4.1 Restrictions

We first document the extent to which credit agreements restrict the actions detrimental to the lender as outlined in Section II. Panel A of Figure 1 displays the frequency of having some form of restrictions for each of these categories of actions in our sample. Credit agreements appear to more frequently restrict actions that circumvent or dilute the priority of debt holders: 92 percent of loan contracts have restrictions on liens and 88 percent on incurring additional debt. On the other hand, credit agreements less frequently restrict actions that potentially increase operational risk: 73 percent of credit agreements have restrictions on asset sales and only 31

percent of contracts on capital expenditures. The overall high frequency of these restrictions is consistent with credit agreements being a widespread tool to address conflicts between lenders and borrowers.

[Insert Figure 1]

4.2 Weakening of Restrictions

The mere existence of a restriction on a class of action does not necessarily grant full protection to the lender in that regard, as this restriction can be significantly weakened contractually. The natural next step of our analysis is therefore to study which restrictions are getting weakened through these channels, and to which extent.

Panel B of Figure 1 displays the frequency of deductibles conditional on having the related restriction. Deductibles are frequent: 96 percent of credit agreements include at least one kind of deductible. The actions that are most frequently restricted –issuance of additional debt and re-pledging of collateral– are also the ones that are most frequently weakened through deductibles. Panel A of Figure 2 displays the average size of deductibles by covenant type, which we scale by EBITDA. This figure reveals the large economic significance of these contractual terms. While the average deductible represents 0.43 EBITDA multiple, the restriction on indebtedness exhibits much larger deductibles, representing more than 2.3 EBITDA multiples on average. Panel B of Figure 2 illustrates the heterogeneity in the use of deductibles: more than 10% of the credit agreements from the sample have no deductibles, while some have deductibles on all the six covenants that we study.

[Insert Figure 2]

In Figure 3, we turn our attention to carve-outs. As with the deductibles, the use of carve-outs is the prevalent practice. Indeed, virtually all credit agreements (99%) with restrictions exhibit at least one carve-out. As shown in Panel A of Figure 3, the average credit agreement includes on average 72 distinct carve-outs.[7] Similar to deductibles, carve-outs are the most numerous for the restrictions on liens (22 on average) and indebtedness (15 on average). The high number of distinct carve-outs makes it difficult to compute their aggregate economic impact

[7] On top of the six covenants that we focus our study on, we also include carve-outs on EBITDA calculation, which typically affects contractual strength through financial covenants.

on the credit contract, as it would require to aggregate across them. Furthermore, by nature of carve-outs, the size of the deduction is not explicitly stated in the contract. For example, in the Outback case, we could only have a noisy proxy for the expected size of payment in kind carve-out. So, instead, we use the number of carve-out per given covenant as a proxy for contractual easing on that dimension. Panel B of Figure 3 illustrates again the significant heterogeneity in the use of carve-outs, which displays a skewed distribution.

[Insert Figure 3]

4.3 Comprehensive Contractual Weakness Proxies

To aggregate weaknesses measure across covenants, we use two simple proxies: the number of covenants that have a deductible, and the total number of carve-outs over all considered covenants. The rationale of the first proxy is to measure the number of dimensions on which the contract is weakened, while the second measure proxies for an overall intensity of the contract weakening. As a robustness check, we also extract the first principal component of the indicator variables of a deductible for each covenant, and of the number of carve-outs for each covenant. This alternative yields a consistent measure, with a correlation coefficient with the one from the first methodology higher than 0.9.

5 Cross-Sectional Determinants of Contractual Provisions

5.1 Understanding Hidden Risk

Figure 4 plots the distribution of Total Debt/EBITDA. EBITDA is measured as of the fiscal year preceding the loan date, and the total debt is measured as of the fiscal year end following the loan date. The focus is on the leverage before and after adjustment for indebtedness deductible. The central takeaway is that the fraction of potentially highly levered deals is much higher than would be inferred from a naive observation of the leverage as of the date of the credit agreement. Whereas at the origination about half of the companies have leverage below 5x EBITDA, in reality over 70% of companies funded in the leverage loan market can issue additional debt that would put total leverage over 5x EBITDA. Furthermore, the potential increase in leverage is concentrated among the transactions that are already heavily levered. For over 70% of

the companies with Debt/EBITDA at loan origination above 4x EBITDA, the actual allowed leverage is at least 1x EBITDA higher. The shift in the distribution of leverage attributable to indebtedness deductible is even more pronounced for leveraged buy-outs, as evidenced in the top-right graph of Figure 4. For comparison, in the bottom two graphs we report the distribution of Debt/EBITDA for two DealScan sub-samples covering the same period (2011-2016): deals over $100 million, and leveraged buyouts.[8]

[Insert Figure 4]

Table 2 emphasizes the risk resulting from this type of contractual adjustments: the potential increase in leverage is concentrated in already highly levered companies. 76% of firms with 5x EBITDA leverage at the loan origination can actually issue debt in excess of 6x EBITDA. 73% of firms with objectively high 6x EBITDA leverage can actually issue debt in excess of 7x EBITDA.

[Insert Table 2]

5.2 Other Measures of Contractual Weakness

Several existing studies use elements of debt contracting to assess contractual strength/weakness. In the loan space, such studies primarily rely on covenant data as summarized by DealScan. Whereas DealScan focuses on a limited set of contractual terms, namely financial covenants and cash-proceeds sweeps, our data offer a comprehensive coverage of the credit agreement. Moreover, DealScan variables on contractual terms are hard to exploit due to their high share of missing values. For instance, the variable on asset sales sweep exhibits 96.7% of missing values for the transactions over $100 million since 2011.

Overall, existing literature tackling contractual provisions in the credit space can be divided into three groups. First, several of the papers on contractual strength look at the "slack" implied in financial covenants, which corresponds to how much room the borrower has until control rights are shifted to creditors. Dichev and Skinner (2002) use covenant slack as reported in Dealscan. Dyreng (2009) looks at slack on a range on a comprehensive set of financial

[8]The tail of the indebtedness distribution might strike as unusually large by industry standards. It is likely that the skew in our distribution is due to the use of unadjusted EBITDA. However, EBITDA is another term that is carefully defined in a large loan and involves a series of adjustments to the accounting item that we use. For example, in the 2007 Outback Credit Agreement, the definition of Consolidated EBITDA takes 1,731 words. When using it in the regressions, we will control for industry factors.

covenants which in addition to restrictions on debt includes current ratio, interest coverage ratio, quick ratio, EBITDA, tangible net worth, and net worth. He estimates the financial slack as a difference between the quarterly Compustat data and the covenant threshold scaled by the standard deviation of the actual value over the previous eight quarters. Demiroglu and James (2010) construct a similar measure at the loan origination, using instead a twelve-quarter window to compute the standard deviation. They also use an alternative approach where instead they use cross-sectional median as a benchmark, rating contracts with lower slack than the median as restrictive. Drucker and Puri (2008) complement somewhat similar methodology for computing slack on net worth and current ratio financial covenants and complement it with overall number of financial covenants. Finally, Murfin (2012) estimates the ex-ante probability of shift in control assuming normal distribution of the ratios underlying the financial covenants, using borrowers' actual financial ratios from Compustat.

A second set of papers is more closely related to our work as it goes beyond financial covenants and instead tries to integrate multiple contractual features in a holistic measure of contractual strength. Demiroglu and James (2010) and Bradley and Roberts (2015) use DealScan data to construct a contractual weakness index for loans, following a methodology similar to the governance index of Gompers et al. (2003). Specifically, they count the number of contractual provisions based on the following six categories: (i) whether the loan is secured, and whether the credit agreement includes (ii) dividend restriction, (iii) more than two restricted financial ratios,[9] (iv) asset sales sweep; (v) debt issuance sweep, or (vi) equity issuance sweep.[10] The resulting index is discrete and ranges from 0 through 6. Billett et al. (2007) instead use FISD bond data which reports the incidence of over 50 different bond-holder protective and issuer restrictive covenants. They code these covenants with 15 indicator variables, and produce a discrete index ranging between 0 and 15. Table 3 emphasizes the conceptual differences in our paper and these previous works.

[Insert Table 3]

Finally, recent work by Becker and Ivashina, and Berlin et al. (2017) focuses on the incidence

[9] Given that a standard credit agreement includes Total Debt/EBITDA and Senior Debt/EBITDA ratios, whether the contract includes more than two financial covenants is a proxy for whether the contract includes financial covenants other than indebtedness.

[10] Sweeps are contractual provisions that give the creditors seniority over the extraordinary cash proceeds, such as assets sales, or new issuance of debt or equity. Note that sweeps can be partial.

of "covenant-liteness" in loan contract, that is, on the strength of the enforcement of the financial covenant, where covenant lite contracts do not have an automatic periodic verification of financial covenants.

Street Diligence data allows us to depart from a simple dummy count by directly measuring the contractual elements that weaken the core provisions, and ultimately computing the potential impact on leverage. In Table 4 we evaluate the relation between our weakness indices, the size of the deductibles and the number of carve-outs allowed under the restrictions on indebtedness and restrictions on liens (by far the most prominent contractual categories), and measures previously used in the literature. The focus is on the R-square in the OLS regressions: the relation is very weak. When looking at coefficients in details, more numerous (and larger) deductibles and carve-outs appear in general correlated with contract weakness as measured by the literature. Cov-lite transactions, and contracts with few financial covenants exhibit more and larger deductibles and more carve-outs. However, we can observe some counterintuitive relations, for instance covenant intensity displays a positive correlation with the size of indebtedness deductible and the number of indebtedness carve-outs.

[Insert Table 4]

6 A Source of Concern?

6.1 The Special Role of Private Equity Sponsors

In this section we establish substantial and systematic differences for loan contracts backing buyouts. The Great Recession offered compelling evidence that debt market inefficiencies are an important aspect of private equity value creation. PE portfolio companies weathered the downturn with relative success, while many similarly leveraged investment vehicles failed during this period. Anecdotally, there is evidence that prior to the financial crisis, PE sponsored leveraged loans were typically structured with longer maturities, laxer covenants, and options to defer interest payments, buying valuable time for an economic recovery to materialize. Although our sample is relatively short, we observe important time-series evolution in contracting for the 2011-2016 sample. For illustration purpose, we plot the quarterly average number of liens and indebtedness carve-outs during our sample period in Figure 5. Even though the first years are to

be taken with a grain of salt as the sample is much smaller before 2011, the graph is consistent with a pro-cyclicality of contract easing.

[Insert Figure 5]

Repeated bank relationships, reputation, and scale can lead to improved financing terms. This is true for all kinds of firms, including those that are not backed by PE; however, in their role as intermediaries, private equity firms interact with banks and financial markets much more frequently than even the largest stand-alone firms. Put simply, a CFO is responsible solely for financial decisions of their company, and this company may or may not pursue acquisition or special dividends. Financial sponsor, on the other hand, manages a portfolio of firms which are routinely acquired, levered, delevered, and sold (with potential mergers and leveraged dividend recaps along the way). Thus, private equity firms, and especially larger private equity firms, have more opportunities to develop beneficial reputations, and their business model is better understood by lenders (Ivashina and Kovner, 2011). Moreover, in their role as intermediaries, private equity firms also develop an expertise in debt markets, contracting, and renegotiation. This allows private equity firms to create value by exploiting inefficiencies related to mispricing of credit terms in boom and bust cycles of credit supply. There are multiple examples of credit terms mispricing: Ivashina and Sun (2011) document an easing in credit terms in the leveraged loan market following large inflows of institutional capital in the syndicated loan market. Greenwood and Hanson (2013) show that the credit quality of corporate debt issuers deteriorates during credit booms and that this deterioration forecasts low excess returns to corporate bondholders. In a related set of findings, Kaplan and Stein (1993) show that during the credit boom of the 1980s, non-price terms of bond issues (such as non-cash, "pay-in-kind" or PIK interest) became more lax, and that the market did not properly price these features.

To test whether private equity firms contract debt in a systematically different manner from more traditional borrowers, we run OLS regressions on our measures of contract easing, using an indicator for leverage buyouts as an explanatory variable. We include industry and quarter fixed effect to absorb any temporal or industry composition effects. Table 5 displays the regression coefficients. The results are consistent with private equity firms relying more heavily on contract easing. Both deductibles and carve-outs are significantly more frequent in leveraged buy-outs. The size of indebtedness deductibles is also larger for leveraged buyouts,

by 0.5 multiple of EBITDA, which is particularly large for transactions already highly levered. Private equity firms also appear to use carve-outs abundantly , as credit agreements of leverage buyouts include on average more than 30 additional carve-outs, with five more indebtedness carve-outs, and seven liens carve-outs.

[Insert Table 5]

In Table 6, we explore the role of private equity sponsor contractual expertise and bargaining power in driving the design of loan contracts. To do so, we use four different proxies. First, using CreditFlux global collateralized loan obligation (CLOs) database, we identify the financial sponsors that have also been active in structuring and managing CLOs (special purpose vehicles used to securitize large corporate loans). The available data from this reference database covers CLO origination between 2000 and 2013, and includes 1,229 different CLOs. The rationale of this proxy is that engagement in the CLO space is a reflection of the sponsors ability to assess the underlying credit risk as well as the demand for securitized products in the corporate space. Both these dimensions are pivotal to leverage loan origination and terms. As an illustration, Blackstone's GSO, Carlyle Group, Ares Management, Apollo Global Management, and CVC-private equity firms that are well known among practitioners for their very sophisticated approach to credit contracting – were among the top-ten CLO managers in this fourteen year period. Since bank-affiliated private equity firms are likely to have the same (or perhaps even bigger) advantage in understanding the contractual terms and market conditions, while being excluded from the CLO space due to conflict of interests, we combine them to CLO-active sponsors to build our first measure of expertise. The results are reported in columns 1 and 5.

As a second measure of expertise we develop an indicator variable for private equity firms that have large-cap buyouts as a key investment focus. This allows us to focus on sponsors that routinely rely on the leveraged loan market to fund their transactions. Building and maintaining the necessary expertise to sort through contractual terms represents a fixed cost, and therefore sponsors require a certain scale in this space to make it a source of value. In columns 2 and 6 we use an indicator variable for stand-alone private equity firms having such profile, and in columns 3 and 7 we combine them with bank-affiliated private equity firms.

Finally, in columns 4 and 8 we consider a possibility that expertise in contractual space is built through experience. To do so we look at whether a sponsor experienced a bankruptcy

in its portfolio. Specifically, using bankruptcy data from Capital IQ, we construct an indicator variable (*Experience with Bankruptcy*) equal to 1 if the sponsor had at least one bankruptcy in its portfolio during the five years before the beginning of our sample (2005 to 2009). All contractual expertise variables are conditional on the LBO sample, which means that the reported coefficients are equivalent to the marginal effect within this group of transactions.

Credit agreements that include an expert sponsor firm appear to exhibit significantly weaker covenants with both more deductibles and carve-outs than in other leverage buy-outs. The gap in both our measures of weaknesses between LBO with expert firms and LBO with only non-expert firms represents half the magnitude of the gap between LBO and non-LBO transactions on these dimensions. The heterogeneity in contractual weakness within LBOs therefore appears to be relatively large.

[Insert Table 6]

6.2 Contract Weakness: Creditors' Perspective

It is clear why a private equity sponsor would prefer weaker contractual terms; after all, the credit agreement – and the covenant structure specified in it – is the key governance mechanism for debt holders. But an explanation for why creditors would be willing to accept weaker contractual terms is in order. One simple motive is that the creditors receive a monetary counterpart, meaning that the risk is (at least partly) priced. Consistent with this observations in Table 7 we show that proxies of contract weakness are associated with a higher loan spread.[11] More specifically, we regress the all-in-drawn spread of a given facility on the proxies of contractual weakness, controlling for standard borrower and transaction characteristics, as well as the loan terms typically studied in the literature. Importantly, we include industry fixed effects, and quarter fixed effects to ensure that our results are not driven by a composition effect on industries, or a specific sub-period.

This analysis reveals a statistically and economically significant relationship between loan issuance prices and proxies for contractual weakness. Thus, adding one deductible on a covenant increases the cost of borrowing by 11 bps, while one standard deviation in the number of carve-outs corresponds to an increase of 17 bps in the loan spread. These magnitudes compare to an

[11] Spread includes interest rates and all fees, and applies to a benchmark rate, typically a LIBOR. This is what is commonly referred to as the "all-in-drawn" spread.

average spread of 266bps in the sample. Adding a deductible on the investments covenant and on the restricted payment one appears to have the largest effect.

[Insert Table 7]

Based on the exercise in Table 7, we cannot assess whether creditors are being compensated fairly for the risk they take, as estimating the risk ex ante is challenging. Instead, we look at the variation in screening and monitoring incentives by the arranging bank in the cross-section of loans. Previous literature establishes that there is substantial information asymmetry about the borrower's quality between the originating banks and the rest of the lending syndicate (e.g., Sufi (2007); Ivashina (2009)). The evidence shows that the lead share –"the skin in the game" for the lead bank – is important in aligning screening and monitoring incentives of the lead bank (also see Wang and Han (2014)). At the same time, institutional investors are likely to be less informed about the fundamentals of the borrower and the contractual terms of the transaction. In particular, according to Standard & Poor's Leveraged Commentary & Data (LCD), collateralized loan obligations (CLOs) represent between 41% (in 2011) and 62% (in 2016) of all institutional participants in the primary syndicated loan market – the single largest institutional group. Laxer screening leading to a deterioration in lending standards in the context of securitization is well documented (e.g., Keys et al. (2010)).[12]

With this in mind, we use several proxies to measure weaker screening and monitoring incentives from creditors in the cross section of loans. First, we use an indicator variable (Inst. Indicator) equal to 1 if the loan has significant institutional participation and 0 otherwise. To construct this variable, we start with market segment information from DealScan, which has "Institutional" as one of the segments. We also count as institutional any loan package that has Term Loan B or "TLb" facility.[13] Second, we look at the lead bank(s)' share of the total loan amount as reported in DealScan (Lead Share). Starting around mid 2000s, it has become increasingly common for the banks to primarily fund a revolving line and not the term loan component of the loan package. Since revolving lines might remain undrawn, looking at the lead

[12] Although Benmelech et al. (2012) point out that if this issue is less severe in the syndicated loan market, it is not because of CLOs being better informed, but because of other mechanisms that are facilitating a well-functioning syndicated loan market.

[13] For example, according to Standard & Poor's (2014), "Institutional debt includes term loans specifically for institutional investors, [...]. These tranches include first- and second-lien loans, as well as prefunded letters of credit. [The latter are not in our sample] Traditionally, institutional tranches were referred as TLbs because they were bullet payments and lined up behind TLas."

share for the full loan (the maximum amount available under a given credit agreement) as a measure of alignment of incentives might be misleading. To account for this possibility, we also look at the lead share for just the term loan component of the loan (Lead Share (TL)). Finally, we also look at the institutional share directly counting term loan facilities B and above (that is, TLc, TLd, etc.) as institutional money and measuring its proportion to the total loan amount (Instit. Share) and total term-loan amount (Instit. Share (TL)).

The results are reported in Table 8. The number of observations is reduced due to lender data availability. All specifications include industry and quarter fixed effects. All results include a leveraged buyout indicator variable. Consistent with looser screening and monitoring incentives, we find that smaller lead share and larger institutional participation are tied to weaker contractual terms. Loans from the institutional segment exhibit on average 0.7 more covenants with a deductible, and 26 more carve-outs, which compares to respective averages of 3 deductibles and 72 carve-outs. These estimates are statistically significant and comparable in magnitude to the association between leveraged buy outs and weaker contractual terms we previously documented, and are robust to controlling for leveraged buy-outs.

Our sample is primarily composed of leveraged – i.e., high yield – loans. But, to further ensure that the link between monitoring incentives and contractual weakness does not result from a spurious correlation with an unobserved heterogeneity in risk, in Panel B, we restrict our sample to the riskiest transactions, i.e. the leveraged buy-outs, in panel B. Despite being less precisely estimated due to the smaller size of the sample, our results are robust.

[Insert Table 8]

In Table 8, we focused on cross-sectional heterogeneity in information production incentives of sophisticated and informed creditors; however, the source of this variation at this stage is unclear and requires further investigation. In Table 9, we instead focus on the time-series variation incentives, which tie to fluctuation in reaching-for-yield behavior. We look at three variables: *Institutional Volume*, measured in USD billions, *Institutional Share*, which is the share of the total origination volume in the leveraged loan market that is funded by institutional investors, and *Total Flow* which is the total origination volume in the leveraged loan market. All variables are measured at the monthly frequency and were collected from Standard & Poor's LCD.

The results are reported in Table 9 and indicate that aggregate measures of institutional activity in the syndicated loan market are important to understand the contractual terms, with more institutional money being tied to a weaker covenant structure. Taking the estimated coefficients at face value, moving the share of institutional volume from 0 to 50% corresponds to 0.65 more deductibles, and 14 more carve-outs, to compare to average levels of 3 and 72.

[Insert Table 9]

7 The Value of Weakening Clauses - Event Study

7.1 J.Crew Debt Restructuring and Related Court Decision

In 2016, JCrew wanted to free up intellectual property assets (mostly the JCrew brand) from a lien to secure a new borrowing on them that would allow JCrew to repurchase its existing debt at a discount, thereby reducing its debt burden. Such actions are typically prohibited by credit agreement covenants to avoid collateral dilution of existing creditors. However, JCrew exploited the existence of a large deductible to move these assets from a restricted subsidiary to an unrestricted one, where they could be pledged for a new debt issuance, thereby diluting the claim of existing secured creditors. A litigation ensued, and on April 25th, 2018, a New York judge handed J. Crew a legal victory against lenders challenging the transaction.[14]

7.2 Impact on the Equity Value of Firms with Weak Loan Contracts

We exploit this court enforcement of the type of weakening clauses studied in this paper to investigate the value effects of weak credit covenants for shareholders. The rationale of the event study is that following the court decision, the market as a whole updates its view on the weakness of the debt contracts that hold similar clauses as the ones of JCrew. Theory predicts that having weak secured debt contracts has unambiguously positive value for shareholders, as it can for instance allow shareholders to implement risk-shifting by increasing leverage, or it can allow avoiding a bankruptcy in which shareholders would be wiped out.[15]

[14] See "J.Crew Holdouts Stumble in Debt-Exchange Lawsuit", *Wall Street Journal, April 26th, 2018.*

[15] The prediction is ambiguous for unsecured debt as it dilutes collateral and thereby reduces the recovery rate in bankruptcy, but might increase cash flow value resulting from the lower likelihood of bankruptcy. Secured debt value unambiguously goes down as the corresponding contract is weakened.

We test whether stock market reaction to the court decision for listed firms in our sample is related to the weakness of the debt contract they have issued. Table 10 displays the OLS coefficients we obtain when regressing abnormal stock returns for the [-5d/+5d] window around the court decision on our measures of contract weakness. We observe that the court decision, which enforces the weakening clauses, leads to a positive stock reaction for firms with loan contracts ranking high on our measures of weaknesses. This relationship is robust to controlling for the other measures of contract weakness from the literature. The economic magnitude is also significant, as the value transfer for firms from the top quartile of contract weakness is estimated between to 1.6% and 2.2%, which is large considering that the actual value transfer is contingent to the weakening clauses being actually exploited.

[Insert Table 10]

8 Conclusion

By conducting a comprehensive analysis of 1,240 credit agreements, we document the importance of negative covenants as a governance tool for large corporate issuers. Virtually all contracts rely on such mechanisms to protect the creditors. However, the restrictions created by these covenants are frequently weakened through two main types of mechanisms: deductibles (or "baskets") and exclusions (or "carve-outs"). These clauses weakening the strength of the contract are concentrated in the most levered transactions, thereby offering room for the issuer to reach even higher levels of leverage. When exploring the cross-section of use of these clauses, we observe that leveraged buy-outs are significantly more likely to use these clauses, which is consistent with private equity sponsors having a higher bargaining power towards lenders, especially in large transactions, as well as high level of expertise in writing contracts.

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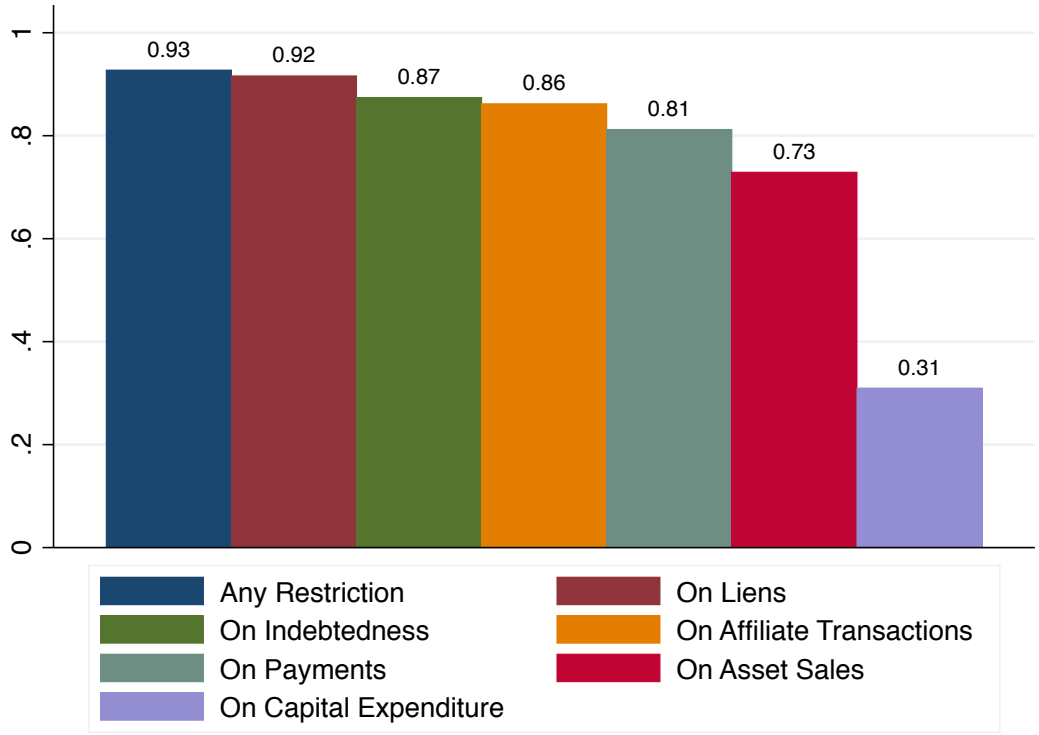
9 Figures and Tables

Panel A: Incidence of Restrictions



Panel B: Incidence of Deductibles on Restrictions

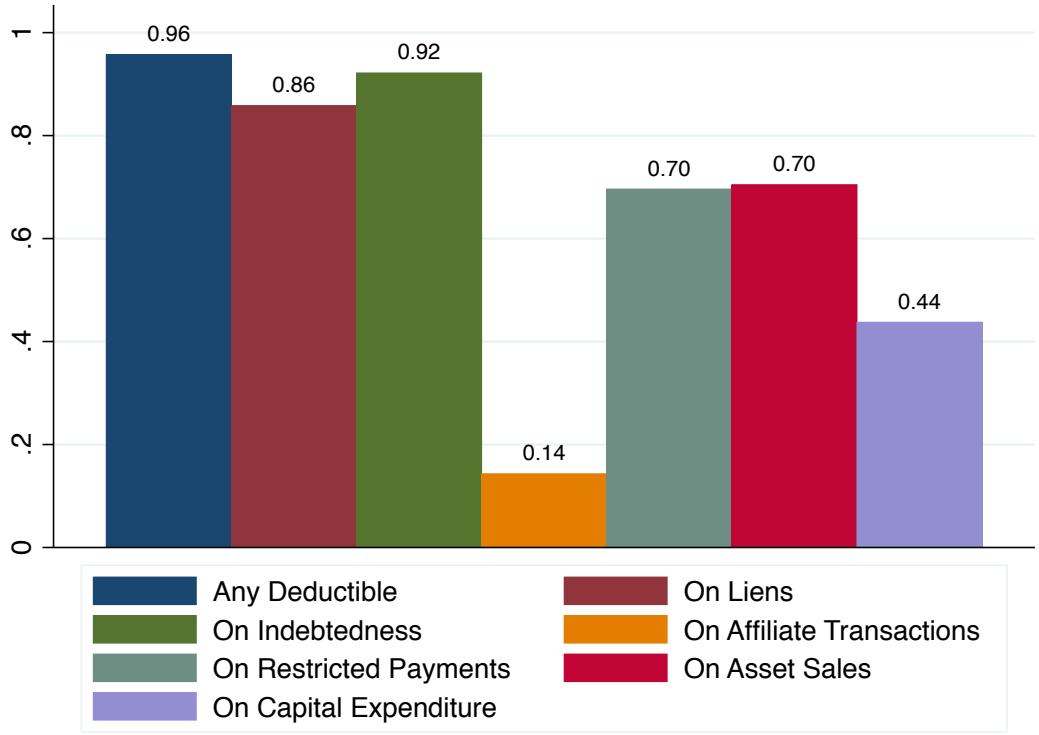
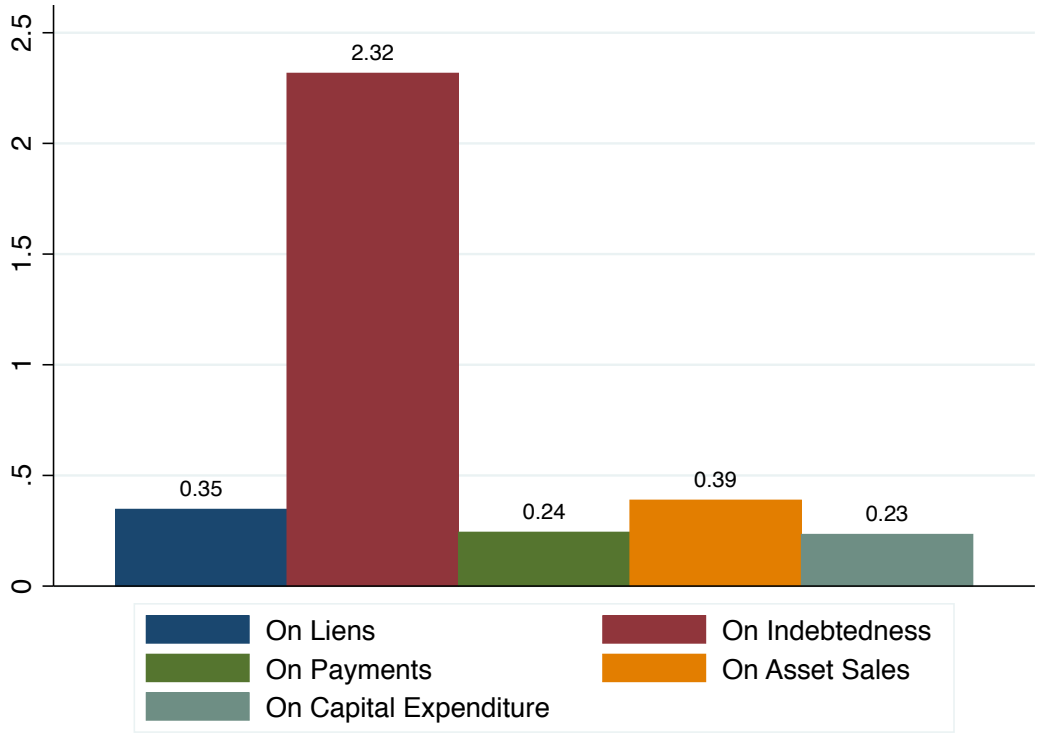


Figure 1: Incidence of Restrictions on Borrower's actions and of Deductibles on these Restrictions

Note: This figure reports the average incidence of restrictions on the issuer actions (negative covenants), and the average incidence of covenant deductibles ("baskets").

Panel A: Size of Deductibles



Panel B: Number of Covenants with Deductibles

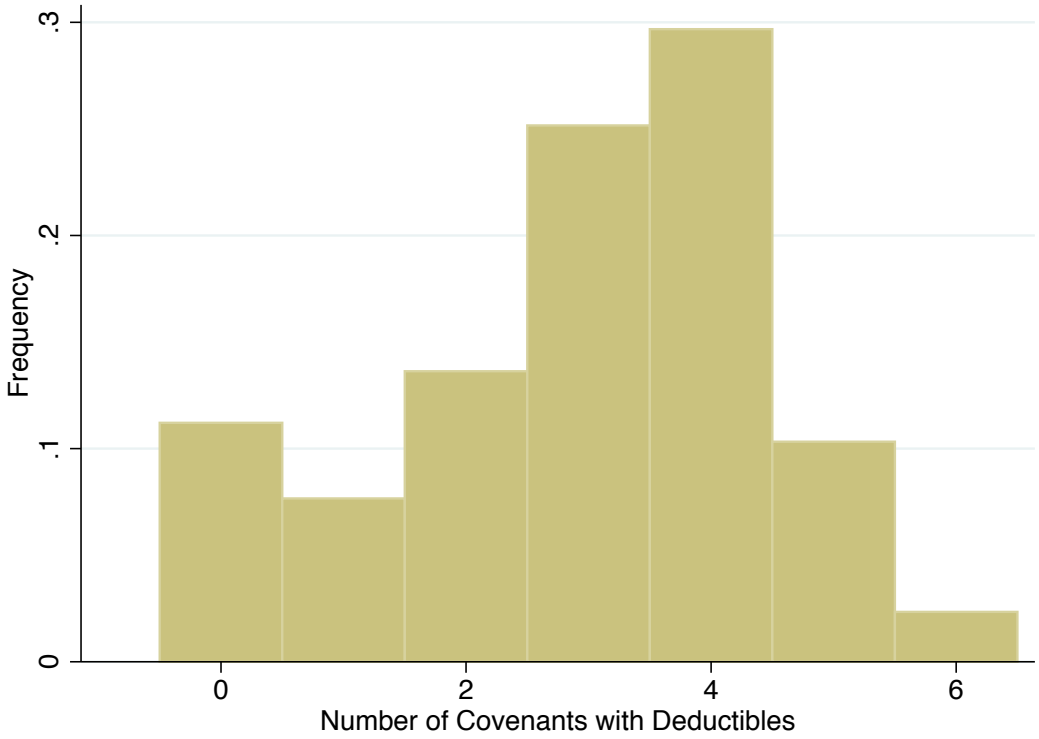
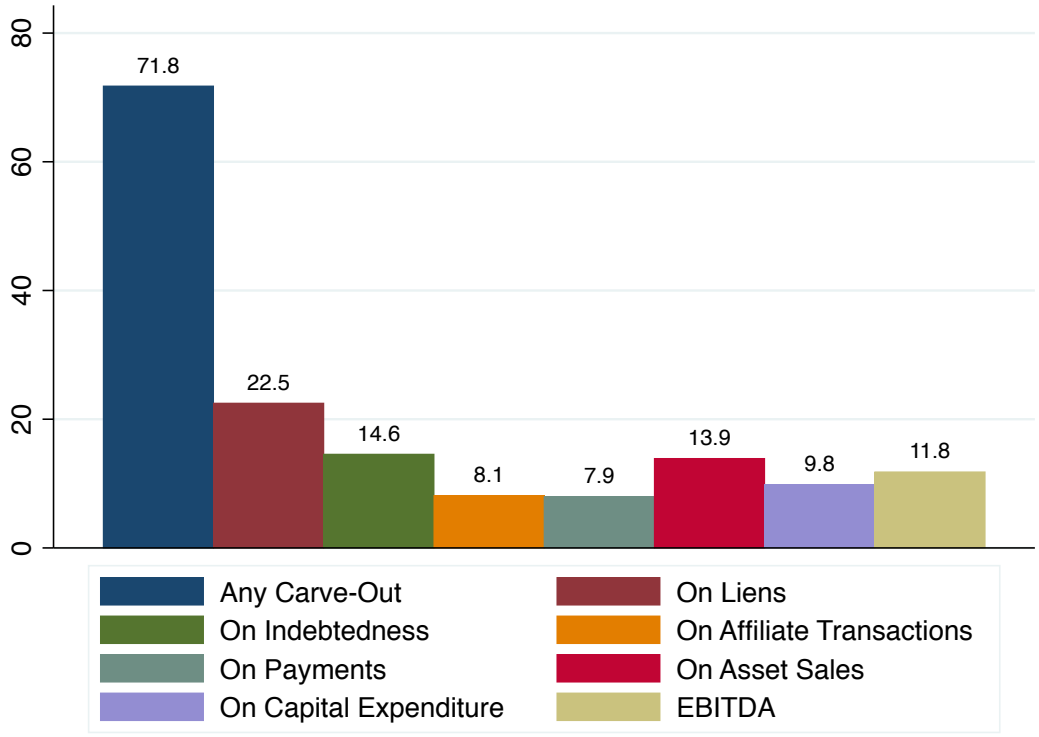


Figure 2: Deductibles on Covenants: Size and Distribution

Note: Upper panel reports the size of the deductibles as a multiple of EBITDA, where EBITDA is measured as of end of the fiscal year preceding the year of the loan issuance. Lower panel displays the distribution of the number of covenants with a deductible.

Panel A: Average Number of Carve-Outs



Panel B: Distribution of Carve-Outs

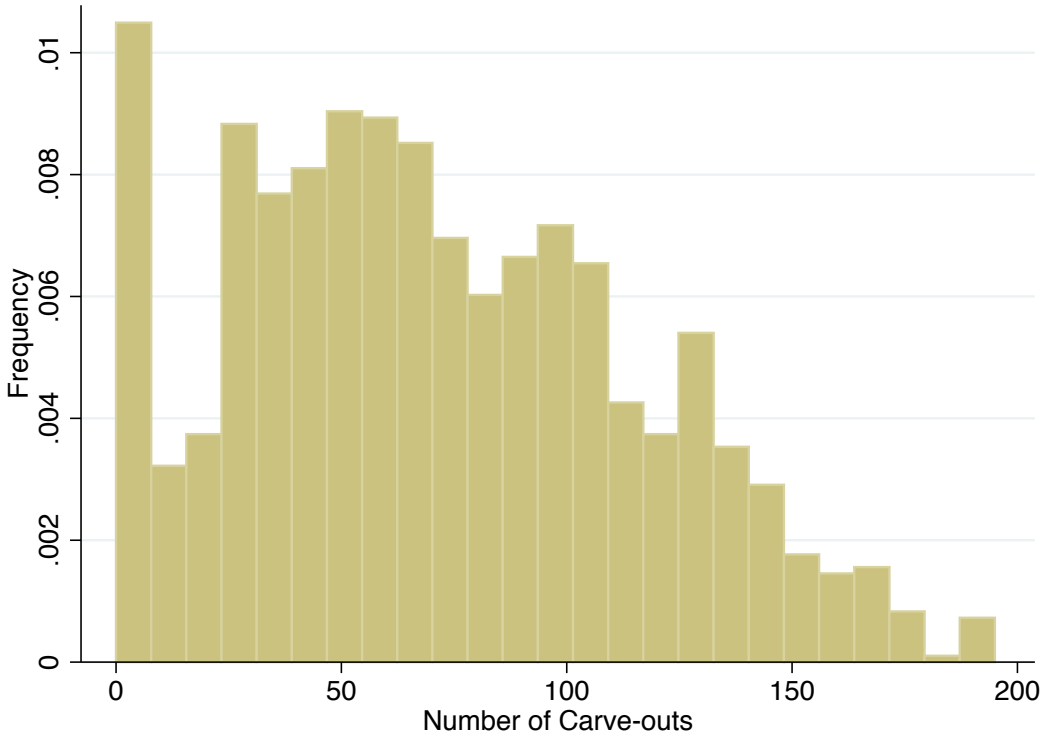


Figure 3: Carve-outs: Number by Covenant Type and Distribution

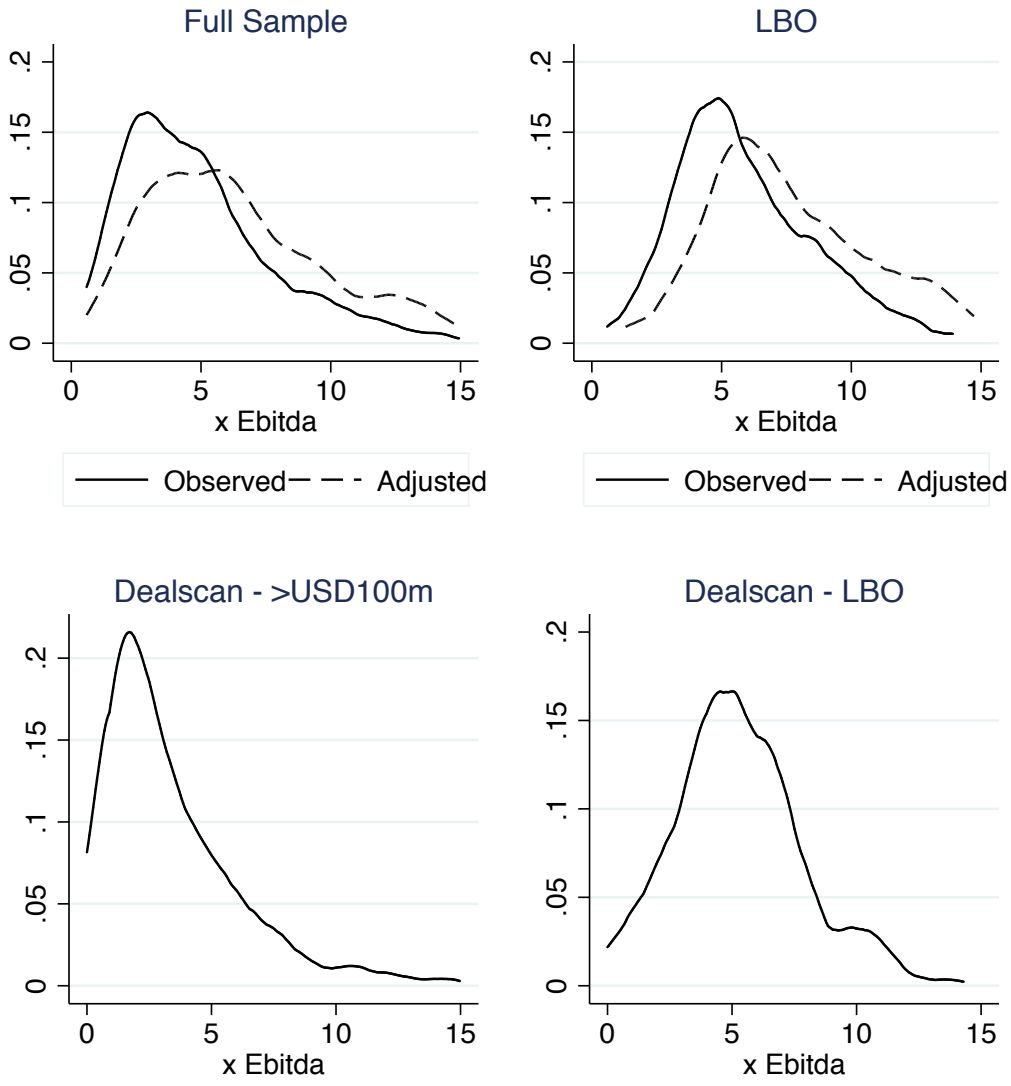


Figure 4: Distribution of Leverage with and without Adjusting for Indebtedness Deductibles

Note: This figure plots the distribution of leverage, calculated as Total Debt / EBITDA. The top left graph displays the distribution of leverage with and without adjusting for the deductible on the indebtedness covenant for the whole Street Diligence dataset. The top right graph conducts the same exercise, while restricting the sample to leverage buyouts. The bottom two graphs plot the unadjusted distribution of leverage for two corresponding benchmark samples from Dealscan: the transactions over USD100m since 2011, and the leverage buyouts since 2011.

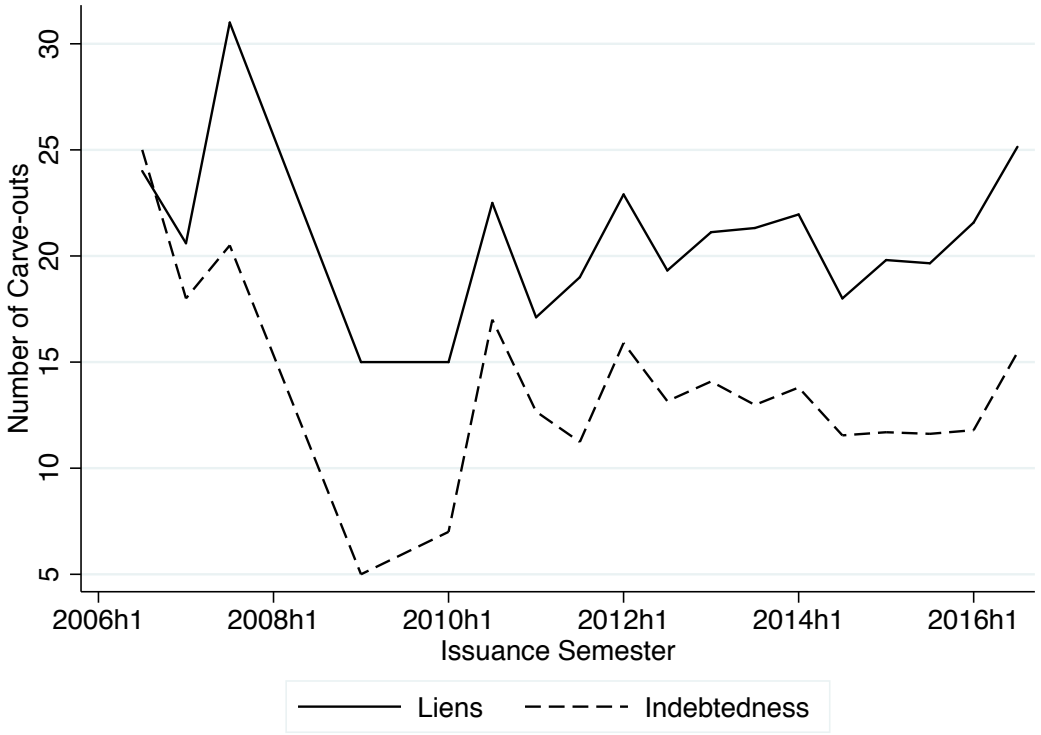


Figure 5: Evolution of Number of Carve-Outs on Liens and Indebtedness Restrictions

Note: This figure plots the average number of carve-outs on the Indebtedness and Liens covenants at semi-annual frequency.

Table 1: Summary Statistics

Year	2011	2012	2013	2014	2015	2016	Total
	Our sample (Source: Street Diligence)						
Number of Credit Agreements/Loans	53	74	222	353	350	188	1,240
Number of Facilities	71	117	336	534	514	285	1,857
Share Leveraged Deal	84.3%	80.8%	87.0%	73.6%	73.1%	77.3%	77.3%
Share LBO Deal	37.7%	37.8%	37.8%	37.8%	16.0%	19.7%	22.3%
Average Loan Size ($m)	1,675	800	1,203	1,122	990	1,224	1,119
Average Maturity (years)	7.2	6.4	5.9	5.6	5.2	5.0	5.6
Average Issuer Assets	4,815	6,441	6,970	7,861	7,341	9,953	7,704
Average Issuer EBITDA	571	830	658	820	726	758	747
Average Leverage (x EBITDA)	5.2	4.8	7.1	5.9	6.6	5.3	6.2
	Benchmark (Source: DealScan)						
All syndicated loans >$100m							
Average Loan Size ($m)	909	867	1,090	1,132	1,241	1,346	1,080
Average Maturity (years)	4.7	4.6	4.7	4.7	4.6	4.7	4.7
Average Issuer Assets	10,838	12,168	11,605	12,496	13,842	15,260	12,509
Average Issuer EBITDA	1,191	1,416	1,424	1,543	1,691	1,866	1,491
Average Leverage (x EBITDA)	3.5	3.9	4.2	4.0	4.2	3.8	3.9
Leveraged loans							
Average Loan Size ($m)	646	679	836	789	899	956	798
Average Maturity (years)	5.1	4.9	5.0	5.3	5.1	5.2	5.1
Average Issuer Assets	2,918	3,916	4,362	4,128	4,057	4,789	4,032
Average Issuer EBITDA	357	528	497	498	459	552	480
Average Leverage (x EBITDA)	4.9	5.3	5.0	5.0	5.5	4.4	5.0

Note: The table presents summary statistics for our sample and benchmarks it against: (i) subset of loans reported in DeaScan that are larger than $100 million; (ii) subset of loans identified in DealScan as leveraged. All accounting variables are from Compustat. Assets and EBITDA are measured as of the fiscal year end preceding the year of the loan issuance. Total debt is measured as of the fiscal year end.

Table 2: Additional Leverage Room

	Multiple of EBITDA			
	>4x	>5x	>6x	>7x
Leverage at loan issuance:				
Debt/EBITDA	67%	56%	47%	41%
Net Debt/EBITDA	62%	51%	43%	39%
Max Potential Debt/EBITDA	80%	72%	63%	55%
Transition probabilities:				
<4.00x	39%	25%	14%	9%
4.00x-4.99x	100%	71%	47%	24%
5.00x-5.99x	–	100%	76%	44%
6.00x-6.99x	–	–	100%	73%

Note: Data on average Debt/EBITDA in S&P is disaggregated by (i) year, (ii) size (above and below $50 million in EBITDA), and (iii) whether the transaction is an LBO. The numbers reported here are weighted by the number of observations in each category in our sample.

Table 3: Elements of Debt Contracting

This paper	Demiroglu and James (2010) Bradley and Roberts (2015)	Billett, King, and Mauer (2007)
Loans, senior secured	Loans	Bonds
Restrictions on liens • Deductibles • Carve-outs	- Debt issuance sweep	
Restrictions on indebtedness • Deductibles • Carve-outs		Restrictions on: - Funded debt - Subordinated debt - Senior debt - Secured debt - Total leverage test
Restrictions on affiliate transactions • Deductibles • Carve-outs		
Restrictions on payments • Deductibles • Carve-outs	Restrictions on: - Dividends	Restrictions on: - Dividends - Share repurchases
Restrictions on asset sales • Deductibles • Carve-outs	Restrictions on: - Asset sales sweep	Restrictions on: - Sale and leaseback - Asset sale clause
Restrictions on capital expenditures • Deductibles • Carve-outs	Restrictions on:	Restrictions on: - Investment policy restriction
(standard)	- Secured	
	- Other financial covenants	- Financial covenants: Net worth and rating
	- Equity issuance sweep	- Restrictions on stock issue
(standard)	(standard)	- Poison put/Change of control - Merger restrictions
(standard)	(standard)	- Cross-default provisions

Table 4: Alternative Measures of Covenant Weakness

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of Deductibles			Number of Carve-outs (Total)		
Covenant Intensity	0.299***			5.572***		
	(9.34)			(6.23)		
Cov-lite (dummy)	0.686***			34.025***		
	(6.73)			(10.38)		
Number of financial covenants	-0.305***			-8.357***		
	(-5.98)			(-6.09)		
Slack Debt/EBITDA		0.036***			0.736**	
		(3.42)			(2.46)	
Normalized Slack Debt/EBITDA			0.001*			0.042
			(1.70)			(1.48)
Constant	2.443***	2.913***	2.909***	59.341***	65.958***	65.431***
	(32.56)	(40.64)	(39.65)	(29.07)	(33.03)	(32.39)
Observations	1,240	379	371	1,240	379	371
R^2	0.127	0.011	0.002	0.175	0.006	0.006
Indebtedness Covenant	Deductible Size			Number of Carve-outs		
Covenant Intensity	0.293***			1.159***		
	(4.60)			(6.66)		
Cov-lite (dummy)	0.905***			5.848***		
	(3.78)			(10.06)		
Number of financial covenants	-0.435***			-1.809***		
	(-4.15)			(-6.57)		
Slack Debt/EBITDA		-0.063			0.202***	
		(-1.40)			(3.69)	
Normalized Slack Debt/EBITDA			0.001			0.003
			(0.60)			(1.08)
Constant	1.680***	1.845***	1.765***	10.539***	11.473***	11.464***
	(10.17)	(13.19)	(13.23)	(26.09)	(28.04)	(27.27)
Observations	1,057	379	371	1,240	379	371
R^2	0.049	0.010	0.001	0.163	0.011	0.001
Liens Covenant	Deductible Size			Number of Carve-outs		
Covenant Intensity	-0.039***			0.686***		
	(-2.91)			(2.75)		
Cov-lite (dummy)	0.002			7.670***		
	(0.07)			(9.18)		
Number of financial covenants	0.015			-1.322***		
	(0.77)			(-3.31)		
Slack Debt/EBITDA		-0.005			0.170**	
		(-0.56)			(2.31)	
Normalized Slack Debt/EBITDA			-0.000**			0.007
			(-2.31)			(1.17)
Constant	0.388***	0.326***	0.315***	18.466***	19.049***	18.950***
	(11.68)	(11.10)	(11.36)	(32.96)	(33.83)	(32.90)
Observations	1,057	379	371	1,240	379	371
R^2	0.010	0.001	0.001	0.107	0.004	0.002

Note: This table presents OLS regression coefficients, where the dependent variable is the number of covenants with a deductible (column 1 to 3) and the total number of carve-outs (column 4 to 6) in panel a, and the size of the deductible on the given covenant (scaled by EBITDA) for columns 1 to 3, and the number of carve-outs for the given covenant for columns 4 to 6 in panel b and c. Explanatory variables are as follows: Covenant intensity is a measure used Demiroglu and James (2010) and Bradley and Roberts (2015) and summarized in Table III. It is a discrete variable that takes value between 0 and 6. Cov-lite is a dummy variable equal to 1 is the loan has only incurrence (vs. maintenance) financial tests. The data on covenant lightness is from S&P LCD. t-statistics are reported in parenthesis. Slack corresponds to the distance from the actual covenant variable (as observed in Compustat) to the trigger level. Normalized scale corresponds to the slack divided by the standard deviation of the covenant variable over the last 12 quarters. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 5: Inclusion of Deductibles and Carve-outs in Buyouts

	(1)	(2)	(3)	(4)	(5)	(6)
	Number of Deductibles			Number of Carve-outs (Total)		
Buyout	0.762***	0.601***	0.523***	41.312***	34.866***	33.779***
	(7.65)	(5.02)	(4.29)	(12.68)	(9.75)	(9.30)
Industry	No	Yes	Yes	No	Yes	Yes
Quarter	No	No	Yes	No	No	Yes
Observations	1,240	1,132	1,132	1,240	1,132	1,132
Indebtedness Covenant	Size of Deductible (x EBITDA)			Number of Carve-outs		
Buyout	0.531***	0.375*	0.338	7.477***	5.807***	5.576***
	(2.59)	(1.72)	(1.55)	(12.53)	(8.80)	(8.28)
Industry FE	No	Yes	Yes	No	Yes	Yes
Quarter FE	No	No	Yes	No	No	Yes
Liens Covenant	Size of Deductible (x EBITDA)			Number of Carve-outs		
Buyout	-0.069*	-0.045	-0.040	8.136***	7.563***	7.261***
	(-1.94)	(-1.17)	(-1.07)	(9.81)	(8.19)	(7.69)
Industry	No	Yes	Yes	No	Yes	Yes
Quarter						
Observations	1,056	1,056	1,056	1,240	1,132	1,132

Note: This table presents OLS regression coefficients, where the dependent variable is the number of covenants with deductibles (column 1 to 3) and the total number of carve-outs (column 4 to 6) in panel a, and the size of the deductible on the given covenant (scaled by EBITDA) for columns 1 to 3, and the number of carve-outs for the given covenant for columns 4 to 6 in panel b and c. Industry is defined as a 2-digit SIC code. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 6: Credit Expertise

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Number of Deductibles (Total)				Number of Carve-outs (Total)			
Credit Expertise (Proxies)	0.290	0.337*	0.351**		14.996*	14.737*	15.858*	
	(1.67)	(2.20)	(2.34)		(1.90)	(1.93)	(2.08)	
Bankruptcy Experience				0.462*				25.258**
				(2.09)				(2.90)
Buyout	0.358*	0.330*	0.321	0.277*	26.042***	25.942***	25.295***	21.211***
	(1.94)	(1.80)	(1.79)	(1.80)	(4.28)	(4.31)	(4.30)	(4.74)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104
r2	0.19	0.19	0.19	0.20	0.30	0.30	0.30	0.31

Note: This table presents OLS regression coefficients, where the dependent variable is the number of covenants with deductibles (column 1 to 4) and the total number of carve-outs (column 5 to 8). Each column corresponds to an alternative definition of contractual expertise. The variables are explained in the text. Industry is defined as a 2-digit SIC code. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 7: Contractual Weakness and Issuance Prices

	Issuance Spread (in bps)			
	(1)	(2)	(3)	(4)
Number of Deductibles	10.916***		7.314**	
	(5.44)		(2.46)	
Number of Carve-outs		0.381***	0.193*	
		(4.98)	(1.71)	
Highly Leveraged Transaction	176.141***	177.228***	176.054***	175.104***
	(14.81)	(14.96)	(14.83)	(14.75)
Buyout	-10.748	-18.338**	-15.178*	-11.898
	(-1.42)	(-2.27)	(-1.88)	(-1.55)
Cov-lite Deal	-9.356	-12.965	-12.204	-11.210
	(-1.18)	(-1.59)	(-1.50)	(-1.39)
Number Financial Covenants	-4.166	-3.516	-3.741	-3.886
	(-1.11)	(-0.94)	(-1.00)	(-1.03)
Deductible on Investments				35.769***
				(3.06)
Deductible on Restricted Payments				21.283***
				(2.85)
Deductible on Liens				5.021
				(0.67)
Deductible on Indebtedness				7.574
				(0.83)
Deductible on Affiliate Transactions				12.781
				(1.38)
Deductible on Asset Sales				-3.647
				(-0.47)
Industry	Yes	Yes	Yes	Yes
Quarter	Yes	Yes	Yes	Yes
Observations	1,586	1,586	1,586	1,586

Note: This table presents OLS regression coefficients, where the dependent variable is the "all-in-drawn" spread at the loan issuance. The spread includes interest rates and all fees and applies to a benchmark rate, typically the LIBOR. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 8: Contractual Weakness and Bank Skin in the Game

	Number of Deductibles					Number of Carve-outs				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: All Sample										
Instit. Indicator	0.715***					25.985***				
	(9.66)					(12.71)				
Lead Share		-0.564**					-11.484**			
		(-2.56)					(-2.67)			
Lead Share (TL)			-0.691*					-8.638		
			(-1.92)					(-0.93)		
Instit. Share				0.769***					26.746***	
				(7.25)					(8.58)	
Instit. Share (TL)					0.759***					26.021***
					(7.97)					(11.30)
Buyout	0.321*	0.460***	0.488***	0.293*	0.290*	27.166***	32.420***	33.044***	26.125***	26.103***
	(2.14)	(3.12)	(3.47)	(1.99)	(1.90)	(5.37)	(6.27)	(6.56)	(5.13)	(4.88)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month
Observations	1,107	1,011	1,011	1,011	1,011	1,107	1,011	1,011	1,011	1,011
R^2	0.235	0.198	0.194	0.221	0.227	0.362	0.312	0.308	0.353	0.361
Panel B: LBO Transactions										
Instit. Indicator	0.255					23.942***				
	(1.37)					(3.59)				
Lead Share		-0.590					-22.576			
		(-0.85)					(-1.28)			
Lead Share (TL)			-2.463**					-59.440**		
			(-2.22)					(-2.45)		
Instit. Share				0.282					24.318**	
				(1.44)					(2.96)	
Instit. Share (TL)					0.303					23.840***
					(1.69)					(3.35)
Cluster	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month
Observations	275	247	247	247	247	275	247	247	247	247
R^2	0.007	0.007	0.030	0.007	0.009	0.054	0.009	0.016	0.049	0.053

Note: This table presents OLS regression coefficients, where the dependent variable is the number of covenants with deductibles (columns 1 to 5) and the total number of carve-outs (column 6 to 10). *Instit. Indicator* is equal to 1 if the loan has significant institutional participation and 0 otherwise. *Lead Share* is the lead bank(s)' share of the total loan amount as reported in DealScan. *Lead Share (TL)* is the lead share for just the term loan component of the loan. *Instit. Share* is the institutional share directly counting term loan facilities B and above (that is, TLc, TLd, etc.) as institutional money and measuring its proportion to the total loan amount, while *Instit. Share (TL)* does so regarding the total term loan amount. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 9: Contractual Weakness and Capital Supply

	Number of Deductibles			Number of Carve-outs		
	(1)	(2)	(3)	(4)	(5)	(6)
Institutional Volume	0.008***			0.192***		
	(3.14)			(3.11)		
Institutional Share		1.305**			29.701**	
		(2.66)			(3.01)	
Total Inst. Flow			0.005*			0.111*
			(1.85)			(2.07)
Buyout	0.571***	0.562***	0.584***	34.146***	33.990***	34.459***
	(3.85)	(3.80)	(3.95)	(6.75)	(6.79)	(6.89)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,129	1,129	1,129	1,129	1,129	1,129
R^2	0.165	0.168	0.162	0.276	0.277	0.274

Note: This table presents OLS regression coefficients, where the dependent variable iwhere the dependent variable is the number of covenants with deductibles (columns 1 to 3) and the total number of carve-outs (column 4 to 6). *Institutional Volume* is measured in USD billions, *Institutional Share* is the share of the total origination volume in the leveraged loan market that is funded by institutional investors, and *Total Flow* is the total origination volume in the leveraged loan market. All variables are measured at the monthly frequency and were collected from Standard & Poor's LCD. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are robust to heteroskedasticity.

Table 10: Event Study: Stock reaction to JCrew Court Decision

	Cumulative Abnormal Return, -5/+5 days							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of Deductibles	0.413**							
	(2.11)							
Top Quartile of Deductibles		1.938**	1.664	2.084*				
		(2.15)	(1.61)	(1.92)				
Number of Carve-outs					0.012*			
					(1.78)			
Top Quartile of Carve-outs						1.917**	1.665**	2.284***
						(2.48)	(2.04)	(2.81)
Highly Leveraged Transaction			0.036	0.650			-0.032	0.636
			(0.05)	(0.92)			(-0.05)	(0.98)
Buyout			0.985	1.238			0.681	0.853
			(0.99)	(1.25)			(0.70)	(0.88)
Covenant Intensity				-0.232				-0.196
				(-0.92)				(-0.79)
Cov-lite Deal				-1.593**				-1.998***
				(-2.09)				(-2.68)
Number Financial Covenants				0.133				0.104
				(0.38)				(0.32)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster								
Observations	640	640	632	632	640	640	632	632
R^2	0.216	0.216	0.216	0.224	0.214	0.220	0.218	0.229

Note: This table presents OLS regression coefficients, where the dependent variable is the stock cumulative abnormal returns over a -5days/+5days window around the April 25th court decision on JCrew. Explanatory variables are as per previous tables. t-statistics are reported in parenthesis. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively. Standard errors are clustered at the industry level.