Information Covenants of Nonbank Direct Lending*

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Abstract

This paper examines the monitoring practices of nonbank direct lenders by analyzing the use of information covenants in loan contracts. Analyzing 688 hand-collected nonbank direct loans, I find that nonbank lenders request firms' accounting information more often than banks in the syndicated loan market. Significant heterogeneity exists among nonbank lenders: private credit lenders employ information covenants more frequently than other nonbanks such as finance companies, while larger nonbank lenders and those with specialized industry expertise are more likely to incorporate lender meetings into their monitoring practices. These results suggest that nonbank direct lenders actively monitor borrowers through frequent information requests. This study highlights the critical role of accounting information in nonbank lending and sheds light on how nonbanks use information covenants to monitor their borrowers.

JEL Classification: G21, G23, G32, M41.

Keywords: Nonbank lending, private credit, information covenants, accounting information, loan monitoring.

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I Introduction

In recent decades, more stringent bank regulation has driven significant growth in nonbank direct lending (e.g., Irani et al., 2021; Gopal and Schnabl, 2022; Chernenko, Erel, and Prilmeier, 2022; Buchak et al., 2024). As of March 2023, direct lenders had deployed over $900 billion of loan investments in the U.S., a significant amount compared to the $1.4 trillion leveraged loan and $1.6 trillion high-yield bond markets (Jang, 2024; Cai and Haque, 2024).[1] Despite this rapid growth, how nonbank direct lenders monitor their borrowers remains an open question.

Theoretical research posits that banks, as special relationship lenders, monitor borrowers closely and adjust loan terms flexibly (e.g., Boyd and Prescott, 1986; Diamond, 1991; Rajan, 1992; Boot, 2000). In line with this theoretical prediction, recent empirical studies suggest that, in small business lending, nonbank lenders such as FinTech companies use different screening and monitoring technologies relative to banks. In particular, they rely less on firms' accounting information such as financial statements (e.g., Vallée and Zeng, 2019; Minnis, Sutherland, and Vetter, 2023).[2]

Do nonbank direct lenders also use different monitoring technologies and rely less on accounting information than banks, or do they demand similar information? Moreover, are these nonbank lenders merely "fair-weather" friends that lack commitment to maintain long-term relationships?[3] Addressing these questions is crucial for evaluating the risks associated with nonbank lending. As Cohen et al. (2024) note, the opacity and limited oversight of the market could amplify financial vulnerabilities. Therefore, understanding how direct lenders monitor borrowers, manage information asymmetry, and mitigate default risk is key to assessing the effectiveness and stability of the direct lending market.

In this paper, I examine how nonbank lenders monitor their middle-market borrowers, using banks

[1] I use direct lenders, nonbank lenders, and nonbank direct lenders interchangeably to indicate any nonbank entities that lend directly to firms without relying on intermediation of a traditional bank. Data soures are LSTA U.S. Leveraged Loan Index and S&P U.S. High Yield Corporate Bond Index (as of December 2023). Although there isn't an official definition for leveraged loans, they are often defined as loans to sub-investment borrowers. Most of leveraged loans are syndicated.

[2] Existing research on direct lending finds conflicting evidences on direct lenders' monitoring effort, proxied by the use of financial covenants. I discuss these papers in greater detail at the end of the introduction.

[3] See https://www.nytimes.com/2023/05/06/business/dealbook/bank-crisis-shadow-banks.html and also https://corpgov.law.harvard.edu/2023/04/06/jamie-dimons-chairman-ceo-letter-to-shareholders/.

in the syndicated loan market as a benchmark. Middle-market firms, often characterized by significant information asymmetry and moral hazard, typically rely on privately placed debt, including syndicated loans and nonbank direct lending (Chernenko, Erel, and Prilmeier, 2022). In the past decade, banks have increasingly adopted an originate-to-distribute model, driven by more stringent regulations and capital requirements. Despite this shift, banks typically retain a lead or administrative role in these syndicated loans, taking responsibility for ongoing monitoring of the loans.[4] Thus, it remains valid to compare nonbank direct lending to bank syndicated loans for understanding their monitoring practices. Focusing on middle-market firms with annual revenues between $10 million and $1 billion, I find that nonbank direct loans account for approximately 21% of my sample of 3,007 credit agreements from 2010 to 2023.[5]

To analyze monitoring effort, I use lenders' information demand as a proxy. Prior literature documents that information demands from lenders reflect their monitoring intensity and influence loan outcomes such as the propensity of future renegotiations (e.g., Carrizosa and Ryan, 2017; Gustafson, Ivanov, and Meisenzahl, 2021). I collect loan contracts through Electronic Data Gathering, Analysis, and Retrieval system (EDGAR), and manually classify the use of three affirmative covenants, which I term "information covenants."[6] These information covenants mandate furnishing of monthly financial statements, annual projections/budget forecasts, and periodic lender meetings. The first two covenants, which request verifiable financial information, capture the demand of *hard* information.[7] In contract, lender meetings, which convey non-verifiable and subjective information, reflect the demand for *soft* information.[8]

In the first part of this paper, I examine whether nonbank lenders demand more or less information

[4] Banks' monitoring duties as lead arrangers in these syndicated loans include enforcing covenants, managing amendments, and ensuring the borrower's compliance with reporting requirements.

[5] Chernenko, Erel, and Prilmeier (2022) show that roughly one-third of loan agreements are from nonbank direct lenders in a sample of 750 randomly selected middle-market firms from 2010 to 2015.

[6] In section III, I explain in detail how I collect the loan contract information and how I systematically classify certain covenants.

[7] These two are the same information covenants discussed in Carrizosa and Ryan (2017).

[8] Gustafson, Ivanov, and Meisenzahl (2021) show that roughly 20% of the bank syndicated loans involve active monitoring (site visits). Importantly, while they use data on actual visits, I only have information about the inclusion of the rights to visit/inspect. Hence, my proxy for *soft* information is a noisier proxy for actual monitoring effort.

in their monitoring process relative to banks. Theoretical predictions are mixed. On the one hand, banks face significant regulatory oversight and often must demonstrate their credit standards to regulators, whereas nonbanks are not subject to this scrutiny (e.g., Granja and Leuz, 2024). This regulatory environment likely incentivizes banks to collect more information during the monitoring process. Furthermore, banks, through their long-term relationships with borrowers, gain bargaining power allowing them to request more stringent covenant terms, potentially exacerbating the "hold-up" problem (Rajan, 1992). On the other hand, nonbanks could demand more information relative to banks for several reasons. First, nonbank lenders have stronger incentives to more closely monitor their loans since they hold a much larger portion of originated loans on their own books (e.g., Ivashina and Sun, 2011; Gustafson, Ivanov, and Meisenzahl, 2021). Second, as new entrants into the credit market, nonbank lenders lack expertise and suffer more from information asymmetry issues; therefore, they might demand more information (Berger, Minnis, and Sutherland, 2017). Thus, whether nonbank lenders request more or less information to monitor borrowers than banks is an empirical question.[9]

Using both a linear probability model (OLS) and a propensity score matching (PSM) method, I provide evidence that nonbank direct lenders tend to demand more information than traditional banks. Specifically, nonbanks are, on average, 12.3% more likely to mandate furnishing of monthly financial statement and 4.6% more likely to mandate periodic meetings, while demanding annual projections at similar frequencies relative to banks. The higher likelihood of requesting backward-looking monthly financial statements supports the hypothesis that nonbank lenders seek to reduce information asymmetry as new entrants to the market.

Meanwhile, their frequent demand for *soft* information through lender meetings suggests that nonbank lenders place greater emphasis on subjective and non-verifiable information compared to banks. These findings align with existing literature suggesting that hard information is particularly valuable to larger firms (banks), as it can be efficiently shared within larger organizational structures (Stein, 2002;

[9] One caveat is that I only observe the final information covenants in contracts, but not the demand of information from lenders. Borrower characteristics such as inherent risks also affect the inclusion of various information covenants. In my analysis throughout, I try to control for different borrower covariates in direct and syndicated lending. I will also employ several research designs to mitigate this selection issue.

Berger et al., 2005). In contrast, nonbank direct lenders, which typically have leaner organizational structures than banks, are more reliant on soft information in their monitoring processes. My results support this view, showing that nonbank lenders use a combination of hard and soft information, with a relatively greater emphasis on the latter compared to banks.

In the second half of the study, I examine lender heterogeneity in their information demand. First, I investigate whether different types of nonbank entities have different monitoring processes. In particular, the past decade has seen the tremendous growth in private credit funds and BDCs (e.g., Jang, 2024). These closed-end funds, which lend directly to U.S. middle-market firms, operate similarly to private equity funds. Understanding how these entities monitor differently from other nonbank lenders, such as finance companies, holds important implications for both policy and academic research (Jang, 2024; Cohen et al., 2024).

I hypothesize and find evidence that private credit lenders are more intensive monitors compared to other nonbanks, requesting all three types of information covenants at higher frequencies. A key distinction between private credit funds and other nonbank lenders is that they hold all loans to maturity and actively monitor loans post-origination, akin to private equity funds. In contrast, other nonbanks, such as investment banks, may have weaker incentives to engage in intensive monitoring. Consistent with this reasoning, I find that private credit funds demand more information after loan origination.

Next, I examine how various characteristics of nonbank lenders influence their use of information covenants. First, while large banks typically rely more on hard information and less on soft information due to their organizational structure (Stein, 2002), I find that large nonbank lenders incorporate lender meeting covenants more frequently and also request hard information more often. This suggests that large nonbank lenders generally monitor more intensively compared to smaller nonbank lenders. This may be because even the largest nonbank lenders are comparable in scale to regional banks and thus operate more like relationship lenders. In contrast, smaller nonbank lenders may lack the resources and organizational capacity to act as relationship lenders, leading to less intensive monitoring practices.

Second, I find evidence that nonbank lenders are more likely to include periodic lender meetings

as covenants when the borrower operates within the lender's industry of expertise.[10] This finding indicates that nonbank lenders selectively use lender meetings when they possess the necessary industry knowledge to effectively interpret the soft information gathered through these meetings, allowing them to better assess ongoing borrower risk.

This paper contributes to the growing literature documenting the rise of nonbank direct lending and its causes and effects (Loumioti, 2019; Chernenko, Erel, and Prilmeier, 2022; Jang, 2024; Block et al., 2024; Davydiuk, Marchuk, and Rosen, 2024; Chernenko, Ialenti, and Scharfstein, 2024). Previous studies have documented that nonbank direct lenders often provide credit to riskier borrowers at higher interest rates. Loumioti (2019) shows that direct lenders charge higher interest spreads and require fewer financial covenants. Chernenko, Erel, and Prilmeier (2022) select a random sample of 750 publicly listed firms from 2010-2015 and show that around 1/3 of the loans are extended by nonbank entities. Those nonbank loans charge higher interest rates and include fewer financial covenants. Jang (2024) uses a novel database for direct lender-held loans to PE buyouts and finds that 99% of the loans do have financial covenants, contrary to previous two papers. Moreover, he shows that direct lenders show more flexibility in contract renegotiation post Covid, concluding that direct lenders act more like banks that actively monitor and engage in relationship lending. However, none of these studies examine how direct lenders monitor their borrowers. This paper fills this gap by showing that direct lenders actively monitor borrowers through the use of information covenants, leveraging private information to manage risks.

Furthermore, this study contributes to the literature on the value relevance of accounting information in nonbank lending. Existing research suggests that nonbank lenders, such as captives, finance companies, and FinTech lenders, tend to rely less on accounting information in small business lending (Minnis, Sutherland, and Vetter, 2023; Vallée and Zeng, 2019). In contrast, I document that nonbank direct lenders in the middle market rely extensively on accounting information, requiring hard information such as monthly financial statements alongside soft information like periodic lender meetings.

Lastly, this paper advances our understanding of direct lending contracts and their underlying

[10] Area of expertise is determined as the top three industries in the lender's portfolio companies in Preqin database.

covenant structures. A substantial body of literature examines the use of covenants to mitigate agency problems in debt contracts (e.g., Armstrong, Guay, and Weber, 2010; Nikolaev, 2010; Demerjian, 2011; Christensen and Nikolaev, 2012; Christensen, Nikolaev, and Wittenberg-Moerman, 2016; Saavedra, 2018; Dyreng, Vashishtha, and Weber, 2017; Christensen et al., 2022). My paper contributes to this existing literature in two ways. First, while prior literature examines mostly negative and financial covenants, I focus on a set of rarely examined covenants — information covenants. By doing so, I extend the results in Carrizosa and Ryan (2017) and shed light on the role of information covenants in monitoring and mitigating risks. Second, to my best knowledge, this is the first paper to closely examine the covenant structure of nonbank loans. Given the rapid growth of nonbank lending, understanding the screening and monitoring mechanisms employed by direct lenders is essential for assessing the risks associated with this opaque and increasingly influential market (Cohen et al., 2024).

II Conceptual framework and background

II.A Conceptual framework

Banks have long been considered special financial intermediaries that ameliorate information asymmetry in the lending process through repeated interactions with borrowers (Boot, 2000). They offer a wide range of services to borrowers including deposits, check clearing, and cash management services, etc. These ongoing activities help reduce information asymmetry and position banks as more effective credit providers that actively monitor borrowers. Indeed, theoretical literature beginning with Diamond (1984) and Diamond (1991) show that the ability of banks to actively monitor borrowers through instruments such as tight financial covenants enable them to lower the costs of information asymmetry and moral hazard (e.g., Diamond, 1984; Boyd and Prescott, 1986; Diamond, 1991; Rajan, 1992).

However, banks face increasingly tighter regulatory pressures and capital requirements, such as Basel III and periodic stress tests. These more stringent regulations have raised the costs of lending,

particularly to riskier borrowers, resulting in a secular decline of bank credit as regulatory and risk-adjusted capital costs may outweigh banks' comparative advantage in screening and monitoring (e.g., Irani et al., 2021; Gopal and Schnabl, 2022; Buchak et al., 2023; Buchak et al., 2024). This retrenchment by banks led to the rise of nonbank lending to fill the gap. Although nonbank lenders might face higher costs for screening and monitoring, they do not experience the regulatory costs and capital requirements that increase lending costs for banks.

Rapid growth of direct lending in recent decades caught the attention of both academics and regulators (e.g., Chernenko, Erel, and Prilmeier, 2022; Cai and Haque, 2024). In an IMF report from April 2024, Cohen et al. (2024) suggest that direct lending could heighten financial vulnerabilities given the opacity and limited oversight of their activities. In this vein, knowing how direct lenders screen and monitor borrowers can shed light on the inherent risks associated with this new type of nonbank lending. Prior literature suggests that difference in the expertise and regulatory pressure of nonbank lenders and banks often result in adoption of different lending technologies (e.g., Vallée and Zeng, 2019; Minnis, Sutherland, and Vetter, 2023).

Would nonbank direct lenders in the middle market also behave like those FinTech and captive companies that lend to small businesses? The answer is not obvious. Middle market lending is quite distinct from small business lending. First, middle market firms are larger and more complex organizations for which accounting information is more relevant. Second, while small business loans are often asset-backed and heavily collateralized, middle market loans are often cash-flow based (Lian and Ma, 2020). Both reasons suggest higher value relevance of accounting information in the monitoring process. Therefore, direct lenders in the middle market likely rely more on accounting information during their screening and monitoring process than nonbank lenders to small businesses.

II.B Institutional background

II.B.1 Nonbank direct lending

Nonbank direct lending refers to the provision of credit by financial institutions that are not traditional banks. These entities, which include private equity firms, hedge funds, finance companies, and private debt funds, Business Development Companies (BDCs), play an increasingly prominent role in global credit markets. Unlike banks, nonbank lenders do not rely on deposits as a funding source; instead, they primarily use capital raised from institutional investors, such as pension funds, insurance companies, and high-net-worth individuals. Nonbank lenders often specialize in lending to mid-sized or distressed companies that may face difficulties obtaining traditional bank financing due to regulatory constraints or risk profiles.

Among the many players within nonbank direct lenders, private debt funds and Business Development Companies (BDCs), sometimes grouped together as "private credit," had seen the most growth in the last decade. Differing from finance companies and other hedge funds, private credit funds and BDCs are closed-end investment funds that only invest in mostly small and medium-sized companies. Private credit funds are pools of actively managed capital that invest primarily in loans to small- and medium-sized companies. BDCs, many of which are publicly traded companies, are closed-end investment funds registered with the the Securities and Exchange Commission (SEC) that also mostly invest in small- and medium-sized companies.

Direct loans are almost always senior secured and have similar covenants as syndicated loans. Many direct lenders such as private credit funds have been participants in the syndicated loan market for decades. Indeed, they have provided more than half of total syndicated lending in the U.S. since 2000s.[11] However, since the Great Financial Crisis (GFC), these institutional investors gradually became active investors that lend directly to middle market firms. Cai and Haque (2024) show that direct lending grew from an insignificant amount in 2008 to more than $800 billion in 2023 using Preqin data.

[11] See https://www.federalreserve.gov/releases/efa/efa-project-syndicated-loan-portfolios-of-financial-institutions.htm.

Borrowers of direct loans are typically middle market firms. With annual revenue between $10 million and $1 billion, middle market firms in the U.S. contribute to 1/3 of all U.S. jobs and private sector gross GDP according to the National Center for the Middle Market. Subject to significant information and moral hazard problems, these firms generally lack access to public debt markets (Faulkender and Petersen, 2006) and rely on privately placed debt (Diamond, 1991). Consequently, direct lending and syndicated loan markets are two key funding sources for these companies. Regulatory tightening since the GFC, however, led to considerable bank retrenchment in this market (Irani et al., 2021; Chernenko, Erel, and Prilmeier, 2022). In response, institutional investors such as BDCs and private debt funds started to lend directly to firms without the intermediation of banks. This direct lending activity reached $900 billion Asset Under Management (AUM) as of end of 2023 and comprised roughly 1/3 of the loans to middle market firms from a sample from 2010-2015 of 750 publicly listed middle market firms (Chernenko, Erel, and Prilmeier, 2022).

There are two types of direct lending, sponsored or non-sponsored. In sponsored deals, direct lenders work closely with private equity (PE) partners to provide credit to PE-backed companies. In fact, direct lenders are approached by sponsors in most sponsored deals.[12] In non-sponsored deals, on the other hand, direct lenders source deals themselves. While direct lenders started off lending mostly to sponsored entities, recent exuberance in private credit led to growth in non-sponsored deals. These deals pose potentially larger risks since there is no private equity sponsor backing up the company. Indeed, In a sample of sponsored (PE-backed) deals, Jang (2024) finds that PE funds can often inject more capital into the company during renegotiation process and therefore lower the risk of default on those loans.

My sample of publicly listed companies is comprised of mostly non-sponsored deals since all borrowers are publicly listed companies in the U.S. There are two advantages for examining public non-sponsored borrowers. First, non-sponsored deals are more similar to traditional bank lending. Therefore, my setting offers a more equal comparison between direct lending and bank syndicated lending. Second, direct lenders source deals themselves as opposed to relying on sponsors, also mimicking

[12] I thank an anonymous friend working in the industry for offering the insight on this piece of information.

what banks do in their lending process.

II.B.2 Syndicated bank loan

Syndicated loans are large loans provided to a borrower (usually a corporation, government, or large project) by a group of lenders, known as a syndicate. These loans are structured and arranged by one or more lead banks or financial institutions to spread the risk of lending among multiple lenders. Syndicated loans are typically used when the borrowing amount is too large or risky for a single lender to provide. For middle market firms in the U.S, they are often too risky for banks to directly provide all funding; as a result, almost all bank loans to them are syndicated.

In syndicated loan deals, banks can provide either a term loan or a revolving credit facility. The latter allows the borrower to draw, repay, and redraw funds as needed. While banks often sell off the majority of their term loans to other investors (e.g., Ivashina and Sun, 2011), they typically retain revolving credit facilities. Regardless of the loan type, banks acting as lead arrangers remain responsible for screening and monitoring the loan. Therefore, it remains valid to compare the monitoring processes of banks in syndicated loans to those of nonbank direct lenders.

III Data

III.A Identification of information covenants

Publicly listed U.S. companies are required to file their credit agreements with banks or non-bank entities as exhibits in an 8-K form and, occasionally, in subsequent 10-Q or 10-K filings when entering into material contracts. These credit agreements typically contain covenants, which are separated into three primary sections: affirmative covenants, negative covenants, and financial covenants. Affirmative covenants often include provisions that require borrowers to provide adequate information to lenders on a periodic basis. Negative covenants restrict borrowers' actions, such as incurring additional debt,

paying dividends, or making certain investments. Financial covenants include maintenance conditions that the borrower must meet, such as a maximum debt-to-EBITDA ratio or minimum liquidity levels, to avoid default.

In this study, I collect information on three specific information covenants within the affirmative covenants section: furnishing of monthly financial statements, annual projections or budget forecasts, and lender meetings. Following the classification by Liberti and Petersen (2019), I distinguish between *hard* information—quantitative, easily storable, and transmittable data—and *soft* information, which is more qualitative and difficult to quantify. In this context, I classify the requirements for monthly financial statements and projected financial statements as hard information covenants, while I categorize the requirement for periodic lender meetings as a soft information covenant. Previous research by Carrizosa and Ryan (2017) has analyzed the impact of hard information covenants; however, the importance of lender meetings as a source of soft information warrants further exploration.

Lender meetings or calls provide an opportunity for lenders to engage with company executives to discuss financial performance and facilitate the timely identification of potential financial distress. Unlike the information obtained through hard information covenants, which may lag in identifying underlying issues, lender meetings provide a qualitative assessment that can enhance lenders' monitoring capabilities by capturing nuanced aspects of the borrower's situation.

To classify these information covenants, I write a script in Python to search for certain texts and phrases similar to the strategy in Carrizosa and Ryan (2017) to systematically extract relevant clauses from the texts of loan contracts. Importantly, the contracts are fairly standard and often include the covenants as separate items on distinct lines, hence the simple textual search algorithm performs relatively well. Appendix B provides examples of the three covenant types. The covenants requiring monthly financial statements, projected financial statements, and lender meetings are denoted by the indicator variables *MonthlyFinStat*, *ProjFinStat*, and *LenderMeeting*, respectively. The variable "LenderMeeting" takes a value of 1 if the covenant is present and 0 if not. While lender meetings are less common in syndicated loan contracts, they are more frequently included in direct lending agreements.

These meetings can function similarly to conference calls, offering lenders direct communication with the borrowing firm's executives to provide qualitative insights that complement the quantitative data available from financial statements.

Appendix B also shows that there is substantial variation in the inclusion of these covenants across lenders, indicating that these provisions are not simply standardized boiler-plate languages but reflect lender-specific preferences or assessments of borrower risk. This variation underscores the importance of understanding how different lenders value and use both hard and soft information.

To further analyze the monitoring intensity of these covenants, I construct composite measures. Specifically, *HardInfo N* represents the sum of the *MonthlyFinStat* and *ProjFinStat* indicators, while *Info N* aggregates *HardInfo N* and *LenderMeeting*. Additionally, *AllInfo* takes the value of 1 if all three covenants are present. These composite measures capture varying levels of monitoring intensity and help examine the relationship between covenant structure and borrower outcomes.

III.B Loan contract sample

I obtain detailed loan contracts from exhibits from 8-K and 10-Q/K filings of public firms from EDGAR. The sample period is from 2010 to 2024. To obtain the list of credit agreements for middle market firms, I follow Nini, Smith, and Sufi (2009) identification algorithm to collect all available original loan contracts on SEC EDGAR during the years 2010 and 2023. Unfortunately, Dealscan covers only about half of the bank loans and almost none of the direct nonbank loans (Chernenko, Erel, and Prilmeier, 2022). As a result, I use ChatGPT 4o-mini to extract deal information and examine the extracted results with Dealscan information for the contracts that have matches in Dealscan. In particular, I collect information on lender names (which I use to determine whether the lender is a bank or nonbank entity), deal amount, interest spread, maturity, seniority, whether secured or first-lien, and whether the loan is asset-based or not. Appendix C provides the prompts I feed to ChatGPT to extract the deal information.

The final sample only includes original loan contracts because I primarily examine the role of

accounting information in lenders' initial decisions to monitor borrowers. Lastly, I obtain firms' financial information from Compustat. The final sample with all borrower and deal information required for the analysis is 3,007 loans from 2010 to 2023, of which 668 are nonbank direct loans.

IV Research design

IV.A Do nonbank direct lenders use more information covenants than banks?

My baseline research design is a linear probability model similar to the baseline specification in Jang (2024). Particularly, I investigate how the use of information covenants differs between a direct lender and a bank by estimating the following regression equation:

$$Y_{i,j,t} = \alpha_j + \alpha_t + \beta \cdot Nonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{1}$$

where $Y_{i,j,t}$ is the indicator variable for individual information covenants or the composite information covenant measures. α_j is the industry fixed effects using Fama-French 12 industry classification, and α_t is the year fixed effects. Borrower covariates $X_{i,j,t}$ include scaled EBITDA (divided by asset), firm size, ROA, and leverage ratio. $Z_{i,j,t}$ controls for various deal information including deal amount, interest spread, and maturity.

The biggest concern in the design above is that banks and nonbanks employ different screening technologies; as a result, there is no common support for bank and nonbank borrowers. To mitigate this concern, I use a canonical selection on observable method — propensity score matching (PSM). In particular, I use PSM on the nearest-neighbor and set caliper to 0.01 standard deviation.[13] The fact that the number of treated (nonbank) borrowers on support even with a small caliper indicates that nonbank and bank borrowers are not drastically different, at least in terms of observables. To conduct the PSM analysis, I use the full sets of borrower and deal characteristics as in the OLS regression to

[13] In untabulated results, I also use entropy balancing and the results remain consistent.

match the treated (those borrowing from direct lenders) and control (those borrowing from banks) firms (Abadie and Imbens, 2016). Moreover, as PSM doesn't rely on the strong functional form that an ordinary OLS does, the results might be less biased than OLS.

Still, PSM does not mitigate the concern of selection bias in this setting. Indeed, Chernenko, Erel, and Prilmeier (2022) shows that nonbank borrowers tend to be smaller, more likely to have negative EBITDA, and have higher leverage, etc. To further corroborate my result, I re-run the baseline regression 1 with two more granular fixed effects structures. First, I re-run the baseline regression model using firm fixed effects instead of industry fixed effects, i.e.:

$$Y_{i,j,t} = \alpha_i + \alpha_t + \beta \cdot Nonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{2}$$

where α_i is the firm fixed effects dummy. With firm and year fixed effects, I only exploit variation coming from borrower switching to/from bank to nonbank lenders. Furthermore, I still control for various firm characteristics such as size and scaled EBITDA. Intuitively, I am comparing how within the same firm, how the decision to swtich to nonbank direct lender affects the information covenant usage while conditional on key firm characteristics.

Second, I further restrict the fixed effects structure by using firm by year fixed effects akin to Khwaja and Mian (2008). In this specification, I am effectively comparing the difference in information covenants for the same borrower for the subset of firms that borrow from both banks and nonbanks in the same year. In other words, for the same firm that borrowers from both banks and nonbanks in the same year, how do their use of information covenants differ?

IV.B Heterogeneity of information covenant usage within nonbank lenders

To document the heterogeneity of nonbank lenders' monitoring practice, I split nonbank lenders into private credit lenders – private debt funds and BDCs – and other nonbank lenders. I then test whether private credit lenders differ significantly from other nonbank entities in information covenant

usage by running the following regression:

$$\begin{aligned} Y_{i,j,t} = \alpha_j + \alpha_t + \beta_1 \cdot Nonbank_{i,j,t} \\ + \beta_2 \cdot Nonbank_{i,j,t} \cdot PrivateCredit_{i,j,t} \\ + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \end{aligned} \tag{3}$$

where $Y_{i,j,t}$ is the indicator variable for individual information covenants or the composite information covenant measures. Fixed effects structures and covariates remain the same as those in Equation 1. The interaction term β_2 captures how private credit lenders differ from other nonbank lenders in their information covenant usage, while the interpretation of β_1 remains the same as above.

IV.C How do the size and industry specialization of nonbank lenders affect their information demand?

To examine whether the size and industry specialization of nonbank lenders influence their monitoring practices, I define two key variables. First, I obtain a measure of the size of nonbank lenders in my sample. In particular, I obtain the number of deals each nonbank lender has completed and classify them based on the median number of deals, which is 5. The indicator variable *Big* is set to 1 if a lender has completed more deals than the median, and 0 otherwise. Second, I obtain a measure of level of industry specialization. Using the complete list of portfolio companies for each nonbank direct lender from Preqin and PitchBook, I identify the top three industries most represented in their portfolios. The indicator variable *SameIndustry* is set to 1 if the borrower belongs to one of these top three industries, and 0 otherwise. I then run the OLS regression as follows:

$$\begin{aligned} Y_{i,j,t} = \alpha_j + \alpha_t + \beta_1 \cdot Nonbank_{i,j,t} + \beta_2 \cdot Size(Same\ Industry)_{i,j,t} \\ + \beta_3 \cdot Nonbank_{i,j,t} \cdot Size(Same\ Industry)_{i,j,t} \\ + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \end{aligned} \tag{4}$$

where $Y_{i,j,t}$ is the indicator variable for individual information covenants or the composite information covenant measures. Fixed effects structures and covariates remain the same as those in Equation 1. The interaction term β_2 captures the effect of either size or industry specialization on information covenant usage.

V Discussion of Results

V.A Rise of Nonbank Lending and Use of Information Covenants

Figure I shows that the share of middle market direct loans originated by nonbank entities has increased steadily between 2010 and 2023 to around 30% at the end of 2023. Corroborative evidence in Figure II shows that the increase in the share of nonbank deals result from steady decline of bank-originated deals in this market. Furthermore, nonbanks do not seem to focus on specific industries and instead lend to similar industries as banks do (Table I).

Figure III shows the frequency of the use of three information covenants – monthly financial statement, annual budget/projection, and lender meeting by banks and nonbank lenders respectively. While banks request monthly financial statement at around 20% of the time, nonbank direct lenders request them around 40-45% of the time. On the other hand, banks and nonbank lenders appear to be equally likely to request annual projection/budget forecast. Lastly, Nonbank lenders are much more likely to request periodic lender meetings and the gap especially widens in the recent decade since 2016. These descriptive figures suggest that for middle market firms between $10 million and $1 billion dollars in revenue, nonbank lenders tend to demand more acconuting information in their monitoring process.

Table II presents the summary statistics of borrowers and deal characteristics by banks and nonbanks separately. Note that nonbanks request monthly financial statement 43% of the time, compared to 24% for banks, and they request lender meetings 28% of the time, compared to 17% for banks. On the other hand, the frequency of annual projection covenant is 59% for both subsamples. Nonbank borrowers

tend to be smaller both in terms of size and revenue, have lower net income and EBITDA, and have higher leverage on average, similar to findings in Chernenko, Erel, and Prilmeier (2022). On the other hand, nonbank lenders have slightly higher R&D intensity and tangibility. These seem to indicate that nonbank borrowers are likely growth firms with smaller sizes. Furthermore, the average nonbank deal is smaller ($172 v.s. $377 million USD), has roughly similar maturity, but significantly higher interest margin (7.12% v.s. 4.43%), again confirming the result in Chernenko, Erel, and Prilmeier (2022).

In Appendix D, I run two simple determinant tests on borrowers' decision to borrow from nonbanks and the use of information covenants. First, Table D2 shows the key factors affects firms' decision to borrow from nonbanks. Overall, the results indicate that EBITDA, ROA, leverage ratio, and deal characteristics are all strong predictors for the borrowing from nonbanks. Importantly, the coefficients in three columns don't vary much, indicating that private credit lenders and other nonbank lenders seem to employ similar screening technologies and lend to similar borrowers. This finding is important because later results show that private credit lenders use information covenants much more frequently than other nonbank lenders.

Table D3 presents the determinant tests of information covenents. Results suggest that size is a consistent predictor for all these covenants, while leverage ratio is positively correlated with the use of both monthly financial statement and lender meeting. On the other hand, deal amount is negatively correlated with monthly financial statement covenant while positively correlated with both annual projection the lender meeting. These results suggest that borrowers are more likely to request the latter two covenants in larger deals to actively monitor borrower's ongoing performance, while care less about the interim financial statement in such case.

V.B Do nonbank lenders request more or less information?

In this section, I discuss the main results that nonbank lenders request more information covenants than banks. The baseline linear probability model in Table III show that nonbank lenders are, on average, 12.3% more likely to request monthly financial statement and 4.3% more likely to request periodic

lender meetings, while not more likely to request annual projections.[14] Furthermore, nonbank lenders also tend to include more information covenants in general, and the probability of nonbank lenders using all three covenants is 8.7% higher than that of banks. Overall, the findings suggest that nonbanks use accounting information extensively to monitor their borrowers post loan origination. This could either be due to the fact that nonbank lenders have higher incentives to monitor or they need more information to reduce information asymmetry and potential moral hazard problems.

Table IV presents robustness checks for results on monthly financial statement, lender meeting, and all information covenant dummies. Using both firm fixed effects and firm $\times$ year fixed effects similar to Khwaja and Mian (2008), I find that the results for monthly financial statement and all information covenants remain robust; nonbank lenders are 8.4% or 13.2% more likely to demand monthly financial statement while 5.4% and 6.8% more likely to demand all three information covenants. Results on lender meeting is still in the correct direction for the regression with firm fixed effects although it loses statistical significance due to limited sample size. The sample size for the regressions with firm fixed effects is 2,148, indicating that roughly 2/3 of my sample firms borrow from both banks and nonbanks, which helps to mitigate the concern of common support. On the other hand, the sample size for firm $\times$ year fixed effects is only around 659, suggesting that roughly 1/5 of my firms borrow from both banks and nonbanks in the same year. Overall, these robustness tests with more stringent fixed effects speak to two main findings. First, there are many firms that borrow both from banks and nonbanks. Second, even for these firms that borrow from both, the nonbank lenders tend to request more information covenants.

To corroborate the result from fixed effects regressions, I employ a nearest-neighbor propensity score (PSM) matching using caliper of 0.01 (standard deviation).[15] Panel A of Table V shows that nonbank lenders request monthly financial statement and lender meetings at higher frequency (13.4% and 6.7% respectively).

Overall, this set of results suggests that nonbank lenders, on average, monitor even more intensively

[14] In untabulated tests, I re-run the results using both a probit and logit model and the magnitudes of coefficients are similar.

[15] In untabulated results, I find that using entropy balancing gives similar results as PSM.

after loan origination relative to banks. Importantly, they request both hard (monthly financial statement) and soft (lender meeting) information to actively monitor their borrowers. Carrizosa and Ryan (2017) suggest that monthly financial statement gives backward-looking information while annual projection offers forward-looking information. To this light, nonbank lenders seem to care more about backward-looking information than banks. One potential reason is that nonbanks, unlike traditional banks, do not have ongoing relationships including depositary service with borrowers, and therefore demand more timely backward-looking information to reduce the information asymmetry.

Furthermore, nonbanks seem to supplement annual projection with more periodic lender meetings. While annual projection provides hard forward-looking information, lender meetings can provide lenders soft information about firm's future outlook. In this vein, my result is consistent with Stein (2002), which argue that large banks might request and use hard information more often than smaller financial institutions, i.e., nonbanks because such hard information is more easily transmitted and processed than soft information in a larger organization.

V.C Do private credit lenders differ from other nonbanks in information demand?

In this section, I test whether and how private credit lenders, private debt funds and BDCs, monitor and demand information differently from other nonbank lenders. Table VI shows the baseline specification with an additional interaction term of nonbank lender and private credit lender, which captures how private credit lenders differ from other nonbank lenders in use of information covenants. Importantly, the coefficients of the interaction term are positive and statistically significant for all six information covenant measures, suggesting that private credit lenders mandate these information covenants at higher frequencies than other nonbanks. These results seem to confirm the finding in Jang (2024) that these new types of nonbank direct lenders are relationship lenders that actively monitor borrowers.

Another interesting observation is that other nonbank lenders are 7.8% less likely to request annual

projection relative to tradtional banks, while 7.4% more likely to request monthly financial statement, which suggests that these other nonbank lenders seem to care about backward-looking information more than forward-looking information. On the other hand, private credit lenders tend to request annual projections slightly more frequently than banks (4.6%), although the result is not statistically significant as indicated by the PSM result in Panel B of Table V.

V.D How do size and industry specialization impact information demand?

To further shed light on the potential drivers of my result, I test whether the size of nonbank lenders and their industry specialization have an effect on their information covenant usage. I classify the top 15 banks as large banks in my sample. For nonbanks, I take the median number of deals, which is equal to 5, and classify any nonbank lenders that has more than five deals as large in my sample.

Table VII shows that larger nonbank lenders tend to be much more likely to request lender meetings (12.3%) than smaller nonbank lenders while small nonbank lenders do not differ from banks in use of lender meetings. This suggests that the more frequent use of lender meeting covenants mostly come from large nonbank lenders. On the other hand, large nonbanks do not differ from small nonbanks in use of monthly financial statement and annual projection.

To classify industry specialization, I calculate, for each lender, its top three industries where the bank/nonbank lend mostly to. For banks, I use my sample to construct this variable. For nonbanks, due to the limited number of deals in my sample, I augment my sample with Pitchbook direct lending deal information to construct this measure. Table VIII shows that nonbank lenders that are specialized in the same industry as the borrower also tend to request periodic lender meetings (22.3%) much more frequently than other nonbanks, while they do not differ from other nonbanks at requesting monthly financial statement or annual projection. Collectively, these cross-sectional tests suggest that larger nonbank lenders with industry expertise tend to request more lender meetings.

VI Conclusion

This paper examines how nonbank direct lenders monitor borrowers using accounting information, comparing their practices to those of syndicated bank loans. I find that nonbank lenders actively demand and utilize accounting information for monitoring borrowers post-loan origination. Specifically, nonbank lenders are more likely than banks to request monthly financial statements and periodic lender meetings, while demanding annual projections at similar frequencies as banks.

Additionally, this study reveals significant heterogeneity in the monitoring practices of different nonbank lenders. Private credit lenders stand out, frequently employing all three types of information covenants analyzed in this paper at higher rates compared to other nonbank lenders. Moreover, larger nonbank lenders and those with industry expertise are significantly more likely to request lender meetings, reflecting their active engagement in borrower oversight.

Overall, these findings contribute to our understanding of the monitoring processes employed by nonbank lenders and highlight the value relevance of accounting information in nonbank lending. Given the increasing prominence of nonbank lending as a result of deleveraging in the banking industry, understanding these monitoring practices is crucial. This paper underscores the critical role of accounting information and information covenants in loan agreements, providing insights into how nonbanks mitigate information asymmetry and manage borrower risk.

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VII Results

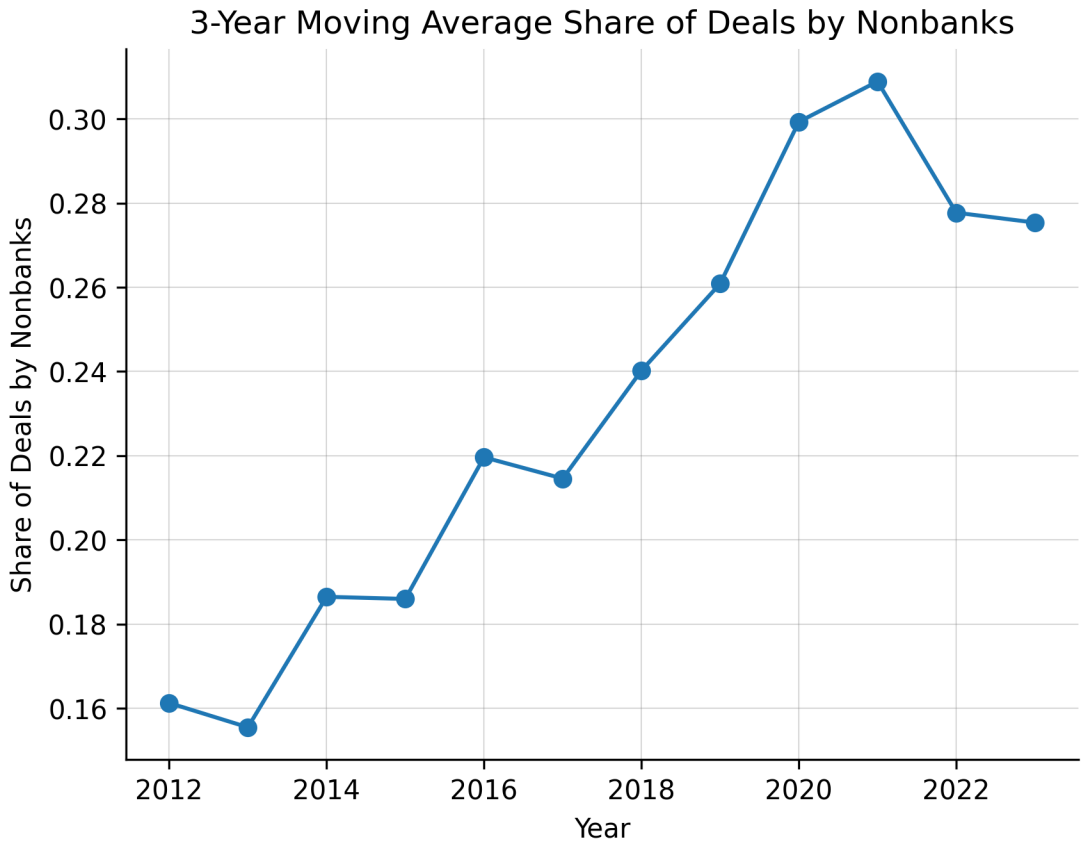


Figure I: Share of loans by nonbank lenders.
This figure plots the fraction of loans originated by nonbank lenders from 2010 to 2023. The graph starts in 2012 as the shares presented are 3-year moving average of the share of loans by nonbanks.

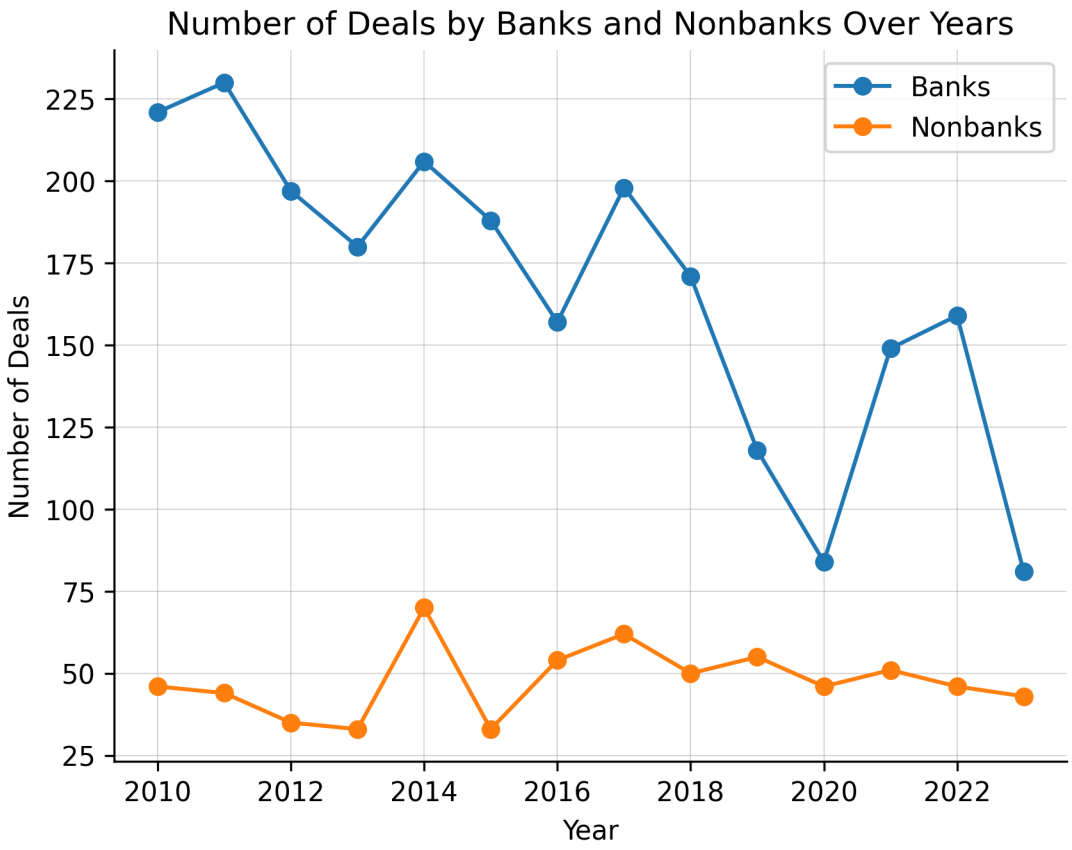
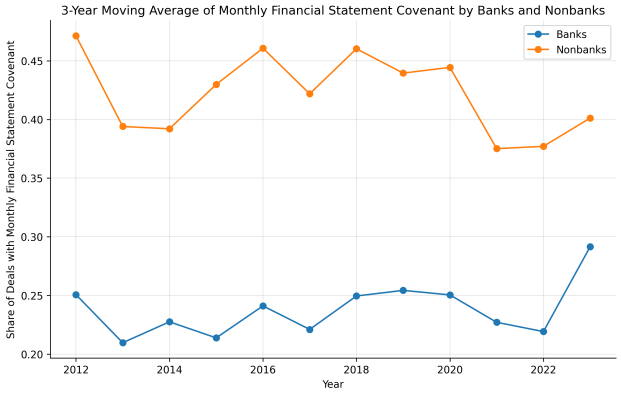
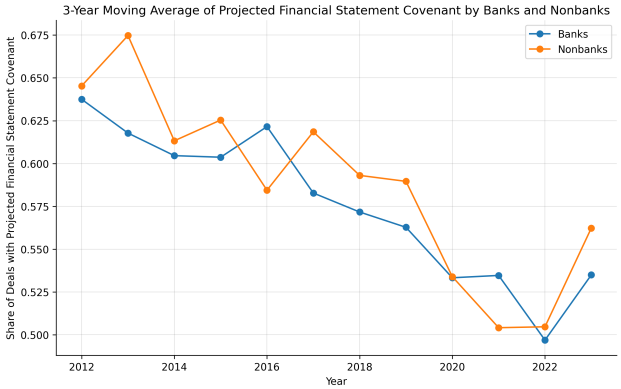


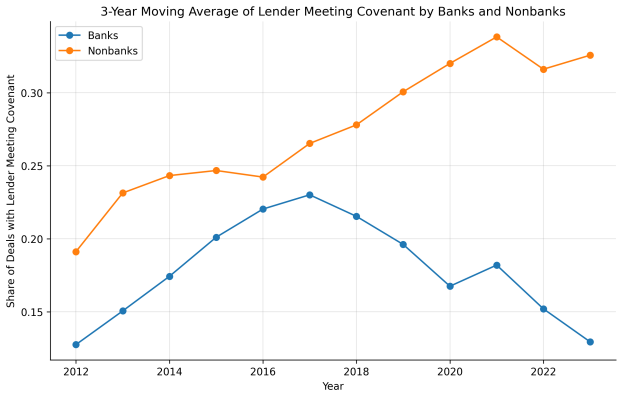
Figure II: Number of loans by nonbank lenders.
This figure plots the number of loans originated by nonbank lenders from 2010 to 2023 in the final sample of 3,007 loans.



(a) Monthly Financial Statement: Final Sample



(b) Annual Budget/Projection: Final Sample



(c) Lender Meeting: Final Sample

Figure III: Use of information covenants by banks and nonbanks.
This figure plots the fraction of loans that include the information covenant for banks and nonbanks from 2010 to 2023 in the final sample of 3,007 loans. Subfigure (a) graphs the use of monthly financial statement, subfigure (b) graphs the use of annual budget/projection, and subfigure (d) graphs the use of lender meeting. The graphs start in 2012 as the shares presented are 3-year moving average of the fraction of loans with certain information covenant.

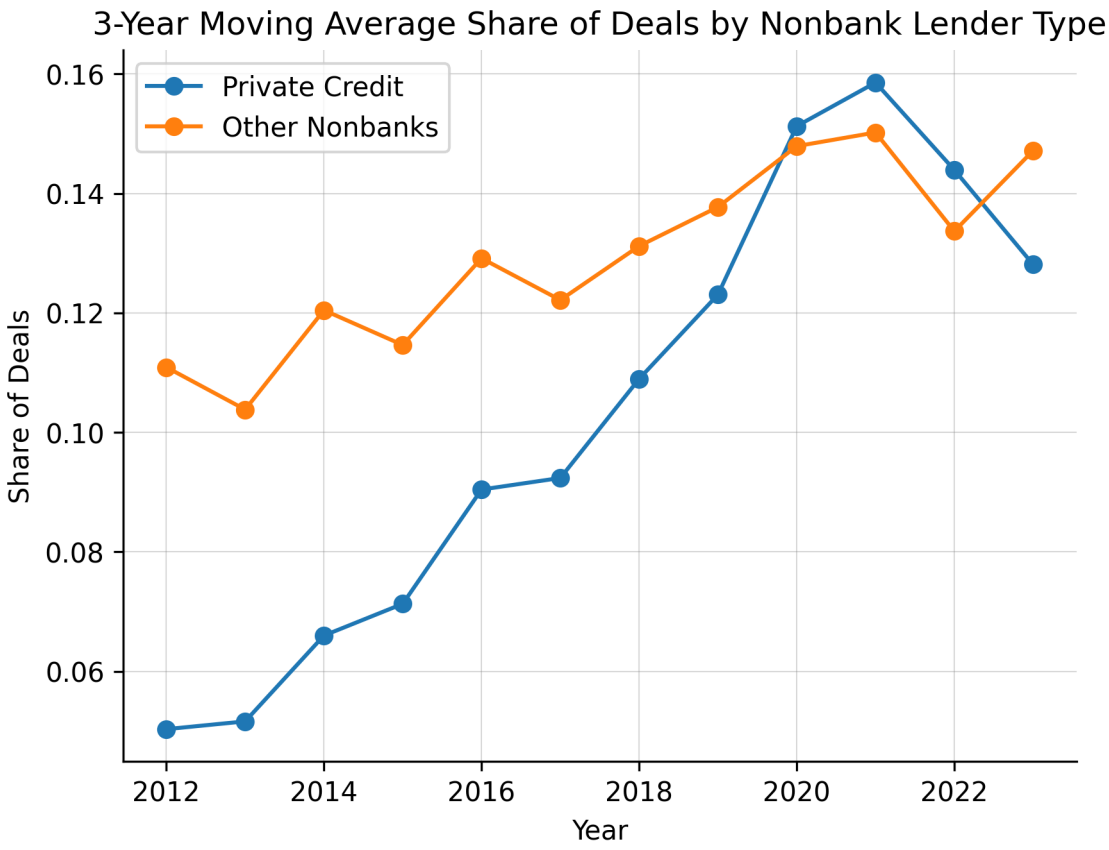
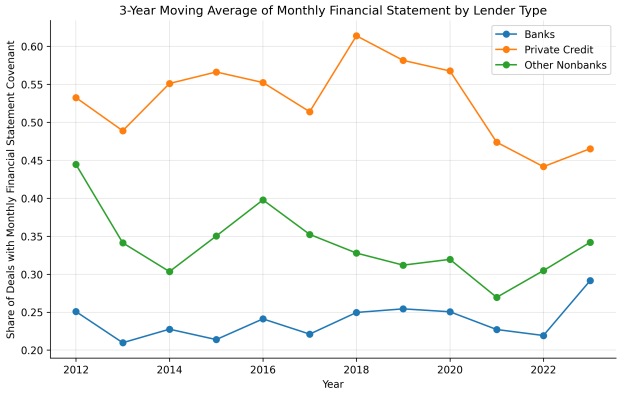
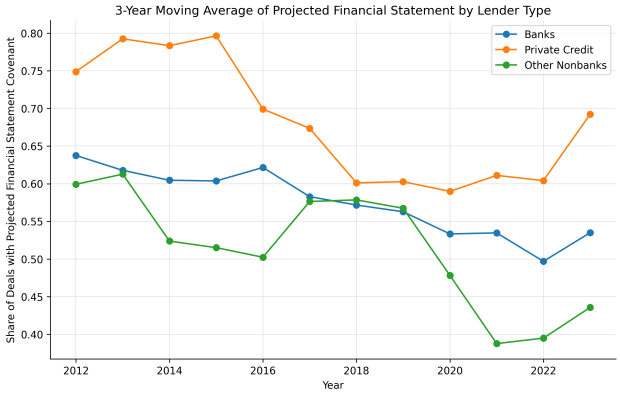


Figure IV: Share of loans by nonbank lender types.

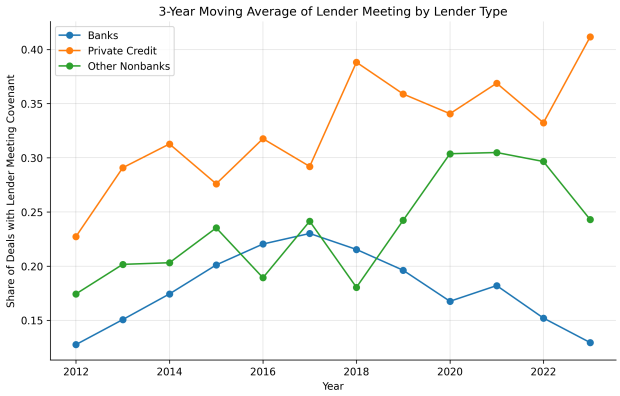
This figure plots the share of loans by private credit lenders, and other nonbank lenders. The graphs start in 2012 as the shares presented are 3-year moving average of the share of loans originated by private credit lenders and other nonbanks



(a) Monthly Financial Statement: Final Sample



(b) Annual Budget/Projection: Final Sample



(c) Lender Meeting: Final Sample

Figure V: Use of information covenants by banks and different nonbanks.
This figure plots the fraction of loans that include the information covenant for banks, private credit lenders, and other nonbank lenders from 2010 to 2023 in the final sample of 3,007 loans. Subfigure (a) graphs the use of monthly financial statement, subfigure (b) graphs the use of annual budget/projection, and subfigure (d) graphs the use of lender meeting. The graphs start in 2012 as the shares presented are 3-year moving average of the fraction of loans with certain information covenant.

Table I
Frequency of Bank/Nonbank Loans by Industry

Table I reports the number of loans by banks and nonbank lenders for each Fama-French 12 industry in the final sample from 2010 to 2023.

	Nonbank Lender		
	0	1	Total
N	2,339 (77.8%)	668 (22.2%)	3,007 (100.0%)
Fama-French 12 Industry			
Consumer NonDurables	124 (5.3%)	33 (4.9%)	157 (5.2%)
Consumer Durables	63 (2.7%)	12 (1.8%)	75 (2.5%)
Manufacturing	310 (13.3%)	43 (6.4%)	353 (11.7%)
Oil, Gas, and Coal Extraction and Products	158 (6.8%)	58 (8.7%)	216 (7.2%)
Chemicals and Allied Products	76 (3.2%)	17 (2.5%)	93 (3.1%)
Business Equipment	295 (12.6%)	61 (9.1%)	356 (11.8%)
Telephone and Television Transmission	59 (2.5%)	20 (3.0%)	79 (2.6%)
Utilities	63 (2.7%)	12 (1.8%)	75 (2.5%)
Wholesale, Retail, and Some Services	194 (8.3%)	70 (10.5%)	264 (8.8%)
Healthcare, Medical Equipment, and Drugs	145 (6.2%)	92 (13.8%)	237 (7.9%)
Finance	430 (18.4%)	110 (16.5%)	540 (18.0%)
Other	422 (18.0%)	140 (21.0%)	562 (18.7%)

Table II
Summary Statistics by Bank and Nonbank Loans

Table II reports the summary statistics of borrowers and deal characteristics by banks and nonbanks in the final loan sample from 2010 to 2023. EBITDA is calculated as previous fiscal year EBITDA. Other borrower characteristics are from the previous fiscal quarter. Borrower characteristics are from Compustat and loan characteristics are hand-collected from credit agreements.

Panel A: Banks

	Count	Mean	Std. Dev.	Min	Median	Max
Monthly Financial Statement	2,339	0.24	0.43	0.00	0.00	1.00
Annual Budget/Projection	2,339	0.59	0.49	0.00	1.00	1.00
Lender Meeting	2,339	0.17	0.38	0.00	0.00	1.00
Total Assets (Million USD)	2,339	2513.95	3518.48	49.23	1413.26	22847.97
Revenue (Million USD)	2,339	276.51	252.12	11.54	182.40	960.78
Net Income (Million USD)	2,339	11.46	65.80	-267.71	5.38	310.34
ROA	2,339	0.00	0.04	-0.20	0.00	0.15
Leverage Ratio	2,339	0.63	0.25	0.13	0.61	1.63
EBITDA (Million USD)	2,339	182.69	258.02	-266.81	97.28	1388.79
R&D Intensity	2,339	0.00	0.01	0.00	0.00	0.07
Tangibility	2,339	0.46	0.45	0.00	0.31	2.47
Deal Amount (Million USD)	2,339	376.81	462.38	3.44	230.00	2500.00
Maturity (Years)	2,339	4.55	2.10	0.34	4.99	14.80
Interest Margin (Percentage)	2,339	4.43	2.30	1.03	3.80	15.00
Floating Rate	2,339	0.95	0.22	0.00	1.00	1.00
Asset Based Loan	2,339	0.02	0.13	0.00	0.00	1.00
Second Lien	2,339	0.01	0.12	0.00	0.00	1.00

Panel B: Nonbanks

	Count	Mean	Std. Dev.	Min	Median	Max
Monthly Financial Statement	668	0.43	0.50	0.00	0.00	1.00
Annual Budget/Projection	668	0.59	0.49	0.00	1.00	1.00
Lender Meeting	668	0.28	0.45	0.00	0.00	1.00
Total Assets (Million USD)	668	1447.41	2535.57	49.23	654.14	22847.97
Revenue (Million USD)	668	167.84	201.06	11.54	84.24	960.78
Net Income (Million USD)	668	-10.07	62.27	-267.71	-3.48	310.34
ROA	668	-0.02	0.06	-0.20	-0.01	0.15
Leverage Ratio	668	0.75	0.31	0.13	0.71	1.63
EBITDA (Million USD)	668	74.75	195.69	-266.81	25.11	1388.79
R&D Intensity	668	0.01	0.02	0.00	0.00	0.07
Tangibility	668	0.51	0.54	0.00	0.33	2.47
Deal Amount (Million USD)	668	172.17	250.73	0.00	90.00	2500.00
Maturity (Years)	668	4.76	2.62	0.34	4.88	14.80
Interest Margin (Percentage)	668	7.12	3.37	1.00	6.92	15.00
Floating Rate	668	0.73	0.44	0.00	1.00	1.00
Asset Based Loan	668	0.01	0.12	0.00	0.00	1.00
Second Lien	668	0.03	0.17	0.00	0.00	1.00

Table III
Use of Information Covenant by Banks and Nonbanks

Table III reports the main regression specification given by the following equation:

$$Y_{i,j,t} = \alpha_j + \alpha_t + \beta \cdot Nonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{5}$$

Outcome variables in columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-Industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.123***	-0.038	0.043**	-0.023	0.128***	0.087***
	(0.022)	(0.024)	(0.020)	(0.023)	(0.043)	(0.012)
EBITDA (Scaled)	-0.127*	-0.027	-0.031	-0.046	-0.184	0.015
	(0.074)	(0.082)	(0.065)	(0.079)	(0.143)	(0.040)
Ln(Total Assets)	-0.067***	-0.095***	-0.021***	-0.101***	-0.183***	-0.016***
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.004)
ROA	-0.465**	-0.002	-0.138	-0.128	-0.605	0.066
	(0.207)	(0.229)	(0.184)	(0.221)	(0.401)	(0.113)
Leverage Ratio	0.052*	-0.012	0.176***	0.028	0.216***	0.035**
	(0.031)	(0.035)	(0.028)	(0.033)	(0.060)	(0.017)
Ln(Deal Amount)	-0.003	0.027***	0.030***	0.027***	0.055***	0.008**
	(0.007)	(0.007)	(0.006)	(0.007)	(0.013)	(0.004)
Maturity (Years)	-0.024***	-0.002	0.004	-0.010***	-0.021***	-0.006***
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	-0.002	0.004	0.019***	0.004	0.022***	0.005***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.002)
Observations	3007	3007	3007	3007	3007	3007
Adjusted R^2	0.119	0.091	0.100	0.085	0.128	0.058
FF-12 Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table IV
Use of Information Covenant by Banks and Nonbanks: Robustness

Table IV reports robustness tests for the main results in Table III. Outcome variables in are monthly financial statement dummy in columns (1) and (2), lender meeting dummy in columns (3) and (4), and dummy for all three information covenants in columns (5) and (6). Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. Columns (1), (3), and (5) include firm and year fixed effects. Columns (2), (4), and (6) include firm by year fixed effects akin to Khwaja and Mian (2008). Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Monthly FS	Meeting	Meeting	All Info	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.132***	0.084**	0.026	-0.006	0.068***	0.054**
	(0.027)	(0.040)	(0.024)	(0.033)	(0.016)	(0.024)
EBITDA (Scaled)	-0.207	-2.661***	-0.177	2.506***	-0.217***	0.298
	(0.133)	(1.005)	(0.119)	(0.825)	(0.081)	(0.616)
Ln(Total Assets)	-0.076***	-0.610***	0.013	0.195**	-0.018	-0.133*
	(0.023)	(0.121)	(0.021)	(0.099)	(0.014)	(0.074)
ROA	-0.458	-1.660**	-0.554**	1.080*	0.080	-0.671
	(0.279)	(0.744)	(0.251)	(0.611)	(0.170)	(0.456)
Leverage Ratio	0.035	-0.164	-0.031	-0.031	0.019	-0.189
	(0.063)	(0.218)	(0.056)	(0.179)	(0.038)	(0.134)
Ln(Deal Amount)	0.013	0.003	0.026***	0.011	0.007	0.011
	(0.008)	(0.012)	(0.007)	(0.010)	(0.005)	(0.007)
Maturity (Years)	-0.016***	-0.008	0.003	-0.003	-0.001	-0.001
	(0.004)	(0.007)	(0.004)	(0.006)	(0.003)	(0.004)
Interest Margin (Percentage)	-0.005	-0.000	0.005	0.001	-0.002	-0.006*
	(0.004)	(0.006)	(0.003)	(0.005)	(0.002)	(0.003)
Observations	2148	659	2148	659	2148	659
Adjusted R^2	0.535	0.725	0.522	0.793	0.414	0.774
Firm Fixed Effects	Yes	No	Yes	No	Yes	No
Year Fixed Effects	Yes	No	Yes	No	Yes	No
Firm × Year Fixed Effects	No	Yes	No	Yes	No	Yes

Table V
Use of Information Covenant by Banks and Nonbanks: Propensity Score Matching (PSM)

Table V reports the difference in the use of various information covenants by banks and nonbanks using PSM based on borrower covariates including industry, total assets, EBITDA, ROA, leverage ratio, as well as deal characteristics including amount, maturity, and interest margin. Outcome variables in Columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Panel A is the result for all nonbank lenders. In Panel B and C the subsample of deals with private credit lenders and other nonbank lenders are used. Standard errors in parenthesis are heteroskedasticity-consistent analytical standard errors from Abadie and Imbens (2016). ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

Panel A: All Nonbanks

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Unmatched	0.188***	0.001	0.110***	0.033	0.300***	0.101***
	(0.020)	(0.022)	(0.017)	(0.021)	(0.038)	(0.010)
Matched	0.134***	- 0.001	0.067*	-0.016	0.194***	0.102***
	(0.035)	(0.037)	(0.037)	(0.034)	(0.068)	(0.017)
Observations	3007	3007	3007	3007	3007	3007

Panel B: Private Credit Only

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Unmatched	0.289***	0.075**	0.174***	0.127***	0.537***	0.166***
	(0.027)	(0.031)	(0.024)	(0.029)	(0.053)	(0.014)
Matched	0.199***	0.046	0.107**	0.084	0.352***	0.142***
	(0.056)	(0.062)	(0.054)	(0.059)	(0.125)	(0.033)
Observations	2623	2623	2623	2623	2623	2623

Panel C: Other Nonbanks Only

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Unmatched	0.114***	-0.054**	0.063***	-0.037	0.124***	0.053***
	(0.024)	(0.027)	(0.021)	(0.026)	(0.047)	(0.011)
Matched	0.121***	-0.022	0.022	0.008	0.121	0.059***
	(0.037)	(0.043)	(0.035)	(0.041)	(0.079)	(0.020)
Observations	2723	2723	2723	2723	2723	2723

Table VI
Use of Information Covenant by Private Credit and Other Nonbank Lenders

Table VI reports the main regression given by the Equation:

$$Y_{i,j,t} = \alpha_j + \alpha_t + \beta_1 \cdot Nonbank_{i,j,t} + \beta_2 \cdot Nonbank_{i,j,t} \cdot PrivateCredit_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t} \quad (6)$$

Outcome variables in columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-Industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.074***	-0.078***	0.013	-0.074***	0.008	0.048***
	(0.025)	(0.028)	(0.022)	(0.027)	(0.049)	(0.014)
Nonbank Lender X Private Credit	0.138***	0.112***	0.085***	0.144***	0.336***	0.110***
	(0.034)	(0.038)	(0.030)	(0.036)	(0.066)	(0.019)
EBITDA (Scaled)	-0.121*	-0.022	-0.027	-0.040	-0.171	0.019
	(0.073)	(0.082)	(0.065)	(0.079)	(0.142)	(0.040)
Ln(Total Assets)	-0.069***	-0.096***	-0.022***	-0.102***	-0.187***	-0.017***
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.004)
ROA	-0.427**	0.029	-0.114	-0.088	-0.511	0.096
	(0.206)	(0.229)	(0.184)	(0.221)	(0.400)	(0.112)
Leverage Ratio	0.050	-0.014	0.175***	0.026	0.211***	0.033**
	(0.031)	(0.035)	(0.028)	(0.033)	(0.060)	(0.017)
Ln(Deal Amount)	0.001	0.031***	0.032***	0.031***	0.064***	0.011***
	(0.007)	(0.007)	(0.006)	(0.007)	(0.013)	(0.004)
Maturity (Years)	-0.023***	-0.001	0.005	-0.010**	-0.020***	-0.005***
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	-0.003	0.003	0.018***	0.003	0.018***	0.004**
	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.002)
Observations	3007	3007	3007	3007	3007	3007
Adjusted R^2	0.124	0.093	0.102	0.090	0.135	0.068
FF-12 Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table VII
Large vs Small Nonbank Lenders

Table VII reports whether large and small direct lenders differ in their information covenant usage. Outcome variables in Columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Main variable of interest is big direct lender, which equals 1 if the private debt fund has had more than 5 deals (median number) during the sample period and 0 otherwise. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include firm and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Backward Info	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.121***	-0.021	0.007	-0.014	0.107*	0.057***
	(0.030)	(0.034)	(0.027)	(0.032)	(0.059)	(0.017)
Big Lender	0.029	0.044*	0.050***	0.044*	0.123***	0.009
	(0.022)	(0.024)	(0.019)	(0.023)	(0.042)	(0.012)
Lender is Nonbank X Big	0.025	-0.010	0.123***	0.012	0.139*	0.077***
	(0.040)	(0.044)	(0.035)	(0.043)	(0.078)	(0.022)
EBITDA (Scaled)	-0.141*	-0.039	-0.070	-0.062	-0.250*	-0.003
	(0.074)	(0.082)	(0.065)	(0.079)	(0.143)	(0.040)
Ln(Total Assets)	-0.069***	-0.097***	-0.024***	-0.103***	-0.191***	-0.017***
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.004)
ROA	-0.471**	-0.005	-0.160	-0.134	-0.637	0.054
	(0.207)	(0.229)	(0.183)	(0.221)	(0.400)	(0.113)
Leverage Ratio	0.051	-0.013	0.171***	0.026	0.209***	0.033*
	(0.031)	(0.035)	(0.028)	(0.033)	(0.060)	(0.017)
Ln(Deal Amount)	-0.004	0.026***	0.028***	0.026***	0.051***	0.007**
	(0.007)	(0.007)	(0.006)	(0.007)	(0.013)	(0.004)
Maturity (Years)	-0.024***	-0.002	0.005	-0.010***	-0.020***	-0.005***
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	-0.002	0.004	0.019***	0.004	0.022***	0.006***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.002)
Observations	3007	3007	3007	3007	3007	3007
Adjusted R^2	0.120	0.092	0.111	0.087	0.134	0.064
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table VIII
Industry Specialization

Table VIII reports how industry specialization affects information covenant usage. Outcome variables in Columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Main variable of interest is big direct lender, which equals 1 if the private debt fund has had more than 5 deals (median number) during the sample period and 0 otherwise. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include firm and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.134***	-0.056*	0.035	-0.018	0.114**	0.087***
	(0.028)	(0.031)	(0.025)	(0.030)	(0.055)	(0.015)
Top 3 Industry	0.021	-0.016	0.010	0.014	0.015	0.018
	(0.023)	(0.026)	(0.021)	(0.025)	(0.045)	(0.013)
Lender is Nonbank X Top 3 Industry	0.039	0.113	0.223***	0.064	0.374***	0.179***
	(0.072)	(0.080)	(0.064)	(0.077)	(0.140)	(0.039)
EBITDA (Scaled)	-0.124*	-0.027	-0.025	-0.043	-0.176	0.020
	(0.074)	(0.082)	(0.065)	(0.079)	(0.143)	(0.040)
Ln(Total Assets)	-0.067***	-0.095***	-0.020***	-0.100***	-0.182***	-0.016***
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.004)
ROA	-0.457**	0.009	-0.110	-0.118	-0.559	0.089
	(0.207)	(0.229)	(0.183)	(0.221)	(0.401)	(0.113)
Leverage Ratio	0.052*	-0.010	0.178***	0.028	0.220***	0.037**
	(0.031)	(0.035)	(0.028)	(0.033)	(0.060)	(0.017)
Ln(Deal Amount)	-0.003	0.027***	0.030***	0.027***	0.054***	0.007**
	(0.007)	(0.007)	(0.006)	(0.007)	(0.013)	(0.004)
Maturity (Years)	-0.024***	-0.002	0.005	-0.010***	-0.020***	-0.005***
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	-0.002	0.004	0.019***	0.004	0.022***	0.005***
	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.002)
Observations	3007	3007	3007	3007	3007	3007
Adjusted R^2	0.119	0.091	0.104	0.085	0.130	0.066
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Appendix A: Variable Definitions

Table A1: Variable Definitions

Variable	Definition
Nonbank Lender	Indicator variable equal to 1 if the lender is a nonbank entity
Private Credit	Indicator variable equal to 1 if the lender is either a private debt fund or a Business Development Company (BDC)
Other Nonbank	Indicator variable equal to 1 if the lender is a nonbank but not private credit
Monthly Financial Statement	Indicator variable equal to 1 if the loan contract includes an affirmative covenant that mandates supply of monthly financial statements to the lender
Annual Budget/Projection	Indicator variable equal to 1 if the loan contract includes an affirmative covenant that mandates supply of annual projections or budget forecasts to the lender
Lender Meeting	Indicator variable equal to 1 if the loan contract includes an affirmative covenant that mandates periodic meetings with the lender
Total Assets	Total book assets in the previous fiscal quarter at loan origination (atq) in millions USD
Revenue	Total revenue in the previous fiscal quarter at loan origination (revtq) in millions USD
Net Income	Net income in the previous fiscal quarter at loan origination (niq) in millions USD
ROA	Return on asset in the previous fiscal quarter at loan origination (niq/atq)
Leverage Ratio	Leverage ratio in the previous fiscal quarter at loan origination (ltq/atq)
EBITDA	EBITDA in the previous fiscal year at loan origination (ebitda)
R&D Intensity	Research & Development Intensity in the previous fiscal quarter at loan origination (xrdq/atq)
Tangibility	Tangibility in the previous fiscal quarter at loan origination (ppegtq/atq)
Deal Amount	Loan amount in millions USD
Maturity	Loan maturity in years
Interest Margin	Interest spread in percentage points
Floating Rate	Indicator variable equal to 1 if the interest spread is a floating rate
Asset Based Loan	Indicator variable equal to 1 if the loan is an asset-based loan
Second Lien	Indicator variable equal to 1 if the loan is a second-lien loan

Appendix B: Examples of Information Covenants

This appendix shows examples of three information covenants coded in this paper. I also present evidence that the same lender uses different information covenants when lending to different borrowers, mitigating the concern that these information covenants are simply boiler-plate languages.

Below I provide an example credit agreement that contains information covenants requesting monthly financial statement and annual budget forecast. On July 24, 2023, IRobot Corporation entered into a credit agreement with TCG Senior Funding L.L.C. The credit agreement provides a $200,000,000 senior secured term loan credit facility that the Company is drawing down in full. The loan bears a floating interest rate based on term SOFR plus 9.00%. The affirmative covenants section of the loan agreement (Section 6) includes the following paragraphs, from which I can identify the use of particular information covenants (**bold** sentences are information used to identify the particular information covenant):

- Section 6.01(c): Budget. Promptly after the same has been submitted to and reviewed by the Board of Directors of the Borrower in each fiscal year, **a detailed consolidated budget of the Borrower and its Subsidiaries for such fiscal year** (including a projected consolidated balance sheet and related projected statements of income and cash flows as of the end of and for such fiscal year and setting forth the assumptions used for purposes of preparing such budget).

- Section 6.02(a): Fiscal Month Financial Related Deliverables. Commencing with the fiscal month of the Borrower ending August 26, 2023, **ten Business Days after the end of each fiscal month, (i) unaudited balance sheets as of the close of such fiscal month and the related statements of income for such fiscal month**, which, for avoidance of doubt, shall not be required to be certified and which shall not constitute a representation or warranty with respect to the contents thereof (and, notwithstanding anything to the contrary in this Agreement or any other Loan Document, any representations, warranties or certifications that apply to any financial statements or components thereof shall be deemed to not apply to any of the balance sheets or

related statements of income provided pursuant to this Section 6.02(a)(i)), together with (ii) a Compliance Certificate signed by the Chief Financial Officer or other Responsible Officer of the Borrower showing in reasonable detail the calculation of the Consolidated Core Assets and a certification of Borrower's compliance or failure to comply with the Minimum Core Assets Test.

Below I provide an example credit agreement that contains a covenant requiring periodic lender meetings. On November 8, 2023, Apyx Medical Corporation entered into a credit agreement with Perceptive Credit Holdings IV, LP. The credit agreement provides up to $45 million senior secured term loan facility comprised of two tranches. The initial loan and delayed draw loan bear interest at a floating rate based on one-month SOFR, subject to a floor of 5.0%, plus 7.0%. Similarly, the affirmative covenants section of the loan agreement (Section 8) include the following paragraph:

- 8.17: Conference Calls. No later than five (5) Business Days after delivery of the financial statements pursuant to Sections 8.01(b) and 8.01(c), at the request of the Administrative Agent, **the Borrower shall cause its chief financial officer (or its chief executive officer) to participate in conference calls with the Administrative Agent and the Lenders to discuss, among other things, the financial condition of each Obligor and any financial or earnings reports**; provided that such conference calls shall be held at reasonable times during normal business hours and, so long as no Event of Default has occurred and is continuing, **not more frequently than once per fiscal quarter.**

In the paragraphs below, I show that the requirement of periodic lender meeting is not a boiler-plate. In particular, I show that the same lender changes its demand for lender meeting when contracting with different borrowers.

Ares Capital Corporation is the largest publicly traded BDC by market capitalization and had a portfolio of around $25 billion as of June 30.[16] On January 18, 2024 Ares Capital Corporation entered into a credit agreement with Artivion, Inc. for an amount of $350,000,000 at a floating rate of SOFR plus 6.50%. The contract mandates quarterly lender calls per Section 5.14:

[16] Information is found on company website https://www.arescapitalcorp.com/about-ares-capital-corporation.

- **Quarterly Lender Calls.** Quarterly, but not more than one time each Fiscal Quarter, at a time to be mutually agreed with, and at the written request of, the Administrative Agent that is reasonably promptly after the delivery of the information required pursuant to Sections 5.1(a) and clause (x) of Section 5.1(b) above, the Borrower will participate in a conference call for Lenders to discuss the financial condition and results of operations of the Borrower and the Subsidiaries for the most recently-ended Fiscal Quarter or Fiscal Year, as applicable, for which financial statements have been delivered.

On December 18, 2023, Ares Capital Corporation entered into a credit agreement with ADMA Biologics, Inc. for a total amount of $130,000,000 (including $62,500,000 initial term loan and $72,500,000 revolving credit facility). That credit agreement, however, does **not** include affirmative covenant requiring periodic lender call or lender meeting.

Appendix C: ChatGPT Prompts for Loan Contract Information

In this appendix, I provide the ChatGPT prompts I employ to extract deal information. In particular, I use ChatGPT 4o-mini API to extract borrower and lender names, deal size, maturity, and interest spreads by reading the entire loan contract downloaded from EDGAR and subsequently cleaned using normal algorithms. Below is the prompt I employ for the extraction:

Lender and borrower names: You are an AI language model designed to extract specific information from legal documents. Please read the following company's credit agreement and extract the following details:

1. **Borrower Name:** 2. **Lender Name (Lead Arrangers):**

Please first search for lead arrangers. If you cannot find the lead arrangers, then serach for administrative agents. Don't include in your answers the following: "various lenders," "various financial institutions," "certain financial institutions," "lenders from time to time party hereto," as those are not lender names If the information in nowhere to be found in all exhibits, return "Not Found".

Text: text

Please format the output as follows (on separate lines):
n" "Borrower Name: <value> Lender Name: <value>

Deal Information: "You are a financial analyst, and your task is to extract key financial terms from a credit agreement document. The specific details you need to identify are:

Deal Size (Amount): The total loan or credit amount provided in the agreement, typically expressed in U.S. dollars (e.g., "100$million$"or"250,000,000"). You should make sure that the amount is clearly stated in dollars $. If the amount is not explicitly stated in dollars, please convert it to dollars.

Interest Spread (Rate): The applicable rate or margin for the loan, which is often stated as a spread over a benchmark rate (e.g., LIBOR, SOFR), such as 'LIBOR + 2%' or 'SOFR + 1.5%'. In such case, report LIBOR + 2% or SOFR + 1.5% for instance. A few more examples include: 1. "Applicable Rate" means, for any day, (i) 4.50% per annum, in the case of an ABR Loan or (ii) 5.50% per annum, in the case of a Eurodollar Loan. In this case, you should report LIBOR + 5.50%. 2. Interest on Loans. Subject to the provisions of Section 2.07, the Loans shall bear interest (computed on the basis of the actual number of days elapsed over a year of 360 days) at a rate per annum equal to 9.00% on the unpaid principal amount thereof through the date such Loan is paid in full in cash (whether upon final maturity, prepayment, acceleration or otherwise). In this case, you should report 9.00%.

Maturity Date: The date by which the loan must be repaid, typically presented as a specific date (e.g., 'December 31, 2025') or a period (e.g., '5 years from the effective date'). A few more examples include: 1. "Term Maturity Date" means (i) September 1, 2027 (or if such day is not a Business Day, the immediately preceding Business Day) or ... In this case, you should report September 1, 2027. 2. "Delayed Draw Term B Loan Maturity Date" shall mean May 24, 2016. In this case, you should report May 24, 2016.

From the document provided below, please extract the deal size, interest spread, and maturity date in a clear and structured format. If any of these details are missing, please note that as well.

Text: truncated_text

Please format the output as follows (on separate lines):
n" "Deal Amount: <value> Interest Spread: <value> Maturity: <value>"

Appendix D: Additional Results

In this appendix, I present additional results including determinant tests for lender type, information covenants, more robustness tests, tests for covariate balances of the propensity score matching estimates, and more results on heterogeneity of lender types. I also present descriptive figures of loan counts over years by banks and nonbanks, and descriptive figures of the use of information covenants by banks and nonbanks for the full sample from 1993 to 2023.

Tables

Table D1
Frequency of Bank/Private Credit Loans by Industry

Table D1 reports the number of loans by banks and private credit lenders for each Fama-French 12 industry in the final sample of loans from 2010 to 2023.

	Private Credit Lender		
	0	1	Total
N	2,339 (89.2%)	284 (10.8%)	2,623 (100.0%)
Fama-French 12 Industry			
Consumer NonDurables	124 (5.3%)	22 (7.7%)	146 (5.6%)
Consumer Durables	63 (2.7%)	7 (2.5%)	70 (2.7%)
Manufacturing	310 (13.3%)	20 (7.0%)	330 (12.6%)
Oil, Gas, and Coal Extraction and Products	158 (6.8%)	25 (8.8%)	183 (7.0%)
Chemicals and Allied Products	76 (3.2%)	4 (1.4%)	80 (3.0%)
Business Equipment	295 (12.6%)	34 (12.0%)	329 (12.5%)
Telephone and Television Transmission	59 (2.5%)	5 (1.8%)	64 (2.4%)
Utilities	63 (2.7%)	5 (1.8%)	68 (2.6%)
Wholesale, Retail, and Some Services	194 (8.3%)	28 (9.9%)	222 (8.5%)
Healthcare, Medical Equipment, and Drugs	145 (6.2%)	51 (18.0%)	196 (7.5%)
Finance	430 (18.4%)	31 (10.9%)	461 (17.6%)
Other	422 (18.0%)	52 (18.3%)	474 (18.1%)

Table D2
Determinant Tests: Borrowing from Nonbanks

Table D2 reports determinant tests of borrowers' decision to contract with nonbank lenders or direct lenders. The outcome variables are indicator variables for lender being a nonbank or a direct lender in columns (1) and (2) respectively. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Lender is Nonbank	Lender is Private Credit	Lender is Other Nonbank
	(1)	(2)	(3)
EBITDA (Scaled)	-0.259***	-0.232***	-0.211***
	(0.061)	(0.051)	(0.063)
Ln(Total Assets)	0.001	0.007	0.001
	(0.007)	(0.005)	(0.007)
ROA	-0.658***	-0.708***	-0.393**
	(0.172)	(0.138)	(0.174)
Leverage Ratio	0.125***	0.105***	0.099***
	(0.026)	(0.021)	(0.025)
Ln(Deal Amount)	-0.073***	-0.062***	-0.051***
	(0.005)	(0.004)	(0.007)
Maturity (Years)	0.017***	0.006**	0.016***
	(0.003)	(0.003)	(0.003)
Interest Margin (Percentage)	0.047***	0.039***	0.032***
	(0.003)	(0.002)	(0.003)
Observations	3007	2623	2723
Adjusted R^2	0.279	0.315	0.152
FF-12 Industry Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Table D3
Determinant Tests: Information Covenants

Table D3 reports determinant tests of information covenants. The outcome variables are indicator variables for three information covenants – monthly financial statement, annual budget/projection, and lender meeting – respectively in columns (1)-(3). Outcome variables in Columns (4)-(6) are indicator variables for composite information measures. Hard info $= 1$ if either monthly financial statement or annual projection is required. Backward info $= 1$ if either monthly financial statement or lender meeting is required. All info $= 1$ if all three information covenants are mandated. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-Industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
EBITDA (Scaled)	-0.159**	-0.017	-0.042	-0.040	-0.217	-0.007
	(0.074)	(0.081)	(0.065)	(0.078)	(0.143)	(0.040)
Ln(Total Assets)	-0.067***	-0.095***	-0.021***	-0.101***	-0.183***	-0.016***
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.005)
ROA	-0.546***	0.023	-0.166	-0.113	-0.689*	0.009
	(0.207)	(0.229)	(0.183)	(0.220)	(0.401)	(0.114)
Leverage Ratio	0.067**	-0.017	0.181***	0.025	0.232***	0.046***
	(0.031)	(0.034)	(0.028)	(0.033)	(0.060)	(0.017)
Ln(Deal Amount)	-0.012*	0.030***	0.027***	0.029***	0.045***	0.001
	(0.006)	(0.007)	(0.006)	(0.007)	(0.012)	(0.004)
Maturity (Years)	-0.022***	-0.002	0.005	-0.011***	-0.019***	-0.004**
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	0.004	0.003	0.021***	0.003	0.028***	0.009***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.006)	(0.002)
Observations	3007	3007	3007	3007	3007	3007
Adjusted R^2	0.110	0.091	0.099	0.085	0.125	0.042
FF-12 Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table D4
Use of Information Covenants by Banks and Nonbanks (Firm Fixed Effects)

Table D4 reports the main regression given by the Equation:

$$Y_{i,j,t} = \alpha_i + \alpha_t + \beta \cdot Nonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{7}$$

Outcome variables in columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include firm fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.132***	0.002	0.026	0.029	0.160***	0.068***
	(0.027)	(0.029)	(0.024)	(0.029)	(0.052)	(0.016)
EBITDA (Scaled)	-0.207	-0.116	-0.177	-0.122	-0.500*	-0.217***
	(0.133)	(0.145)	(0.119)	(0.142)	(0.261)	(0.081)
Ln(Total Assets)	-0.076***	-0.043*	0.013	-0.055**	-0.106**	-0.018
	(0.023)	(0.025)	(0.021)	(0.025)	(0.046)	(0.014)
ROA	-0.458	0.221	-0.554**	0.114	-0.791	0.080
	(0.279)	(0.305)	(0.251)	(0.299)	(0.547)	(0.170)
Leverage Ratio	0.035	-0.019	-0.031	0.023	-0.015	0.019
	(0.063)	(0.069)	(0.056)	(0.067)	(0.123)	(0.038)
Ln(Deal Amount)	0.013	0.031***	0.026***	0.033***	0.069***	0.007
	(0.008)	(0.009)	(0.007)	(0.009)	(0.016)	(0.005)
Maturity (Years)	-0.016***	-0.016***	0.003	-0.017***	-0.030***	-0.001
	(0.004)	(0.005)	(0.004)	(0.005)	(0.009)	(0.003)
Interest Margin (Percentage)	-0.005	-0.004	0.005	-0.004	-0.005	-0.002
	(0.004)	(0.004)	(0.003)	(0.004)	(0.008)	(0.002)
Observations	2148	2148	2148	2148	2148	2148
Adjusted R^2	0.535	0.515	0.522	0.493	0.524	0.414
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table D5
Use of Information Covenants by Banks and Nonbanks (Firm × Year Fixed Effects)

Table D5 reports the main regression given by the Equation:

$$Y_{i,j,t} = \alpha_i + \alpha_t + \beta \cdot Nonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{8}$$

Outcome variables in columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include firm fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Info N	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Nonbank Lender	0.084**	0.052	-0.006	0.068	0.130*	0.054**
	(0.040)	(0.041)	(0.033)	(0.043)	(0.078)	(0.024)
EBITDA (Scaled)	-2.661***	-1.508	2.506***	-1.668	-1.663	0.298
	(1.005)	(1.042)	(0.825)	(1.082)	(1.969)	(0.616)
Ln(Total Assets)	-0.610***	-0.176	0.195**	-0.305**	-0.591**	-0.133*
	(0.121)	(0.125)	(0.099)	(0.130)	(0.236)	(0.074)
ROA	-1.660**	-0.008	1.080*	-0.308	-0.587	-0.671
	(0.744)	(0.771)	(0.611)	(0.801)	(1.458)	(0.456)
Leverage Ratio	-0.164	0.241	-0.031	0.310	0.046	-0.189
	(0.218)	(0.226)	(0.179)	(0.235)	(0.427)	(0.134)
Ln(Deal Amount)	0.003	0.024**	0.011	0.016	0.038*	0.011
	(0.012)	(0.012)	(0.010)	(0.013)	(0.023)	(0.007)
Maturity (Years)	-0.008	-0.013*	-0.003	-0.012	-0.024*	-0.001
	(0.007)	(0.007)	(0.006)	(0.008)	(0.014)	(0.004)
Interest Margin (Percentage)	-0.000	-0.009	0.001	-0.002	-0.009	-0.006*
	(0.006)	(0.006)	(0.005)	(0.006)	(0.011)	(0.003)
Observations	659	659	659	659	659	659
Adjusted R^2	0.725	0.697	0.793	0.624	0.726	0.774
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table D6
Use of Information Covenants by Banks and Private Credit Lenders

Table D6 reports the main regression given by the Equation:

$$Y_{i,j,t} = \alpha_j + \alpha_t + \beta \cdot PrivateCredit_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \epsilon_{i,j,t}, \tag{9}$$

Outcome variables in Columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-Industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Backward Info	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Private Credit Lender	0.186***	0.009	0.075***	0.043	0.271***	0.154***
	(0.032)	(0.036)	(0.028)	(0.034)	(0.060)	(0.017)
EBITDA (Scaled)	-0.222***	-0.025	-0.136*	-0.070	-0.384**	-0.028
	(0.082)	(0.092)	(0.073)	(0.088)	(0.156)	(0.044)
Ln(Total Assets)	-0.070***	-0.098***	-0.025***	-0.103***	-0.193***	-0.019***
	(0.009)	(0.010)	(0.008)	(0.009)	(0.016)	(0.005)
ROA	-0.676***	-0.175	-0.216	-0.317	-1.067**	-0.063
	(0.225)	(0.252)	(0.201)	(0.242)	(0.428)	(0.120)
Leverage Ratio	0.058*	-0.002	0.169***	0.034	0.226***	0.022
	(0.034)	(0.038)	(0.030)	(0.036)	(0.064)	(0.018)
Ln(Deal Amount)	0.000	0.025***	0.027***	0.026***	0.052***	0.011***
	(0.007)	(0.008)	(0.006)	(0.008)	(0.013)	(0.004)
Maturity (Years)	-0.021***	0.005	0.009**	-0.004	-0.007	-0.004*
	(0.004)	(0.005)	(0.004)	(0.004)	(0.008)	(0.002)
Interest Margin (Percentage)	-0.002	0.005	0.019***	0.005	0.022***	0.003
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Observations	2623	2623	2623	2623	2623	2623
Adjusted R^2	0.129	0.098	0.103	0.094	0.155	0.069
FF-12 Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Table D7
Use of Information Covenants by Banks and Other Nonbank Lenders

Table D7 reports the main regression given by the Equation:

$$Y_{i,j,t} = \alpha_j + \alpha_t + \beta \cdot OtherNonbank_{i,j,t} + \Gamma \cdot X_{i,j,t-1} + \Phi \cdot Z_{i,j,t} + \Psi \cdot W_{i,j,t} + \epsilon_{i,j,t}, \tag{10}$$

Outcome variables in Columns (1)-(3) are individual information covenants while outcome variables in columns (4)-(6) are composite information measures as defined above. Explanatory variables include borrowers' previous-year EBITDA scaled by total assets, logged total assets, ROA, leverage ratio, as well as deal characteristics including deal amount, maturity, and interest margin. All regressions include Fama-French 12-Industry fixed effects and year fixed effects. Standard errors are presented in parentheses and are clustered at the firm level. ***, **, and *, represent statistical significance at 1%, 5%, and 10% level, respectively.

	Monthly FS	Annual Projection	Meeting	Hard Info	Backward Info	All Info
	(1)	(2)	(3)	(4)	(5)	(6)
Other Nonbank Lender	0.080***	-0.073***	0.009	-0.063**	0.015	0.047***
	(0.025)	(0.028)	(0.022)	(0.027)	(0.048)	(0.012)
EBITDA (Scaled)	-0.234***	-0.159*	-0.072	-0.198**	-0.465***	-0.038
	(0.082)	(0.092)	(0.072)	(0.089)	(0.158)	(0.040)
Ln(Total Assets)	-0.057***	-0.117***	-0.025***	-0.126***	-0.199***	-0.012***
	(0.009)	(0.010)	(0.008)	(0.010)	(0.018)	(0.005)
ROA	-0.459**	0.077	-0.154	0.017	-0.537	0.072
	(0.227)	(0.255)	(0.199)	(0.247)	(0.437)	(0.111)
Leverage Ratio	0.036	0.019	0.181***	0.044	0.236***	0.042***
	(0.033)	(0.037)	(0.029)	(0.036)	(0.063)	(0.016)
Ln(Deal Amount)	-0.005	0.059***	0.035***	0.064***	0.089***	0.008*
	(0.009)	(0.010)	(0.008)	(0.009)	(0.017)	(0.004)
Maturity (Years)	-0.020***	-0.002	0.005*	-0.011***	-0.017**	-0.004**
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Interest Margin (Percentage)	-0.009**	0.001	0.018***	-0.001	0.011	0.002
	(0.004)	(0.004)	(0.003)	(0.004)	(0.007)	(0.002)
Observations	2723	2723	2723	2723	2723	2723
Adjusted R^2	0.093	0.098	0.092	0.094	0.108	0.033
FF-12 Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

Figures

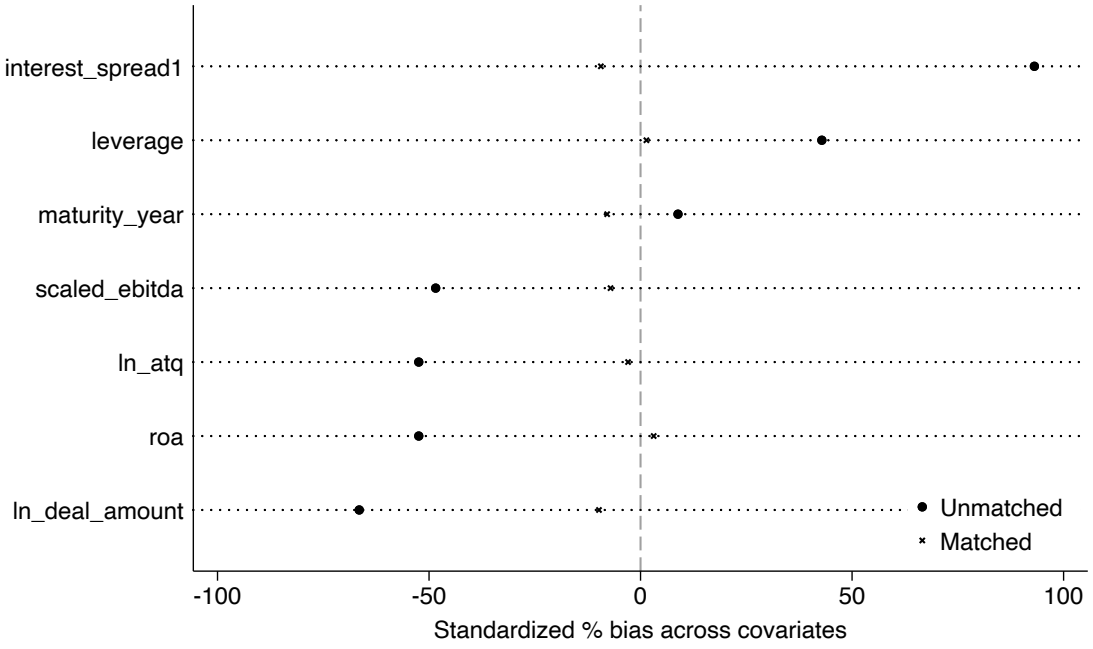


Figure D1: Bank vs Nonbank: % Bias of Unmatched and Matched Covariates for Nearest-Neighbor Propensity Score Matching

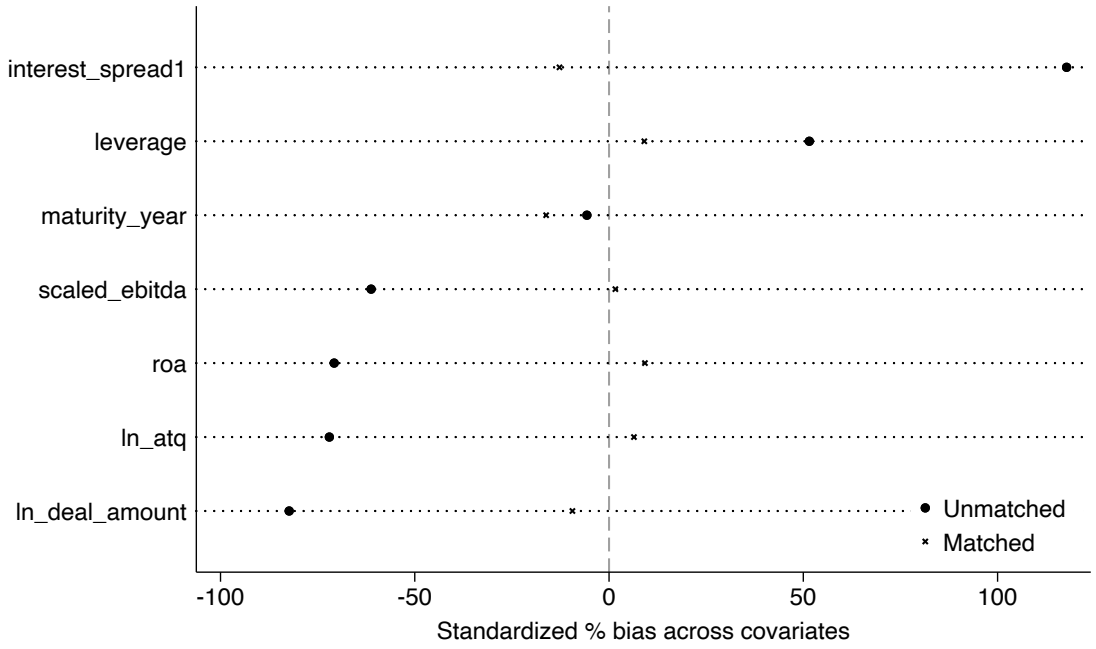


Figure D2: Bank vs Private Credit: % Bias of Unmatched and Matched Covariates for Nearest-Neighbor Propensity Score Matching

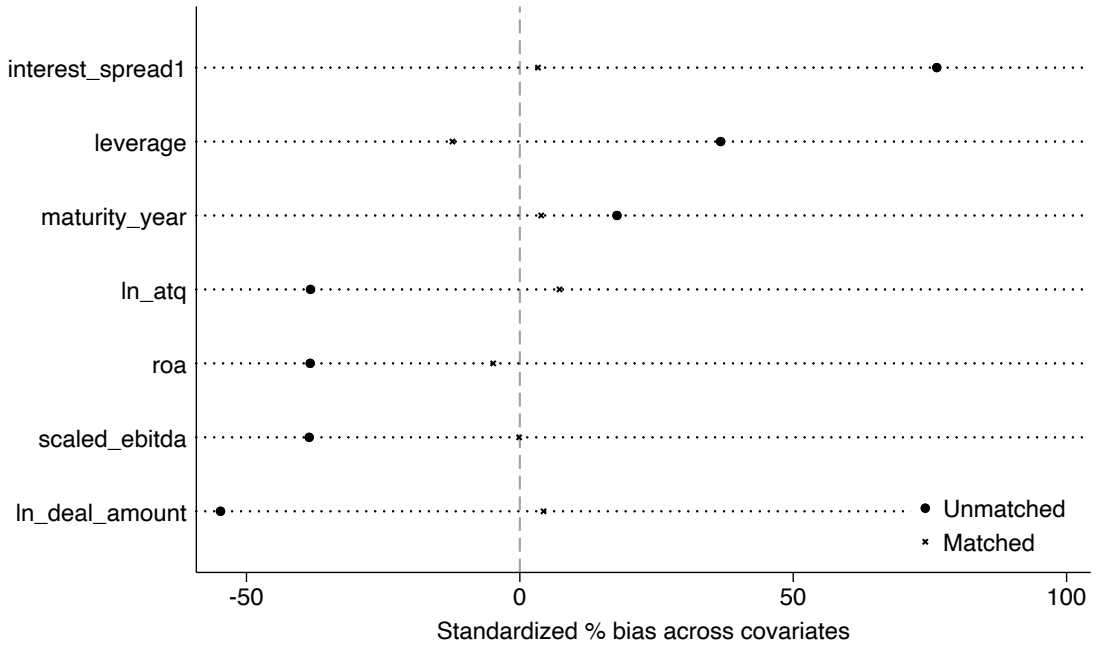
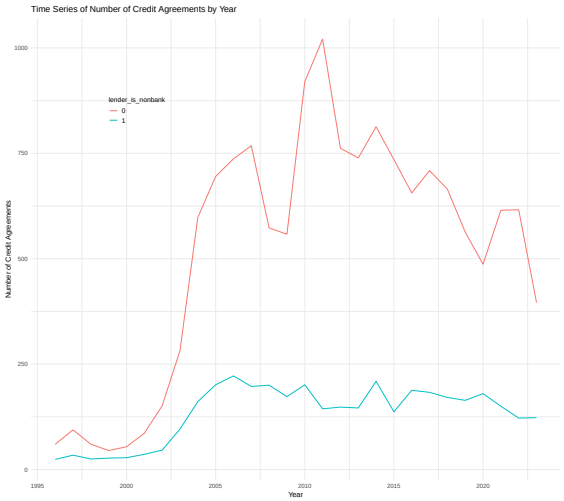
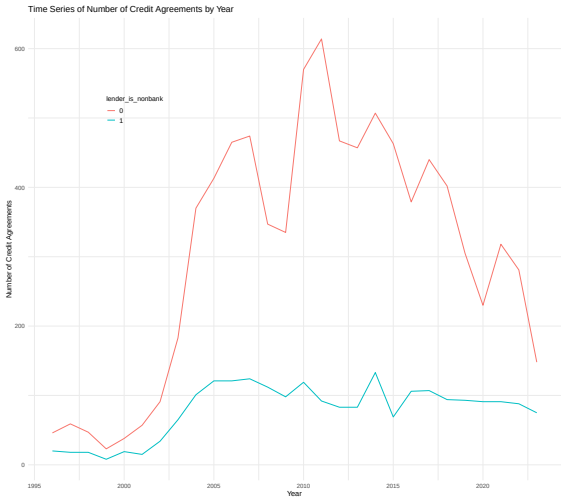


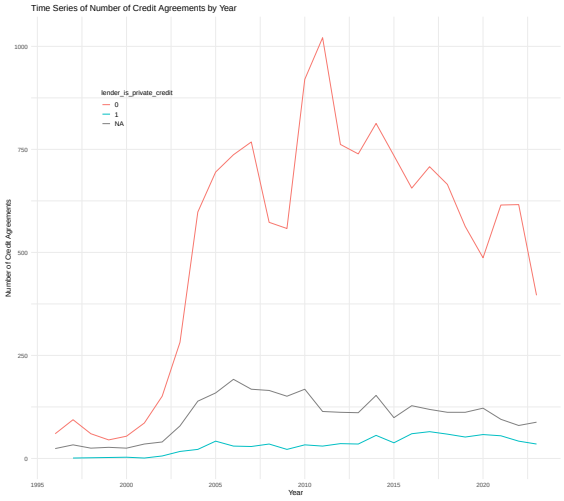
Figure D3: Bank vs Other Nonbank Lender: % Bias of Unmatched and Matched Covariates for Nearest-Neighbor Propensity Score Matching



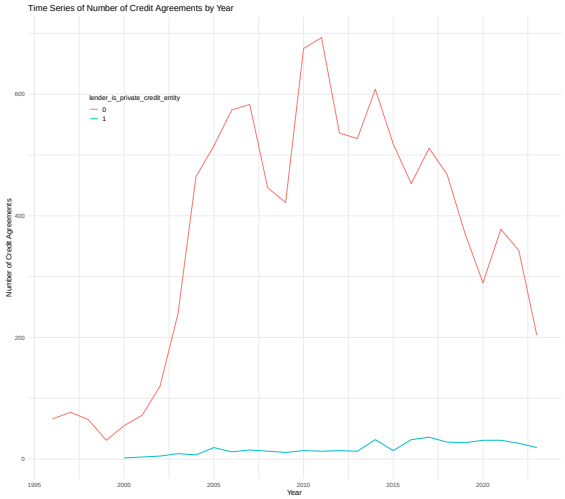
(a) Bank vs Nonbank: All Observations



(b) Bank vs Nonbank: Middle Market with Deal Info

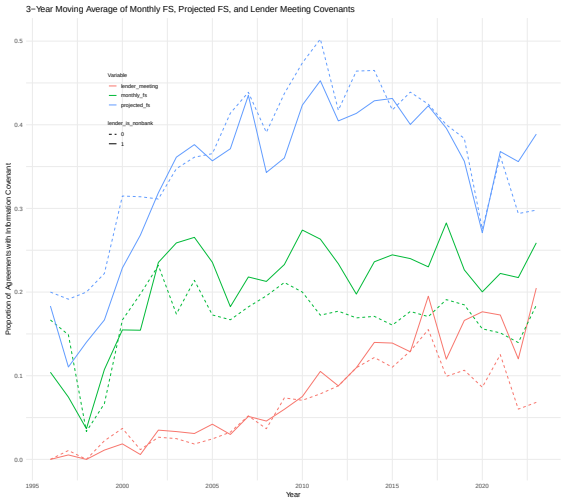


(c) Bank vs Direct Lender: All Observations

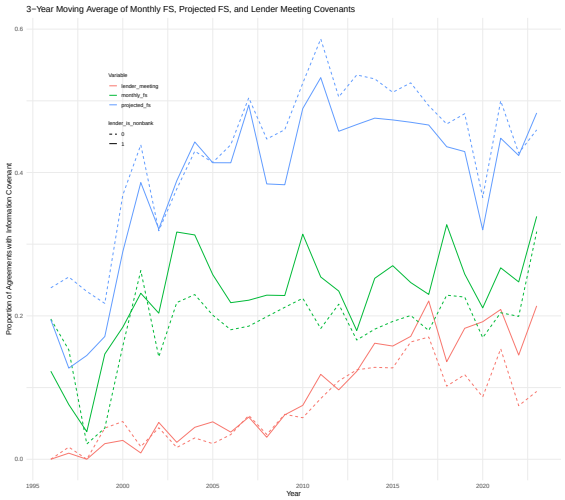


(d) Bank vs Direct Lender: Middle Market with Deal Info

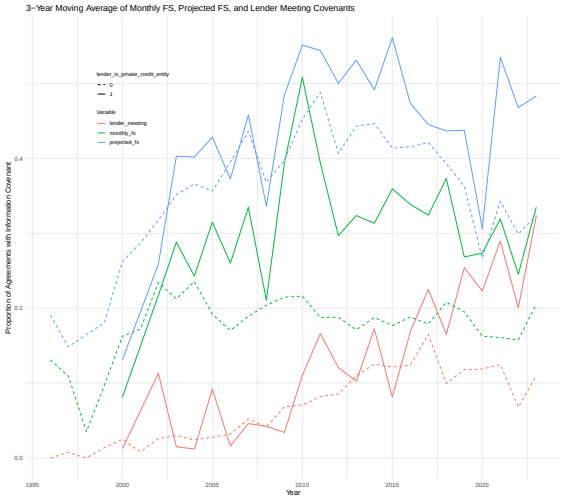
Figure D4: Number of credit agreements from 1993 to 2023.



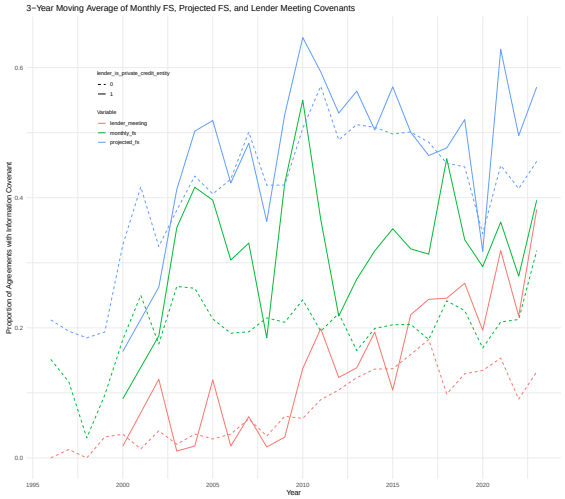
(a) Bank vs Nonbank: All Observations



(b) Bank vs Nonbank: Middle Market with Deal Info



(c) Bank vs Direct Lender: All Observations



(d) Bank vs Direct Lender: Middle Market with Deal Info

Figure D5: Frequency of information covenant usage from 1993 to 2023.