# The Cyclicality of Direct Lending*

Franz J. Hinzen

Paul Rintamäki

Giorgio Mondini

Sascha Steffen

This Version: November 18, 2026

**Abstract.** We show that direct lending dampens the corporate credit cycle: because direct lenders fund loans with capital committed in advance, they keep lending when the syndicated leveraged loan market tightens. Direct lending is far less cyclical than institutional syndicated lending and behaves like bank-funded pro rata lending. When syndicated conditions tighten, firms switch into direct lending; when conditions ease, they return to leveraged loans. Weaker and sponsor-backed borrowers are more likely to switch. Borrowers pay a higher spread on entry that largely reverses on exit, so direct lending is a costly, temporary backstop. Banks fund part of this replacement credit through committed lines to BDCs, and managers running both CLOs and direct lending vehicles fund borrowers across markets. The results also hold in Europe.

*Keywords:* Direct Lending, Leveraged Loans, Credit Cycles, Financial Constraints
*JEL Classification:* G23, G32, E44

*First Version: Dec 2025. Franz Hinzen is affiliated with the Tuck School of Business at Dartmouth. Giorgio Mondini, Paul Rintamäki and Sascha Steffen are affiliated with the Frankfurt School of Finance & Management. Please send correspondence to Franz Hinzen at franz.hinzen@tuck.dartmouth.edu, to Giorgio Mondini at g.mondini@fs.de, to Paul Rintamäki at p.rintamaki@fs.de, or to Sascha Steffen at s.steffen@fs.de. We thank our discussants Jack Bao, Bo Becker, Dion Bongaerts, Dominik Damast, Sebastian Doerr, Quirin Fleckenstein, Mariassunta Giannetti, Cédric Huylebroek, Young Soo Jang, Tatyana Marchuk, Sophie Rotermund, Nikolas Topaloglou, and Jan Riepe as well as seminar participants at the University of Alabama, Bank of England, Federal Reserve Bank of New York, Frankfurt School of Finance & Management, University of Glasgow, Hong Kong Polytechnic University, University of Maryland (Smith), Universitat Pompeu Fabra, University of Toulouse, and conference participants at the Benelux Banking Research Day, Isenberg School of Management Finance Conference, UIC Finance Conference, LUISS Finance Workshop, CCA-ESCP Workshop on Financial Institutions and Corporate Finance, Frankfurt Private Capital Symposium, Private Markets Research Conference in Lausanne, SHoF Annual Conference on the Future of Private Capital Markets, 12th IWH-FIN-FIRE Workshop, EFA 2026, and Banken-Forschungsworkshop 2026 for comments and suggestions. The authors thank the Centre for European Transformation (CfET) at Frankfurt School for financial support.

# 1 Introduction

By 2023, syndicated leveraged loan issuance had fallen by more than a third from its near-record $1.4 trillion in 2021. Weak institutional demand had raised banks' risk of underwriting these loans, and several large failed deals had left billions of dollars of unsold loans on bank balance sheets. Unable to obtain bank-arranged loans, many borrowers turned to direct lenders instead.

The case of CIRCOR International illustrates this shift to direct lending. With the syndicated market disrupted, KKR financed its 2023 buyout of CIRCOR with a $650 million term loan from direct lenders. The loan carried a spread of 600 basis points, roughly 150 basis points above the spread on CIRCOR's previously outstanding syndicated loan. Only one year later, after the syndicated market had reopened, CIRCOR refinanced with a syndicated loan at a spread of 350 basis points. Thus, while direct lending was costly, it granted CIRCOR continued access to credit during a period when syndicated loans were difficult to obtain.[1]

This paper asks whether this pattern is systematic and to what extent borrowers substitute into direct lending in response to contracted credit supply in the syndicated leveraged loan market. The question is important because a prevailing view holds that nonbank lenders *amplify* credit cycles. For syndicated loans, Fleckenstein, Gopal, Gutiérrez, and Hillenbrand (2025) show that the nonbank-funded institutional tranches are about three times as cyclical as bank-funded tranches. Aldasoro, Doerr, and Zhou (2025) document that nonbanks reduce syndicated lending more than banks during crises.[2] Direct lenders are also nonbanks, but they fund loans largely with capital committed in advance (equity as well as bank provided credit lines), hold them on their balance sheets, and negotiate bilaterally with borrowers.[3]

The question has also become quantitatively important. The size of private credit is now comparable to the syndicated leveraged loan and high-yield bond markets (Block, Jang, Kaplan, and Schulze, 2024; Robinson and Wallskog, 2026). The relevant substitution margin for leveraged borrowers also differs from the one studied in prior work. Becker and Ivashina (2014) show that large firms substitute from bank loans to bonds when bank credit supply contracts. However, many borrowers have only limited access to the bond market. Direct loans could be an alternative source of debt-financing for these firms. Thus, the growth of private credit may have changed how supply shocks in the syndicated loan market transmit

[1] For more details see CIRCOR International, Inc., Definitive Proxy Statement (Schedule 14A), July 17, 2023, "KKR's Circor Looks to Exit Private Credit With Leveraged Loan", Bloomberg News, September 25, 2024, and "KKR Reaffirms Intention to Acquire CIRCOR International", Business Wire.

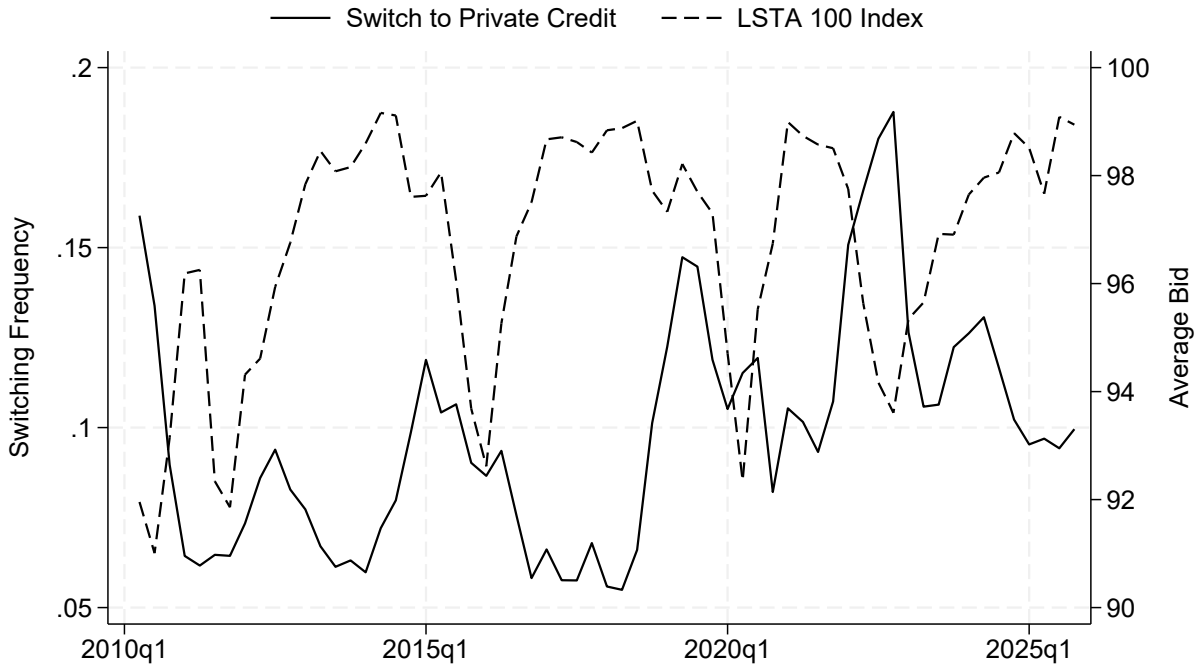
[2] Acharya, Gopal, and Steffen (2025) show that banks respond to rollover risk in nonbank markets by reducing liquidity provision via credit lines ex ante.

[3] Matvos, Piskorski, and Seru (2026); Mistopoulou, Rotermund, and Steffen (2026) discuss the funding of Business Development Companies (BDCs) and their funding fragility.

to the corporate credit conditions (Chava and Purnanandam, 2011; Chodorow-Reich, 2014; Diamond and Rajan, 2005; Holmstrom and Tirole, 1997). Moreover, this substitution might alleviate possible pipeline risk of banks (Bruche, Malherbe, and Meisenzahl, 2020), thereby increasing credit availability and firm liquidity provisioning (Acharya et al., 2025).

In this paper we argue that direct lending issuance is substantially less cyclical than syndicated leveraged lending and that direct lenders absorb some borrower demand when leveraged loan market conditions tighten. Direct lending thus provides a backstop for borrowers that would otherwise rely on syndicated credit. Once conditions in the syndicated market ease, borrowers frequently return. Our argument requires that there exists a common set of borrower between the direct lending and the leveraged loan market. We document that, by the end of 2025, more than a quarter of firms in our sample that borrow in either market have switched between them at least once. Figure 1 shows that the frequency of firms switching to private credit increases when loan prices in the leveraged loan market are low as measured by the the average bid price of the LSTA 100 Index constituents.

**Figure 1: Switching to private credit and leveraged loan index.**
This figure plots the trailing-twelve-month share of firms that switch from leveraged loans to private credit from 2010 through 2025. We classify switches as quarters in which a firm changes its source of debt financing (see Figure 7). We also plot the average bid of the LSTA 100 Index obtained from PitchBook.




We use PitchBook-LCD data from 2005 to 2025 and classify each deal as a leveraged loan (LL), that is, a broadly syndicated loan, or as private credit (PC), that is, a loan originated by

nonbank direct lenders outside the syndicated market. A switch is a deal whose type differs from that of the borrower's preceding deal. We measure syndicated market conditions with standard survey- and market-based measures, including the Federal Reserve's Senior Loan Officers Opinion Survey's (SLOOS) lending standards, the excess bond and loan premia, net flex, time-to-market, CLO issuance, and CLO AAA spreads, and with a BSL Tightness index constructed from statements in BDC earnings calls about competitive conditions in the syndicated market.

**Aggregate time-series pattern.** We begin by describing some stylized facts about the private credit vis-a-vis leveraged loan market. We first document that both the number of private credit as well as of leveraged loan deals have increased over our sample period, but lending has been substantially more cyclical in the leveraged loan market. The number private credit deals have increased 20-fold during our sample period (but only doubled in the leveraged loan market). Second, the leveraged loan and private credit market have become more integrated. The percentage of firms that exclusively borrows in the private credit market has increased over time. However, the percentage of firms only borrowing through leveraged loans has significantly declined, and the percentage of firms that either switch from leveraged loans to private credit or from private credit to leveraged loans has increased. At the end of our sample period, more than 25% of firms in our sample have borrowed in both markets at least once.

Third, we show that private credit volume is still significantly lower compared to leveraged loan volume but the difference has been declining over time. Importantly, the aggregate quarterly leveraged loan volume is more cyclical and drops during stress periods significantly more compared to private credit. When we separate syndicated issuance into bank-funded pro rata and nonbank-funded institutional tranches, institutional issuance declines significantly more than pro rata issuance, consistent with Fleckenstein et al. (2025), whereas private credit issuance does not differ significantly from pro rata issuance volumes. The excess cyclicality of nonbank lending is thus a feature of institutional syndicated lending and does not extend to direct lending. Fourth, leveraged loan as well as private credit spreads have been declining during our sample period, and, similar to loan volumes, become more similar between both markets.

**Private credit share and leveraged loan market tightness.** We first show that private credit's share of borrowing firms rises with every tightness measure after controlling for a linear trend. For example, a one-standard-deviation increase in BSL Tightness is associated with a 6.95-percentage-point higher private credit share, and the corresponding estimates are 5.02 points for tighter lending standards and 6.09 points for the excess bond premium. Because a rising share can reflect a change in borrower composition, we estimate

the probability that a deal is private credit among firms that obtain new debt, and therefore have positive credit demand, and that have borrowed outside private credit in the preceding 20 quarters. Without firm fixed effects, a one-standard-deviation increase in BSL Tightness is associated with an 8.82-percentage-point higher probability of choosing private credit. With firm fixed effects, the estimate falls to 3.95 points and remains significant at the 1% level. Borrower composition thus accounts for part of the aggregate effect, and the remainder reflects a shift in the financing choice of the same borrower to issue private credit when leveraged loan market conditions tighten.

**Switching between both markets.** Firms can switch between both markets over the credit cycle. Tightening of lending in the leveraged loan market should *raise* entry from leveraged loans into private credit and *lower* exit back to leveraged loans, and easing should do the reverse. We condition on the type of the preceding deal and estimate each transition probability with firm fixed effects. Among borrowers whose previous deal was a leveraged loan, a one-standard-deviation increase in BSL Tightness raises the probability that the next deal is private credit by 3.19 percentage points (3.32 points for CLO AAA spreads). Among borrowers whose previous deal was private credit, a one-standard-deviation easing raises the probability of returning to a leveraged loan by 4.44 points for BSL Tightness, 3.56 points for lending standards, and 3.50 points for CLO AAA spreads. Private credit absorbs borrowers when the syndicated market tightens and these firms return to the leveragerd loan market when it reopens, a pattern that secular growth in private credit cannot generate. Private equity-backed borrowers are also more likely to switch into private credit.

**Borrower quality.** Leveraged loan lenders face portfolio constraints that tighten when credit conditions deteriorate. CLOs, the largest buyers of leveraged loans, for example can hold only a limited share of CCC-rated loans and must meet overcollateralization tests. These constraints bind first for weak borrowers, those with low ratings or loans trading below par. If constraints drive the substitution into private credit, weak borrowers should be more likely to switch when leveraged loan conditions tighten. We test this among borrowers whose previous deal was a leveraged loan, measuring borrower quality with secondary-market loan prices and ratings before the deal. More precisely, we use measures such as a secondary loan market discount relative to par, the pre-loan fall in the secondary loan market price, a rating of CCC or worse or an indicator whether the borrower had been downgraded in the four quarters preceeding the deal.

Weaker borrowers are more likely to switch. A rating downgrade in the preceding four quarters raises the switching probability by about 6.4 percentage points, and by 6.1 points with firm fixed effects. Larger secondary-market discounts, recent price declines and ratings of CCC or below are also associated with more switching. When we interact these measures

with tighter lending standards, the effect is significant, for example, for borrowers rated CCC or below. These are precisely the loans that push CLO portfolios against their CCC limits when credit conditions weaken.[4]

**Mechanisms.** These results raise the question as to why direct lenders can still originate loans when institutional syndicated lenders reduce lending. We examine two complementary explanations, related to funding and to information. First, institutional syndicated lending depends on funding raised at contemporaneous market prices: open-end loan funds face redemptions, and an expansion of CLO lending capacity requires new vehicles financed at prevailing liability spreads. Because banks typically fund only the pro rata part of a transaction, weak institutional demand constrains the completion of entire deals through arrangers' pipeline risk (Bruche et al., 2020). Private credit funds, by contrast, draw committed investor capital, and BDCs deploy equity already raised together with bank credit lines committed in advance. We first test whether such committed funding sustains origination.

Bank lending to private credit funds is largely unobservable. Business Development Companies (BDCs) are an exception: they report their funding, including bank credit facilities, in quarterly filings (Mistopoulou et al., 2026).[5] We therefore match the private credit lenders in our sample to BDCs. In a BDC-quarter panel, the number of private credit deals falls when leveraged loan markets tighten, albeit less than the number of leveraged loan deals. The decline is smaller for BDCs that enter the quarter with more unused revolver and SPV capacity. With quarter fixed effects, the interaction between lagged unused capacity and tightness is 0.24 for BSL tightness, 0.21 for lending standards, 0.37 for the excess loan premium and 0.20 for CLO AAA spreads, each significant at the 1% level. Bank credit commitments thus fund direct lenders' lending when leveraged loan markets tighten: part of the private credit that replaces syndicated loans is financed by banks.

Second, switching between markets involves information costs. However, for private market lenders, it is likely easier to obtain information about potential target firms operating in the public market than it is for public market lenders to obtain information about potential target firms in the private market.[6] This difference matters more when uncertainty and information frictions rise, which can explain why in bad times private credit can absorb bor-

[4]With firm fixed effects, the interaction coefficient is of similar magnitude but no longer statistically significant, because few borrowers change rating category between deals and the fixed effects absorb most of the variation in CCC status.

[5]Mistopoulou et al. (2026) document that banks fund BDCs through credit lines, extended either to the BDC directly or to special purpose vehicles (SPVs), which use these funds, together with equity capital committed by the BDC, to buy loans from the BDC's portfolio. Our measure is the sum of both types of credit line.

[6]This is because public markets are more transparent but also because private information is more easily available: for most lenders it is easier to participate as an investor in a broad syndicate than in a concentrated private credit deal with typically only few lenders.

rowers coming from leveraged loan market but not the other way around. When uncertainty subsides, borrowers can more readily return to leveraged loans.

To investigate this idea empirically, we analyze asset managers that operate both CLOs and direct lending funds and who can thus acquire information about a borrower through this prior exposure. We find that a parent whose CLOs held the borrower's leveraged loans is more likely to lend in the new private credit deal, controlling for event and parent-quarter fixed effects. Moreover, for switches from private credit back into leveraged loans, a parent that lent in the preceding private credit deal is more likely to hold the new leveraged loan through its CLOs. Overall, our estimates document persistence of lending relationships in both directions exactly among affiliated vehicles, consistent with prior borrower exposure reducing information costs of switching.

**The terms of switching.** Direct loans are known to cost more than bank loans. After controlling for borrower and loan characteristics, nonbank loans to middle-market firms carry interest rates about 190 basis points higher (Chernenko, Erel, and Prilmeier, 2022), and private debt priced alongside a bank loan to the same borrower carries a spread roughly 200 basis points wider (Haque, Mayer, and Stefanescu, 2026). This premium may compensate for borrower risk and illiquidity, pay for services such as certainty of execution and flexible covenants (Block et al., 2024), or reflect lenders' pricing power when borrowers' outside options are limited (Santos and Winton, 2008). If borrowers enter direct lending because syndicated credit is unavailable, the premium should appear on entry and largely reverse on exit. We estimate changes in spreads across consecutive financings of the same firm, relative to firms that remain in private credit in the same quarter. Entry into private credit is associated with a 145.65 basis-point larger spread increase, and exit into leveraged loans with a 96.77 basis-point larger decline. New deal amounts fall on entry and rise on exit. These estimates do not account for changes in credit quality between the two financings, since firms may enter direct lending after deteriorating and return after improving. They should be more carefully interpreted as an upper bound on the price of access to direct lending, and as evidence that borrowers use direct lending as a more expensive and temporary source of financing.

**Bond markets.** High-yield bonds are the alternative to bank loans in Becker and Ivashina (2014). We therefore ask whether bonds and direct lending offer leveraged loan borrowers the same substitution margin. We show that they do not. Of deals that follow a leveraged loan, 12.91% are private credit and 16.55% are high-yield bonds. Yet only 2.41% of deals that follow a private credit deal are high-yield bonds, and only 3.27% of deals that follow a bond are private credit, compared with 23.07% of deals following private credit that are leveraged loans. These descriptive transitions indicate that direct lending and the

bond market serve largely separate borrowers, so the margin we study is distinct from the loan–bond margin.

**European evidence.** Finally, we examine whether the results reflect institutional features of the U.S. market, such as the size of its CLO sector. We replicate the market-share and deal-level tests for European borrowers from 2005 to 2025, using ECB Bank Lending Survey measures, Term Loan B spreads, CLO issuance, and the excess bond premium. A one-standard-deviation tightening in lending standards is associated with a 5.29-percentage-point higher European private credit share and, with firm fixed effects, a 5.68-point higher probability that a deal is private credit. The corresponding within-firm estimates are 5.18 points for reported loan spread increases and 5.99 points for Term Loan B spreads, while CLO issuance is insignificant in all specifications. Substitution toward direct lending during syndicated tightening is therefore not specific to the United States, but a feature of modern credit market with different types of bank and non-bank intermediation.

**Related literature.** Our paper contributes to three strands of literature. First, it contributes to work on whether nonbank intermediaries amplify credit cycles. Fleckenstein et al. (2025) attribute the cyclicality of institutional syndicated lending to the sensitivity of CLO issuance and mutual fund flows to market conditions, and Aldasoro et al. (2025) show that nonbanks retreat from syndicated lending during global crises.[7] We show that this cyclicality is specific to the institutional segment of the syndicated market and does not extend to direct lending, and we relate the difference to committed funding and to lending relationships that persist across affiliated vehicles. This evidence is consistent with Jang (2024), who argues that direct lenders resemble relationship banks more than arm's-length investors, and with evidence on the lending technology of direct lenders (Davydiuk, Marchuk, and Rosen, 2024; Jang, Kim, Sufi, and Chen, 2025). For cyclicality, the relevant distinction is therefore not between banks and nonbanks but between lenders whose funding depends on contemporaneous market conditions and lenders whose funding is committed in advance (see also Acharya et al., 2025).

Second, we contribute to the literature on substitution across credit markets and debt structure. We apply the approach of Becker and Ivashina (2014) to the substitution between syndicated and direct loans, which is the relevant margin for many leveraged borrowers, and show that bonds and direct lending serve largely separate borrowers. Haque et al. (2026) document substitution between private credit term loans and bank credit lines within deals, and Fernández, González, and Suárez (2018) find partial substitution between bank

[7]Exceptions include Emin, James, Li, and Lu (2026), who show that CLOs provide liquidity when loan mutual funds experience outflows among loans eligible for par-building trades, and Banerjee and Serena (2026), who find that nonbank direct lenders are more likely to join loan syndicates following monetary policy announcements that reduce borrowers' net worth.

and nonbank credit for SMEs during crises. Studies of debt structure emphasize borrower characteristics such as credit quality and opacity as determinants of the choice of lender (Chernenko et al., 2022; Colla, Ippolito, and Li, 2013; Denis and Mihov, 2003). We show that this choice also varies with aggregate credit conditions within firms, and that borrower deterioration and aggregate tightening are separate determinants of the move into direct lending. Work linking the growth of nonbank lending to bank regulation (Chernenko, Ialenti, and Scharfstein, 2025; Davydiuk et al., 2024; Erel and Inozemtsev, 2025; Gopal and Schnabl, 2022; Irani, Iyer, Meisenzahl, and Peydro, 2021; Kim, Plosser, and Santos, 2018) and to bank lending to private credit funds (Haque, Jang, and Wang, 2025) explains the secular growth of private credit; we study its cyclical variation around this trend.

Third, we contribute to work on financial sponsors. Sponsors reduce information asymmetries and relax credit constraints for portfolio companies (Demiroglu and James, 2010; Ivashina and Kovner, 2011), and direct lenders are well suited to sponsored transactions because of their flexibility in negotiating terms (Block et al., 2024; Buchner, Espenlaub, Khurshed, and Mohamed, 2024; Rintamäki and Steffen, 2025; Robinson and Wallskog, 2026). We show that sponsor backing is strongly associated with entry into direct lending but not with exit from it, consistent with sponsors' relationships with both arrangers and direct lenders facilitating movement between the two markets.

Our findings have implications for the transmission of credit supply shocks and for financial stability. If borrowers can substitute into direct lending when the syndicated market contracts, contractions in syndicated credit supply are transmitted less fully to these borrowers' access to credit (Almeida, Campello, Laranjeira, and Weisbenner, 2012; Chodorow-Reich, 2014; Greenstone, Mas, and Nguyen, 2020), although at higher spreads. This substitution also shifts credit risk toward lenders that are less transparent and less regulated, and the funding capacity we document relies in part on bank commitments whose terms can change in a prolonged downturn. Our evidence concerns the allocation and price of credit among observed borrowers; it does not measure the financing of firms that obtain no debt or the real effects of switching.

The remainder of the paper is structured as follows. Section 2 describes the data, institutional setting, and empirical framework. Section 3 presents the results on switching, while Section 4 examines the funding and information mechanisms. Section 5 analyzes the terms of switching and the role of high-yield bonds. Subsection 5.3 presents European evidence, and Section 6 concludes.

# 2 Data and Institutional Background

## 2.1 Data Sources

To study the dynamic relationship between the private credit and BSL market, we use different data sources. Our main data set is licensed from Pitchbook-LCD. Pitchbook-LCD provides deal-level information about bond and loan issuances. However, while Pitchbook-LCD classifies the more recent loans as leveraged loans and private credit categories, this classification is incomplete and leaves many deals undefined. We thus build on this benchmark by performing the classification ourselves, creating a *Private Credit Flag* variable that distinguishes between the two loan types and other types of debt.

**Private Credit Flag.** If the Pitchbook field *DebtProvided* is "Bond," we characterize the facility as "Bond." Otherwise, if a deal contains a bond, or any facility in a deal is included in LCD, is marked as "Cov-lite" or "Syndicated," or has a facility of $250m or more in size with a bank designated as admin agent, we classify all non-bond facilities in that deal as "Leveraged Loan." For the remaining unclassified facilities, we classify those that have only bank lenders as "Bank Debt," those that have only nonbank lenders as "Private Credit," and those that have both bank lenders and nonbank lenders as "Private Credit and Bank Loan." To go from the classification at the facility level to the one at the deal level, we follow this logic: if a deal has only one type of facilities, then the deal classification is the same as the facilities classification. If a deal has both bond and leveraged loan facilities, then the deal is classified both as a leveraged loan and a bond. Finally, a deal is classified as a private credit deal if any of its facilities is a private credit facility. If a deal contains only mixed ("Private Credit and Bank Loan") facilities, the entire deal is classified as a mixed deal. We compare our classification with Pitchbook-LCD's classification for the sub-sample of deals which are classified by both. In Subsection A.1, we show that the two classifications yield comparable results.

**Tightness Measures.** We collect eight well-established measures of credit market tightness: excess bond premium (EBP) (Gilchrist and Zakrajšek, 2012), excess loan premium (ELP) (Saunders, Spina, Steffen, and Streitz, 2025), net share of broadly syndicated loan deals flexed up (Net Flex), average time-to-market of broadly syndicated loans, CLO volume, CLO AAA spreads, and two measures from Senior Loan Officer Opinion Survey (SLOOS), which capture reported loan supply, and reported spread increases in commercial and industrial bank lending.[8].

[8]EBP and ELP series are provided by the authors of the associated papers. Net flex, average time to market are calculated from Pitchbook data. SLOOS measures are downloaded from FRED (https://fred.stlouisfed.org/series/DRTSCILM, and https://fred.stlouisfed.org/series/DRISCFLM)

**Secondary-market prices and ratings.** To measure borrowers' credit quality, we use leveraged loan secondary-market prices from LSTA and S&P loan ratings from the credit rating agency and CLO trustee reports. For each term loan in LSTA, we take the average of daily prices over a quarter to get quarterly prices. If one borrower has more than one active loan at the same time, then we take the weighted average of the quarterly prices using the loan amounts (a larger loan will have a larger impact in the final quarterly price of that borrower). For each borrower, we then compute the quarterly discount, that is 100 − quarterly price, where a large positive discount means that the loans of the borrower in that quarter are trading at a lower value than 100 (measuring lower quality of a borrower). For each rated loan, we have monthly ratings. We use the rating in the last month of each quarter, and in case a borrower has multiple loan active in the same quarter with multiple ratings, the lowest rating is kept. We then classify the ratings as above CCC+ (excluding CCC+) and below CCC+. This separation is motivated by hurdles CLO investors face when investing in leveraged loans. Moreover, we build a dummy variable indicating if a borrower has experienced a downgrade in rating from the year before to the quarter before the current quarter. We match the secondary-market prices from LSTA and the ratings at the loan level through the LIN identifier. We then match the borrower-quarter level variables created to our PitchBook-LCD sample through a name-matching algorithm available on PitchBook: the algorithm takes a list of borrower names and match it to borrower names in the PitchBook database and gives a confidence score for the matches among "Low", "Medium", and "High". We only use matches with confidence score "High".

**AI-scored BSL Tightness Index.** We measure the extent to which private credit market participants report reduced competitive pressure due to tightened credit market conditions in the broadly syndicated loan market using an *AI-scored BSL Tightness Index* from quarterly earnings-call transcripts of U.S. Business Development Companies (BDCs). We collect all regular earnings calls for listed BDCs over the sample period and parse each transcript into short, contiguous text segments ("chunks").[9] Each chunk is then evaluated by a large language model (LLM, GPT-4.1). For every chunk, the model receives the chunk text and a fixed instruction that asks it to classify the passage into one of six mutually exclusive states:

**1.** Substantial increase in competition (major spread compression, capital flooding in)

**2.** Increase in competition (modest spread compression)

**3.** No change (stable spreads)

[9]We provide the prompt structure in Subsection A.2.

4. Decrease in competition (modest spread widening)

5. Substantial decrease in competition (major spread widening, capital scarcity)

6. No information provided (if the passage does not contain information about competition, pricing, spreads, or lender aggressiveness)

In addition to the categorical label, the model is asked to provide a short free-text explanation and to reproduce the relevant quote from the passage, which we later use for validation and examples in the text. We map the six categories into a numerical competition score at the chunk level as follows:

1. substantial increase in competition: $-1.0$

2. increase in competition: $-0.5$

3. no change / no information: 0

4. decrease in competition: $+0.5$

5. substantial decrease in competition: $+1.0$

For each BDC-quarter, we average the scores across all chunks from that firm's earnings call in that quarter, which yields a firm-level competition score. We then compute the *AI-scored BSL Tightness Index* as the cross-sectional mean of these firm-level scores in each calendar quarter. By construction, higher values of the index indicate that BDCs, on average, report weaker competitive pressure due to tight conditions in the BSL market (wider spreads, lender-friendly terms, and capital scarcity in BSL), whereas lower values indicate easier market conditions for broadly syndicated loans (tighter spreads, more aggressive terms, and abundant capital supply from BSL).

## 2.2 Sample construction

We focus on completed debt transactions by U.S. nonfinancial firms between 2000 and 2025, excluding revolving credit facilities, transactions with missing lender information, and deals smaller than $10 million. We further restrict the sample to major financing transactions, including buyouts, mergers and acquisitions, general debt issuance, refinancing, and recapitalizations. Following Becker and Ivashina (2014), we retain only observations for borrowers that have accessed non-private credit debt markets within the preceding five years and exclude firm-quarter observations in which borrowers simultaneously issue private credit and

leveraged loans. These restrictions ensure that our analysis focuses on firms with demonstrated access to alternative debt markets, for which substitution between private credit and syndicated lending is economically relevant. The resulting sample comprises 29,160 debt transactions, of which 6,751 are classified as private credit and 9,644 as leveraged loans. Subsection A.1 provides a detailed description of the data construction, classification methodology, and sample selection criteria.

## 2.3 Summary statistics

Table 1 reports summary statistics for the quarterly measures of leveraged loan market tightening, private credit activity, borrower and deal characteristics, and correlations among the tightening measures. The time-series sample generally covers January 2005 through December 2025 and contains up to 84 quarterly observations. Some tightness measures (BSL Tightness, Excess Loan Premium, and CLO AAA Spread) only cover a smaller subsample.

[Table 1 here]

Panel A shows substantial variation in leveraged loan market conditions over the sample period. The BSL Tightness index has a mean of 0.02 and a standard deviation of 0.15. The share of banks tightening loan standards averages 5.21%, although the distribution is wide, with a standard deviation of 23.65%. Loan spread changes average -12.88%. Average time-to-market is 18.54 days, with an interquartile range of 12.70 to 22.55 days. Net flex has a mean close to zero at -0.07. Excess bond and loan premia average 0.02% and 1.02%, respectively. CLO volume averages 3.38 in logarithmic terms and varies relatively little across quarters, comparable to the CLO AAA spreads which have a quarterly average of 144 bps and little variation. To make these series comparable, in our regressions below we standardize the series to have a mean zero and unit standard deviation.

Private credit accounts for a substantial share of firm borrowing activity. On average, 50.28% of firms issue private credit in a given quarter and the private-credit switching rate averages 29.88%. The corresponding rate of switching from leveraged loans to private credit is 25.87%, while net switching averages 4.44%. The positive mean for net switching indicates that, on average, switching toward private credit exceeds switching in the opposite direction. Panel B compares borrower and deal characteristics across 6,751 private credit deals and 9,644 leveraged loan deals. Median borrower age is 26 years for private credit deals and 34 years for leveraged loan deals. Average loan volume is also smaller in the private credit sample. Private credit deals have a mean volume of $64.62 million, whereas leveraged loan deals have a mean volume of $226.63 million. Private credit deals also have wider spreads, averaging 581 basis points compared with 386 basis points for leveraged loans.

Panel C reports pairwise correlations among the leveraged loan tightening measures. Most tightening measures are positively correlated with one another, except CLO volume which is, as expected, generally negatively correlated with measures of tighter market conditions.

Panels D and E report spreads and deal volumes separately for new borrowers, repeat borrowers, and switchers. Panel D shows that private credit deals generally carry higher spreads than leveraged loans. New PC deals have the highest average spread (619.63 bps), followed by stay PC deals (585.07 bps) and deals switching from LL to PC (575.86 bps). In contrast, average spreads are considerably lower for new LL deals (425.70 bps) and stay LL deals (362.63 bps), while deals switching from PC to LL exhibit an intermediate average spread of 457.14 bps. Panel E reveals substantial differences in deal size across the two markets. Leveraged loans tend to involve significantly larger transactions, with average volumes of $617.27 million for new LL deals and $916.37 million for stay LL deals, compared with $100.31 million and $146.44 million for new and stay PC deals, respectively. Deals switching from LL to PC have an average volume of $170.51 million, whereas those switching from PC to LL average $769.96 million. Overall, these descriptive statistics indicate that private credit transactions are typically smaller and carry higher spreads, while leveraged loans are characterized by larger deal volumes and lower spreads.

## 2.4 Stylized Facts about the Private Credit Market

Our central hypothesis is that direct lending provides an alternative source of financing when credit supply in the syndicated leveraged loan market contracts. For this pattern to be economically relevant, several conditions must hold. First, direct lending activity must be less sensitive to aggregate credit market disruptions than syndicated lending. Second, the two markets must serve an overlapping set of borrowers, rather than entirely separate firm populations. Third, the differences in lending activity must be consistent with distinct intermediation models, particularly the greater dependence of institutional syndicated lending on contemporaneous market funding. We therefore begin by documenting the evolution of deal activity, the extent of borrower overlap, and the cyclicality of issuance volumes and spreads across the two markets. These stylized facts establish whether the basic conditions for substitution are present before we formally examine firms' financing decisions.

**The Rise of Private Credit.** Figure 2 plots the four-quarter rolling number of deals in both markets from 2005 to 2025. Two patterns are immediately apparent. First, private credit deal counts have grown substantially over the sample period, rising from roughly 50 deals (trailing four quarters) in 2005 to over 1,000 deals by 2024. Second, broadly syndicated

loan deal activity exhibits considerably more cyclical variation, contracting sharply during the Global Financial Crisis (2008–2009), the oil price collapse (2015–2016), and the COVID-19 shock (2020), whereas private credit deal flow appears more stable through these episodes. By the end of our sample, private credit originates more deals per year as the broadly syndicated loan market.

[Figure 2 here]

**Market integration.** Figure 3 characterizes firms by the credit markets they have accessed over time extent. At a given point in time, we classify a firm as "Only PC" or "Only LL" if the firm has exclusively borrowed from the private credit or the broadly syndicated loan market up to that date. Once a firm switches, we re-classify it as "LL→PC" or "PC→LL" depending on the direction of the switch. Subsequently, if that firm switches again, we classify the firm as "Both Switch." Figure 3 Panel (a) shows that the composition of issuers has shifted markedly over time. BSL-only borrowers dominate during the early sample period. However, their share declines as private credit-only issuers become more frequent, and a large set of multi-market borrowers emerges.

[Figure 3 here]

At the end of 2024, 73.01% of firms are single market borrowers, split between 47.85% of private credit-only and 26.16% of leveraged loan-only firms. Figure 3 Panel (b) highlights that the market overlap has become economically large as 26.99% of firms have switched credit markets. 11.56% of firms switch once throughout their credit history with 7.25% migrating from leveraged loan to private credit and 4.31% migrating in the opposite direction. 15.43% of firms switch multiple times back-and-forth between the leveraged loan market and private credit.

**Private credit vs leveraged loans.** Figure 4 presents the log of trailing-twelve-month issuance volume of private credit and leveraged loans (Panel A), the issuance volume of private credit and leveraged loan, split into institutional loan and pro-rate loans (Panel B) and the volume-weighted average spread (Panel C) for both markets. Several facts stand out.

[Figure 4 here]

First, while leveraged loan issuance volume has historically exceeded private credit volume in dollar terms, this gap has narrowed considerably, particularly since 2020 (Panel A). Leveraged loan volume is more cyclical and drop more in stress periods compared to private credit. We show this in a regression framework in the Online Appendix. Second, the

institutional part of the leveraged loan volume is more cyclical compared to both pro-rate leveraged loan and private credit volume, consistent with Fleckenstein et al. (2025). In the Online Appendix, we show that private credit is not more cyclical than pro-rata (bank) lending. Third, spreads in the private credit market consistently exceed those in the leveraged loan market by approximately 200–250 basis points on average. This spread premium reflects both the higher risk profile of private credit borrowers (smaller, more leveraged, less likely to be rated) and compensation for illiquidity. Third, and most importantly for our purposes, the two spread series move together over time, suggesting that pricing in both markets responds to common credit cycle conditions, even as quantity dynamics diverge.

# 3 Direct Lending as a Backstop

## 3.1 Aggregate private credit market share

Figure 5 depicts the trailing-twelve-month share of firms raising debt that choose private credit over broadly syndicated loans. This share has increased secularly from approximately 20% in 2008 to nearly 80% by 2024, reflecting the structural shift in U.S. corporate credit intermediation toward private lenders. Notably, the private credit share exhibits pronounced spikes during periods of loan market stress. For instance, the share jumped from roughly 20% in early 2008 to around 70% by mid-2009 as the syndicated loan market froze. Similar increases occurred during the 2015–2016 oil price shock period and the COVID-19 disruption in early 2020. These patterns suggest that private credit absorbs borrowers displaced from the broadly syndicated loan market when syndicated lending conditions tighten.

[Figure 5 here]

Figure 6 illustrates that the share of firms accessing private credit relative to all loan market participants rises systematically with measures of syndicated loan market tightness – including tighter bank lending standards or market-based measures such as the excess bond or loan premium.

[Figure 6 here]

We start by formally testing the correlation between measures of loan market tightness and private credit deal share, where $\textit{Private Credit Share}_t$ is the share of firms issuing private credit in quarter $t$ relative to all firms issuing either private credit or leveraged loans in quarter $t$. This is raw or unsmoothed version of the variable in Figure 5. We then employ the following time series regression

$$Private\ Credit\ Share_t = \alpha + \beta\ Tightness_t + \varphi t + \varepsilon_t$$

The explanatory variable $Tightness_t$ is our key explanatory variable and comprises three survey-based measures from the Senior Loan Officer Opinion Survey (SLOOS)—specifically, banks reporting increased spreads, and tightening standards—and five market-based measures: average time-to-market, net flex, excess bond premium, excess loan premium, log CLO volume and CLO AAA spread. We standardize all tightness measures to have mean zero and unit standard deviation. The coefficient $\varphi$ captures the slope of this gradual increase in private credit share. We report Newey-West robust standard errors to account for heteroscedasticity and autocorrelation of residuals.

[Table 2 here]

Panel A of Table 2 presents the market-share regression results. Tightening loan standards, the excess bond premium, and net flex have coefficients of 5.02, 6.09, and 4.23, respectively, all statistically significant at the 1% level. Higher CLO AAA spreads are associated with a greater private credit share, while greater CLO issuance is associated with a smaller share. These results show a countercyclical private credit market share relative to syndicated lending; they do not imply that private credit issuance necessarily rises in levels.

## 3.2 Within-firm financing choices

To separate changes in loan supply from loan demand, we analyze firms' substitution between private credit and leveraged loan issuance, focusing only on firms that obtain new debt financing. We follow the empirical strategy of Becker and Ivashina (2014), who argue that under the revealed-preferences, a firm that raises debt must have a positive demand for external financing. Restricting the sample to firms issuing new debt therefore ensures that all observations reflect nonzero demand for credit. By contrast, when a firm does not obtain new financing, it is impossible to determine whether this outcome reflects a lack of financing needs or an inability to secure funding.

We interpret a shift from leveraged loans to private credit issuance as evidence of changes in the supply of public credit. Specifically, if public loan supply contracts, all else equal, some firms that would otherwise rely on BSL market are forced to obtain financing through private credit markets instead.

To assess firms' propensity to borrow in the private credit market relative to other credit markets, we follow Becker and Ivashina (2014) and estimate the following specification:

$$Private\ Credit_{ft} = \beta\, Tightness_t + \gamma X_{ft} + \mu_f + \varphi t + \varepsilon_{ft}$$

where *Private Credit* is a dummy variable that equals one if the issued debt is private credit, and zero for non-private credit, *Tightness* is a standardized quarterly time-series measure that captures market tightness in the loan market. We include the following controls, $X$: effective fed funds rate, private equity-sponsored dummy, deal type (e.g., LBO, Debt Refinancing, etc), and firm age. We also include *Firm fixed effects*, $\mu_f$, that absorb time-invariant borrower characteristics. Similarly to above, we include the linear time trend as a control. We follow Becker and Ivashina (2014) in the sample construction. First, we only include firm-quarter observations in which firm $f$ issued debt in quarter $t$. Second, exclude firm-quarter observations if firm $f$ has not issued non-private credit debt in the last 20 quarters. Third, exclude firm-quarter observations if firm $f$ issues both private credit and non-private credit debt in that quarter.

Panel B and C of Table 2 present the results. With firm fixed effects, the coefficient on BSL Tightness is 3.95 and significant at the 1% level. The tightening-standards coefficient is 2.08 and significant at the 10% level; the excess bond premium coefficient is positive but not statistically significant. The coefficient on log CLO issuance is -4.43 and significant at the 1% level. Thus, the shift toward private credit also appears within borrowers, beyond persistent differences in the composition of firms using each market.

## 3.3 Switching between both markets

Next, we decompose the dynamics shown in Figure 5.

These facts matter for interpreting the cyclical patterns documented in Subsection 3.1. When leveraged loan conditions tighten, a substantial set of borrowers sits at the intersection of the two markets and can reallocate issuance toward private credit rather than forgo financing altogether, consistent with the pronounced stress-period increases in private credit market share in Figure 5. At the same time, the large "Both Switch" population motivates our within-firm identification in Subsection 3.2: firm fixed effects concentrate attention on borrowers with demonstrated access to both markets, allowing us to test whether aggregate tightness measures shift their deal choice toward private credit.

[Figure 7 here]

Figure 7 provides direct evidence on borrower migration between markets by tracking the frequency with which firms switch from one market to the other across consecutive deals. We measure switching relative to the total number of private credit and leveraged loan deals in each quarter, so that the two series capture the relative importance of flows in each direction within the overall market. Prior to the Global Financial Crisis, switching

between the two markets was limited. During the financial crisis, however, switching from leveraged loans to private credit increased sharply, peaking at close to 40% around 2009. This pronounced increase is consistent with borrowers turning to direct lenders as access to the syndicated loan market deteriorated. As leveraged loan market conditions normalized, the frequency of switching into private credit declined substantially, while switching from private credit to leveraged loans increased. Over the subsequent decade, flows in the two directions became considerably more balanced. Switching into private credit nevertheless exhibits several periods of elevated activity, including around 2014-2015, and from 2019 to 2022. By the end of the sample, the two switching frequencies converge to roughly similar levels.

The time variation in these flows is consistent with private credit acting as an alternative source of financing when access to leveraged loans becomes more difficult. At the same time, the substantial flow of borrowers back into leveraged loans indicates that migration between the two markets is not one-directional. This pattern is consistent with borrowers moving across markets in response to changes in financing conditions.

We test the switching behavior of borrowers when facing leveraged loan tightness by estimating the following specification:

$$Switch_{ft} = \beta\, Tightness_t + \gamma X_{ft} + \mu_f + \varphi t + \varepsilon_{ft}$$

where $Switch_{ft}$ has two separate meanings: in one specification, it is a dummy equal to 100 if the current deal of firm $f$ in quarter $t$ is a private credit deal and the previous deal of the same firm is a leveraged loan deal, and equal to 0 if both the previous and current deals are leveraged loans (*Switch to private credit*); in another specification, the variable is a dummy equal to 100 if the current deal of firm $f$ in quarter $t$ is a leveraged loan deal and the previous deal of the same firm is a private credit deal, and equal to 0 if both the previous and current deals are private credit deals (*Switch to leveraged loan*). We again include the following controls, $X$: effective fed funds rate, private equity-sponsored dummy, deal type (e.g., LBO, Debt Refinancing, etc), and firm age. We also include *Firm fixed effects*, $\mu_f$, that absorb time-invariant borrower characteristics. Similarly to above, we include the linear time trend as a control.

[Table 3 here]

Table 3 presents the results. Panel A shows the results for firms switching from leveraged loan to private credit. We find that especially the tightness measures specific of the syndicated market, such as CLO AAA spread, average time-to-market, net flex, and BSL tightness are positive and statistically significant. For example, a one-standard deviation

increase in the CLO AAA Spread leads to a 3.32 percentage point increase in the probability of the borrower switching from leveraged loan to private credit. Moreover, we find that the private equity-backed companies are in general more likely to switch to private credit. Panel B shows the results for firms switching from private credit to leveraged loan. Across almost all our tightness measures, we find statistically significant coefficients pointing at firms switching to private credit from leveraged loan when the leveraged loan market is not tight anymore. For example, a one-standard deviation increase in the Log CLO volume increases by 9 percentage points the likelihood of borrowers going from private credit to leveraged loans. These results are consistent with our thesis: Private credit absorbs borrowers when the syndicated market tightens and these firms return to the leveraged loan market when it reopens, a pattern that secular growth in private credit cannot generate.[10]

## 3.4 Borrowers' quality and switching from leveraged loan to private credit

The aggregate results show that borrowers increasingly migrate from leveraged loans to private credit when syndicated loan conditions tighten. We next examine which borrowers account for this migration. In particular, we test whether firms experiencing a deterioration in credit quality are more likely to switch from leveraged loans to private credit rather than refinance again in the leveraged loan market.

We first test whether borrowers that experienced a recent decline in their quality are more likely to switch from leveraged loan to private credit irrespective of the leveraged loan market being tight or loose. To test for this we employ the following specification:

$$Switch\ LL\ to\ PC_{ft} = \beta Credit\ Weakness_{ft-1} + \gamma X_{ft} + \mu_f + \varepsilon_{ft}$$

where $Switch\ LL\ to\ PC_{ft}$ is a dummy equal to one if the previous loan of a company is a leveraged loan and the following loan of the same company is a private credit, and zero if both the previous and the following loans are leveraged loans, $Credit\ Weakness_{ft-1}$ is (i) the quarterly discount of the borrowers' active loans measured the quarter before the switching deal, (ii) the decline in the quarterly price in the four quarters before the switching deal, (iii) a dummy variable equal to one if any of the active loans of a borrower was rated CCC+ or below in the quarter before the switching deal, (iv) a dummy variable equal to one if the borrower experienced any rating downgrade the four quarters before the switching deal. We

[10]In the online appendix we show that we obtain consistent results when looking at borrowers going from leveraged loan to private credit and back to leveraged loan. Even when measuring borrowers' credit quality using BDC holdings data, we see that borrowers switch back to leveraged loan when the leveraged loan market is not tight anymore, and not simply because their credit quality improved.

then include the usual firm-specific controls $X_{ft}$: the logarithm of the borrower age, and a private equity dummy. Additionally, we include firm and quarter fixed effects.

[Table 4 here]

Panel A of Table 4 presents our estimates. The four measures of borrowers' credit quality are all positive and highly significant indicating that borrowers with outstanding leveraged loans who experienced a deterioration in their quality are more likely to switch to private credit. For example, a recent rating downgrade is associated with a 6.42-percentage-point higher probability of switching without firm fixed effects and a 6.14-point difference with firm fixed effects. Similar positive relationships hold for secondary-market discounts, price declines, and low ratings.

We then explore whether the switching behavior of borrowers with recent decline in credit quality is more pronounced when the leveraged loan market is tight. To test this, we add to the previous model specification the leveraged loan tightness measures, thus estimating:

$$\begin{aligned} \textit{Switch LL to PC}_{ft} = \beta_1 \textit{Tightness}_t \times \textit{Credit Weakness}_{ft-1} \\ + \beta_2 \textit{Credit Weakness}_{ft-1} + \gamma X_{ft} + \mu_f + \varepsilon_{ft}. \end{aligned}$$

The coefficient of interest is $\beta_1$, that is the effect on switching from leveraged loan to private credit when a borrower contemporaneously has been experiencing outstanding credit deterioration in the secondary-market in the past quarters, and the leveraged loan market is tight in the same quarter as the deal happens.

Panel B reports the interaction estimates. The price-decline and low-rating interactions are positive and significant without firm fixed effects, but not with firm fixed effects. The main effects of borrower weakness remain generally positive. These results do not establish a uniform amplification of borrower deterioration during tightening.

# 4 Mechanisms

The preceding results raise a central question: given that both direct lenders and syndicated loan market investors are subject to same macro, and interest rate, environment it is puzzling why can direct lenders continue providing financing when other nonbank lenders withdraw from the syndicated loan market? We now examine two complementary mechanisms that could generate this advantage: direct lenders' pre-existing committed funding capacity and their lower screening costs using common asset-management platforms to obtain prior information about new borrowers.

## 4.1 Funding stability and unused BDC revolvers

Private credit funds can draw committed investor capital, and BDCs can deploy equity already raised and committed bank credit. This can reduce dependence on contemporaneous market fundraising. In contrast, open-end loan funds face redemptions, leveraged investors depend on market borrowing, and new CLO formation requires financing at prevailing prices. Existing CLOs can reinvest proceeds, but the net expansion of institutional lending capacity remains sensitive to new issuance. Banks' comparatively stable pro rata lending does not by itself replace missing institutional demand for a complete syndicated transaction.

We test whether unused committed funding helps BDCs sustain originations when market conditions tighten. For BDC $b$ in quarter $t$, we estimate

$$\begin{aligned}\ln(1 + \#PC\ Deals_{bt}) = \beta_1\, Tightness_t + \beta_2\, Tightness_t \times Unused\ Revolver_{b,t-1} \\ + \beta_3\, Unused\ Revolver_{b,t-1} + \mu_t + \varepsilon_{bt}.\end{aligned} \tag{1}$$

The outcome is the log of one plus the BDC's number of private credit originations. Unused Revolver is the previous quarter's unused revolving and SPV facility capacity divided by total committed revolvers. We report specifications with and without quarter fixed effects. Quarter fixed effects absorb the common tightness measure but leave its interaction with BDC-specific unused capacity identified.

[Table 5 here]

Table 5 reports positive interaction coefficients for all four tightness measures, each significant at the 1% level. With quarter fixed effects, the estimates are 0.24 for BSL Tightness, 0.21 for tightening loan standards, 0.37 for the excess loan premium, and 0.20 for CLO AAA spreads. BDCs entering a quarter with more unused committed capacity thus maintain more deal activity as conditions tighten. Each specification contains 2,991 observations.

The results support a role for committed liquidity in sustaining lending. They do not directly measure the sensitivity of funding prices or imply that all private credit funding costs are fixed: floating reference rates, contractual borrowing constraints, and the terms of new capital can still change. Combined with the common-parent evidence, they suggest that both available funding and pre-existing borrower relationships contribute to private credit's capacity to absorb borrowers from syndicated markets.

## 4.2 Information frictions and common CLO–private credit parents

Direct lenders and affiliated CLO managers can acquire borrower information through participation in leveraged loans before financing a private credit transaction. A common parent

may therefore connect prior loan exposure to subsequent direct lending. Concentrated private credit syndicates offer fewer opportunities for the broader leveraged loan investor base to acquire information through prior participation. If information frictions worsen in downturns, this asymmetry can contribute to increased entry into private credit and reduced exit back into leveraged loans. The following test examines how prior exposure impacts future lending decisions.

For each observed switch of borrower $f$ from a leveraged loan to private credit in quarter $t$, we consider manager parents $m$ that made a private credit loan during the preceding 12 months. We estimate

$$Lends_{ftm} = \beta\ CLO\ Holder_{ftm} + \mu_{ft} + \mu_{mt} + \varepsilon_{ftm}, \tag{2}$$

where $Lends_{ftm}$ equals 100 if a lender affiliated with parent $m$ participates in the new private credit deal and zero otherwise. $CLO\ Holder_{ftm}$ indicates whether a CLO of that parent held the borrower's leveraged loans 90 days before the deal, using each CLO's last report in the preceding 91 days. CLO managers and private credit lenders, including BDCs, are linked at the parent level. Event fixed effects $\mu_{ft}$ compare parents within the same borrower transition; parent-quarter fixed effects $\mu_{mt}$ account for each parent's lending activity in a given quarter.

[Table 6 here]

In Panel A of Table 6, the coefficient on prior CLO ownership is positive and significant at the 1% level in all four specifications. It falls from 4.05 percentage points with event fixed effects alone to 2.43 points after adding parent-quarter fixed effects. Restricting the comparison to parents with CLOs produces an estimate of 2.77 points, while event weighting produces an estimate of 2.45 points. The raw lending rate is 4.18% for parents whose CLOs held the borrower's loans, compared with 0.17% for other eligible parents in the unrestricted sample.

These estimates document persistence in lending relationships across affiliated vehicles and markets. They are consistent with prior borrower exposure reducing information costs. Because the sample conditions on completed switches, they do not identify a causal effect of common ownership on the likelihood of switching, distinguish information from every other relationship advantage, or establish that the information channel strengthens in downturns.

Panel B of Table 6 examines persistence in the reverse direction. Among completed PC-to-LL switches, a parent that lent in the preceding private credit deal is more likely to hold the new leveraged loan through its CLOs. The outcome measures CLO ownership at the end of the quarter after closing. With deal and parent-quarter fixed effects, the association

is 16.52 percentage points; the estimate remains similar among PC-active parents and with event weighting. As in the LL-to-PC test, this is a conditional association among observed transitions.

# 5 Further discussion

## 5.1 The price and terms of switching

Our results suggest that private credit provides borrowers with continued access to financing when syndicated loan conditions deteriorate. However, this substitution need not be costless. Direct loans typically carry higher spreads than syndicated loans, reflecting differences in borrower characteristics, liquidity, and lending technology. If firms move into private credit because syndicated financing becomes difficult to obtain, they may accept higher borrowing costs in exchange for continued access to credit. When syndicated market conditions improve, the opportunity to refinance at lower spreads should provide an incentive to return. We therefore examine changes in loan spreads and deal amounts across consecutive financing transactions to assess whether the terms of switching are consistent with private credit serving as a more expensive, potentially temporary alternative to syndicated borrowing.

Table 7 examines changes in spreads, and deal amounts across consecutive financings. The regressions distinguish entry into private credit, exit into leveraged loans, and continued leveraged loan borrowing, with continued private credit borrowing as the omitted category. Specifications include quarter fixed effects and, in alternating columns, firm fixed effects.

[Table 7 here]

In the firm-fixed-effects spread regression, the entry coefficient is 145.65 basis points and the exit coefficient is -96.77 basis points. These are differences in spread changes relative to continued private credit borrowing, rather than causal estimates of switching costs. Entry is also associated with smaller recorded deal amounts, whereas exit is associated with larger amounts. The spread results support the interpretation that financing from private credit carries is costlier and that borrowers can reverse back to lower funding when returning to leveraged loans.

## 5.2 Which firms substitute: private credit and high-yield bonds

An important question is whether substitution into private credit represents a distinct financing margin or simply reflects the broader ability of firms to replace bank lending with nonbank debt. Becker and Ivashina (2014) document that firms substitute from bank loans

into bonds when bank credit supply contracts. However, access to the high-yield bond market is concentrated among borrowers that can issue sufficiently large and marketable securities, whereas direct lending can serve smaller and more informationally opaque firms. Consequently, bonds and private credit may not be close substitutes for the same borrowers, even though both represent alternatives to syndicated loans. Establishing this distinction is important for identifying the contribution of direct lending to credit supply resilience. We therefore examine transitions across private credit, syndicated leveraged loans, and high-yield bonds to assess the extent to which these markets share a common borrower base and whether direct lending provides a distinct substitution channel for leveraged borrowers.

Table 8 presents the transition matrix across private credit (PC), leveraged loans (LL), and high-yield bonds (HY Bond) over the period from January 2005 to December 2025. The results indicate substantial persistence in financing choices, with most borrowers remaining in the same debt market across consecutive deals. Specifically, 74.51% of borrowers previously using private credit continue to rely on private credit, compared with 70.54% for leveraged loans and 61.02% for high-yield bonds. Among borrowers that switch financing types, transitions are more common between leveraged loans and the other two markets. In particular, 35.70% of borrowers previously issuing high-yield bonds subsequently use leveraged loans, while 23.07% of borrowers previously using private credit transition to leveraged loans. By contrast, direct transitions between private credit and high-yield bonds are relatively uncommon, accounting for only 2.41% and 3.27% of their respective previous-deal categories. Overall, the results suggest that financing choices exhibit considerable persistence, while leveraged loans play a relatively prominent role in transitions between debt markets.

[Table 8 here]

## 5.3 European evidence

The results so far have relied exclusively on the US. This raises concerns that they are an artifact of the institutional features of the US credit markets, and lack external validity in other domains. In this section, we show the robustness of our findings by replicating the US-based results documented in Table 2 using European data.

The dataset from Pitchbook-LCD is constructed similarly to above, but we only keep European deals. We classify a deal as European if (a) the headquarters global region of the firm is "Europe", and (b) the native currency of the deal is a European currency.

**Tightness Measures.** We collect five measures of European credit market tightness which broadly corresponds to the ones we used for the US analysis in the main paper: excess bond

premium, CLO volume in Europe, Term Loan B spreads of newly-issued leveraged loans in Europe, and three credit conditions measures from ECB's Bank Lending Survey measures, which capture reported loan supply, and reported spread increases in bank lending to small- and medium-sized enterprises.[11]

[Table 9 here]

First, Table 9 Panel A shows that standardized measures of credit conditions have economically meaningful effects on the share of private credit in Europe. A one–standard deviation increase in average loan spreads raises the private credit share by 5-6 percentage points, and a comparable tightening in lending standards increases it by 5 percentage points. These effects are economically similar, though close to those observed in the U.S., where the corresponding responses are about 5 percentage points.

Market-based indicators further highlight cross-regional differences in magnitude. A one–standard deviation increase in the excess bond premium is associated with a 9 percentage point rise in the European private credit share, compared with roughly 6 percentage points in the U.S. This suggests that aggregate risk pricing plays a particularly important role in reallocating credit intermediation in Europe. In contrast, CLO issuance has a negative but statistically insignificant effect in Europe, while the same standardized increase is associated with an approximately 6 percentage point decline in private credit in the U.S., underscoring the more central role of securitized loan markets in the U.S. financial system.

Overall, the sign and magnitude of the estimates indicate that the direction of substitution toward private credit is remarkably similar across Europe and the U.S..

Second, Table 9 Panel B analyzes the determinants of firms' deal-level choice between private credit and leveraged loans in Europe, using an indicator equal to one if a deal is financed with private credit. This table thus serves as a European counterpart to the US-based results documented in Table 2 above. The specifications progressively incorporate firm fixed effects, allowing the analysis to isolate within-firm substitution across financing channels in response to changing market conditions.

Columns 1 to 4 show the results for the survey-based measures of leveraged loan conditions obtained from the ECB Bank Lending Survey. Increases in loan spreads for the average borrower significantly raise the probability that a European deal is financed with private credit by 5 - 7 percentage points. Tighter lending standards have a similarly strong positive effect, consistent with the evidence above.

[11] https://data.ecb.europa.eu/data/datasets/BLS/BLS.Q.U2.ALL.SME.E.Z.B3.ST.S.WFNET, https://data.ecb.europa.eu/data/datasets/BLS/BLS.Q.U2.ALL.SME.E.Z.B3.ZZ.D.WFNET, and https://data.ecb.europa.eu/data/datasets/BLS/BLS.Q.U2.ALL.MAL.E.Z.B3.TC.S.WFNET

Columns 5 to 10 consider market-based measures of leveraged loan tightness. Higher Term loan B spreads and elevated excess bond premia are associated with a greater likelihood of private credit usage, indicating that periods of heightened risk pricing in public credit markets lead European firms to turn toward private lenders. The excess bond premium coefficient is not statistically significant with firm fixed effects. In contrast, greater CLO issuance is associated with a lower but not statistically significant probability of private credit deals. In conclusion, the overall pattern aligns well with that observed in the U.S. data.

# 6 Conclusion

Direct lending issuance is substantially less cyclical than syndicated leveraged lending and can thus function as backstop to the leveraged loan market. When syndicated conditions tighten, firms that would otherwise borrow in the syndicated market obtain direct loans; when conditions ease, many of them return. Direct lending does not show the excess cyclicality documented for institutional syndicated tranches: its issuance is no more cyclical than bank-funded pro rata issuance. Sponsor-backed firms and weaker borrowers are more likely to switch: A downgrade in the preceding four quarters raises the switching probability, and the effect is concentrated among loans rated CCC or below. These are exactly the loans that push CLO portfolios against their limits when credit conditions weaken.

Two mechanisms explain why direct lenders keep originating when institutional syndicated lenders decrease lending. First, direct lenders fund loans with capital committed in advance. BDCs that enter a quarter with more unused revolver and SPV capacity reduce origination less when the leveraged loan market tightens, so bank credit commitments fund part of the private credit that replaces syndicated loans. Second, prior exposure lowers the information cost of switching. Asset managers whose CLOs held a borrower's leveraged loans are more likely to lend in its new private credit deal, and the relationship persists when the borrower returns to the syndicated market. For cyclicality, the relevant distinction is between lenders whose funding depends on contemporaneous market prices and lenders whose funding is committed in advance, not between banks and nonbanks.

Access to direct lending is expensive. Relative to firms that remain in private credit, entry is associated with a spread increase of roughly 150 basis points and exit with a decline of roughly 100 basis points. Borrowers thus use direct lending as a more expensive and temporary source of financing. This margin is distinct from the loan–bond margin in Becker and Ivashina (2014): deals that follow private credit are rarely high-yield bonds, and deals that follow bonds are rarely private credit. The same substitution holds in Europe, where the

CLO sector is smaller. There, a one-standard-deviation tightening in bank lending standards raises the within-firm probability of a private credit deal by close to 6 percentage points.

Our results also have policy implications. Direct lending dampens the transmission of syndicated credit supply shocks: when CLO and loan-fund demand contracts, leveraged borrowers lose less access to credit than they otherwise would. The backstop, however, shifts credit risk toward less transparent and less regulated lenders at the point in the cycle when borrower quality is lowest. It also relies in part on bank credit lines to BDCs and their SPVs, whose terms banks can tighten in a prolonged downturn. Monitoring private credit for financial stability therefore requires data on the committed bank facilities that fund direct lenders, alongside data on their loan books. We look forward to more research addressing some of these issues.

# References


Acharya, V. V., Gopal, M., and Steffen, S. (2025). *Fragile financing? how corporate reliance on shadow banking affects their access to bank liquidity* (Tech. Rep.). National Bureau of Economic Research.

Aldasoro, I., Doerr, S., and Zhou, H. (2025). Non-bank lending during crises. *Review of Finance*, *29*(6), 1809–1832.

Almeida, H., Campello, M., Laranjeira, B., and Weisbenner, S. (2012). Corporate debt maturity and the real effects of the 2007 credit crisis. *Critical Finance Review*, *1*(1), 3–58.

Banerjee, R., and Serena, J.-M. (2026). Dampening the financial accelerator? direct lenders and monetary policy. *Journal of Money, Credit and Banking*, *58*(4), 1017–1049.

Becker, B., and Ivashina, V. (2014). Cyclicality of credit supply: Firm level evidence. *Journal of Monetary Economics*, *62*, 76–93.

Block, J., Jang, Y. S., Kaplan, S. N., and Schulze, A. (2024). A survey of private debt funds. *The Review of Corporate Finance Studies*, *13*(2), 335–383.

Bruche, M., Malherbe, F., and Meisenzahl, R. R. (2020). Pipeline risk in leveraged loan syndication. *The Review of Financial Studies*, *33*(12), 5660–5705.

Buchner, A., Espenlaub, S., Khurshed, A., and Mohamed, A. (2024). Private debt and the role of venture capital and private equity sponsors. *Management Science*, *70*(1), 372–395.

Chava, S., and Purnanandam, A. (2011). The effect of banking crisis on bank-dependent borrowers. *Journal of financial economics*, *99*(1), 116–135.

Chernenko, S., Erel, I., and Prilmeier, R. (2022). Why do firms borrow directly from nonbanks? *The Review of Financial Studies*, *35*(11), 4902–4947.

Chernenko, S., Ialenti, R., and Scharfstein, D. (2025). Bank capital and the growth of private credit. *Available at SSRN*, *5097437*, 509–515.

Chodorow-Reich, G. (2014). The employment effects of credit market disruptions: Firm-level evidence from the 2008–9 financial crisis. *The Quarterly Journal of Economics*, *129*(1), 1–59.

Colla, P., Ippolito, F., and Li, K. (2013). Debt specialization. *The Journal of Finance*, *68*(5), 2117–2141.

Davydiuk, T., Marchuk, T., and Rosen, S. (2024). Direct lenders in the us middle market. *Journal of Financial Economics*, *162*, 103946.

Demiroglu, C., and James, C. M. (2010). The role of private equity group reputation in lbo financing. *Journal of Financial Economics*, *96*(2), 306–330.

Denis, D. J., and Mihov, V. T. (2003). The choice among bank debt, non-bank private debt, and public debt: evidence from new corporate borrowings. *Journal of financial Economics*, *70*(1), 3–28.

Diamond, D. W., and Rajan, R. G. (2005). Liquidity shortages and banking crises. *The Journal of finance*, *60*(2), 615–647.

Emin, M., James, C., Li, T., and Lu, J. (2026). *Institutional synergies and the fragility of loan funds.* Review of Financial Studies.

Erel, I., and Inozemtsev, E. (2025). Evolution of debt financing toward less-regulated financial intermediaries in the united states. *Journal of Financial and Quantitative Analysis*, *60*(3), 1234–1271.

Fernández, A. I., González, F., and Suárez, N. (2018). Bank supply shocks and the substitution between bank and nonbank debt. *Journal of Corporate Finance*, *48*, 122–147.

Fleckenstein, Q., Gopal, M., Gutiérrez, G., and Hillenbrand, S. (2025). Nonbank lending and credit cyclicality. *The Review of Financial Studies*, hhaf024.

Gilchrist, S., and Zakrajšek, E. (2012). Credit spreads and business cycle fluctuations. *American economic review*, *102*(4), 1692–1720.

Gopal, M., and Schnabl, P. (2022). The rise of finance companies and fintech lenders in small business lending. *The Review of Financial Studies*, *35*(11), 4859–4901.

Greenstone, M., Mas, A., and Nguyen, H.-L. (2020). Do credit market shocks affect the real economy? quasi-experimental evidence from the great recession and "normal" economic times. *American Economic Journal: Economic Policy*, *12*(1), 200–225.

Haque, S., Jang, Y. S., and Wang, J. J. (2025). Indirect credit supply: How bank lending to private credit shapes monetary policy transmission. *Available at SSRN 5125733*.

Haque, S., Mayer, S., and Stefanescu, I. (2026). Private debt versus bank debt in corporate borrowing. *Journal of Financial Economics*, *186*, 104401.

Holmstrom, B., and Tirole, J. (1997). Financial intermediation, loanable funds, and the real sector. *the Quarterly Journal of economics*, *112*(3), 663–691.

Irani, R. M., Iyer, R., Meisenzahl, R. R., and Peydro, J.-L. (2021). The rise of shadow banking: Evidence from capital regulation. *The Review of Financial Studies*, *34*(5), 2181–2235.

Ivashina, V., and Kovner, A. (2011). The private equity advantage: Leveraged buyout firms and relationship banking. *The Review of Financial Studies*, *24*(7), 2462–2498.

Jang, Y. S. (2024). *Are direct lenders more like banks or arm's-length investors?* (Unpublished doctoral dissertation). The University of Chicago.

Jang, Y. S., Kim, D., Sufi, A., and Chen, X. (2025). *The lending technology of direct lenders in private credit* (Tech. Rep.). National Bureau of Economic Research.

Kim, S., Plosser, M. C., and Santos, J. A. (2018). Macroprudential policy and the revolving door of risk: Lessons from leveraged lending guidance. *Journal of Financial Intermediation*, *34*, 17–31.

Matvos, G., Piskorski, T., and Seru, A. (2026). *Private credit, balance sheets and financial stability* (Tech. Rep.). National Bureau of Economic Research.

Mistopoulou, E., Rotermund, S., and Steffen, S. (2026). Funding fragility in direct lending. *Working Paper*.

Rintamäki, P., and Steffen, S. (2025). When flexibility becomes forbearance: Payment-in-kind in private credit. *Available at SSRN 5341145*.

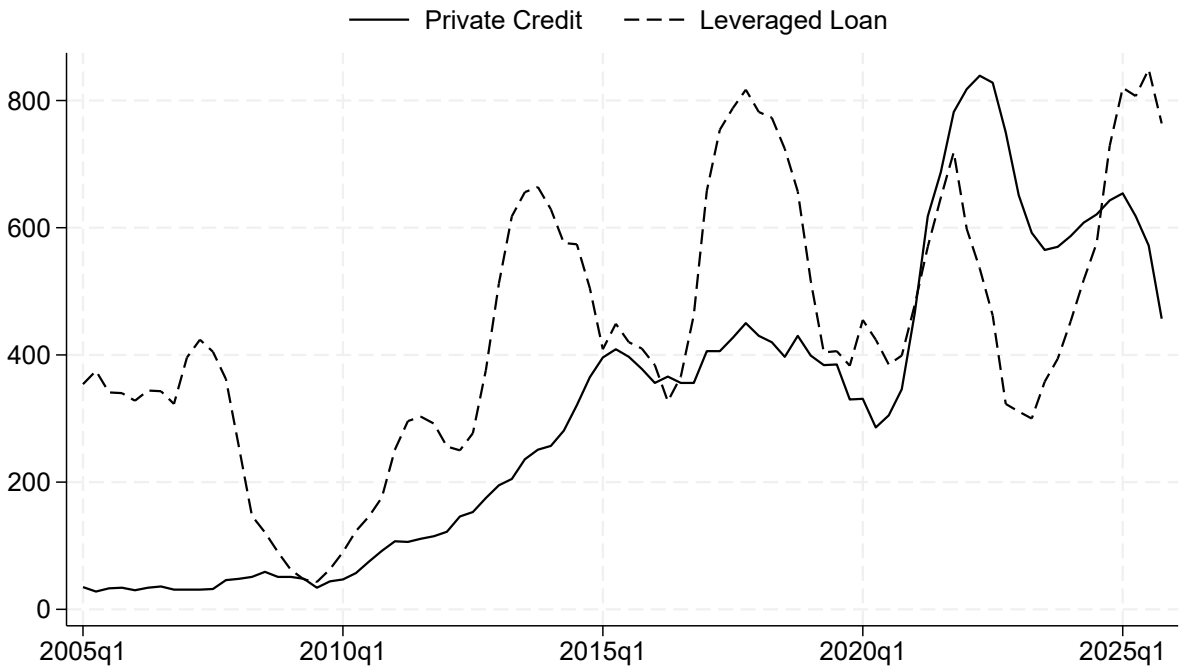
Robinson, D. T., and Wallskog, M. (2026). *Why is private lending so popular?* (Tech. Rep.). National Bureau of Economic Research.

Santos, J. A., and Winton, A. (2008). Bank loans, bonds, and information monopolies across the business cycle. *The Journal of Finance*, *63*(3), 1315–1359.

Saunders, A., Spina, A., Steffen, S., and Streitz, D. (2025). Corporate loan spreads and economic activity. *The Review of Financial Studies*, *38*(2), 507–546.

**Figure 2: Number of private credit and leveraged loan deals**

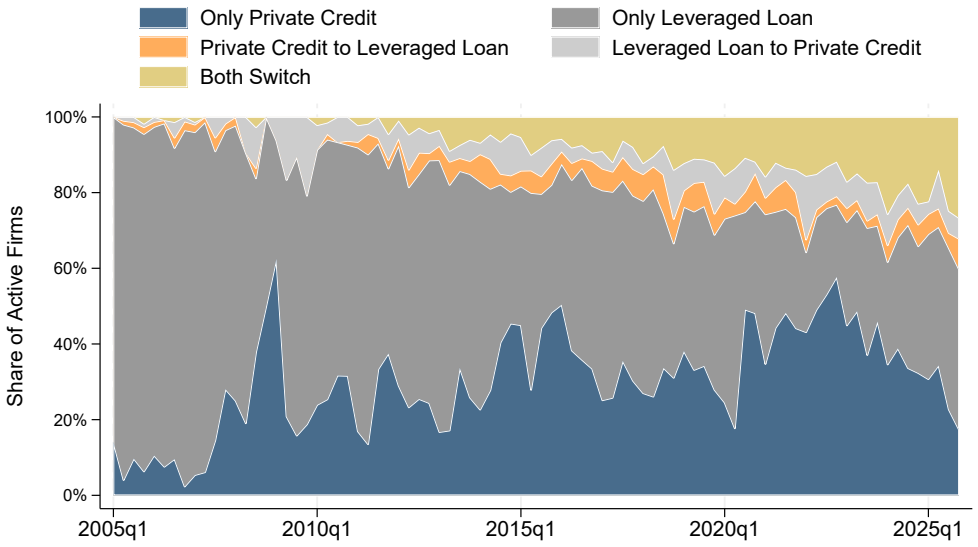
This figure documents the four-quarter rolling sum of the number of private credit and leveraged loan deals. For each quarter, the plotted value represents the total number of deals completed in that quarter and the preceding three quarters. The sample is filtered as described in the paper. The sample period is from January 2005 to December 2025.



## Figure 3: Firm debt profiles

This figure shows how firms' debt financing spans the private credit (PC) and leveraged loan (LL) markets. Panel (a) plots, by origination quarter, the share of active firms (issuing either a PC or LL deal in that quarter) in each of five mutually exclusive debt-history profiles constructed from firms' ordered deal sequences (using pre-2005 observations to initialize histories). Panel (b) reports the distribution of these profiles across borrowers in the sample: 47% borrow only in PC, 26% borrow only in LL, 7% migrate from LL to PC, 4% migrate from PC to LL, and 15% access both markets in both directions ("Both Switch").

### (a) Firm Debt Evolution




### (b) Distribution of Firm Debt Profiles

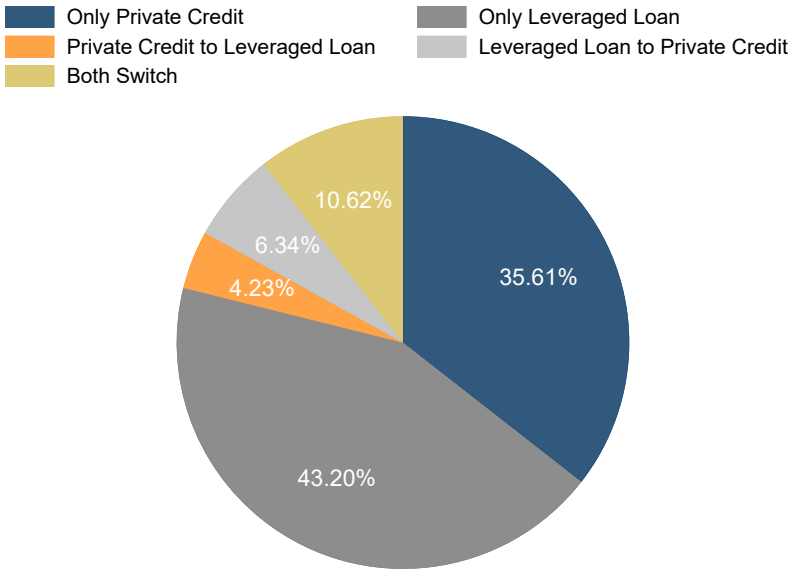
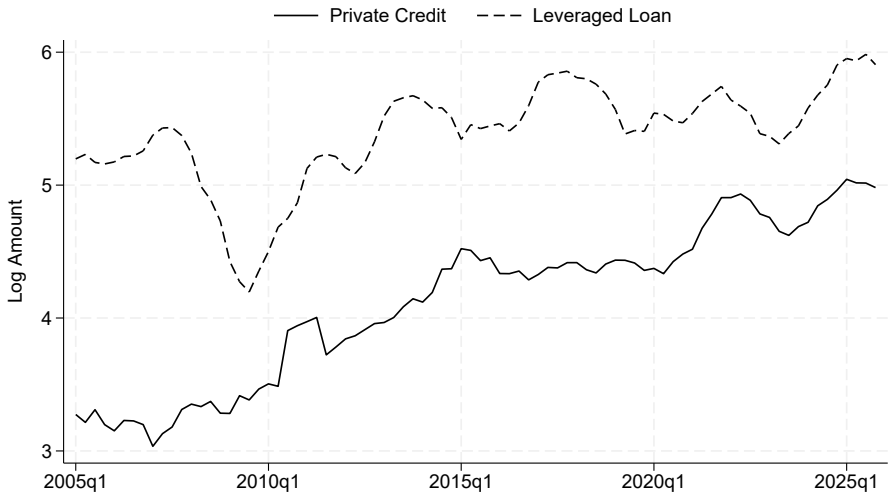
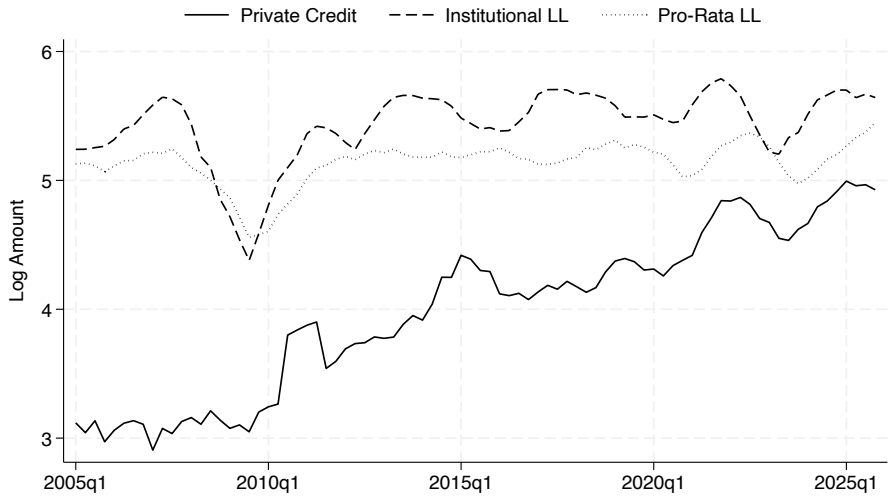


**Figure 4: Issuance volume and average spread of private credit and leveraged loan deals**

This figure documents the log of trailing-twelve-month total issuance of private credit and leveraged loan deals in our sample (panel a), the total issuance of private credit, institutional and pro-rata leveraged loans (panel b), and the trailing-twelve-month volume-weighted average spread (panel c) of private credit and leveraged loan deals over time. The sample period is from January 2005 to December 2025.

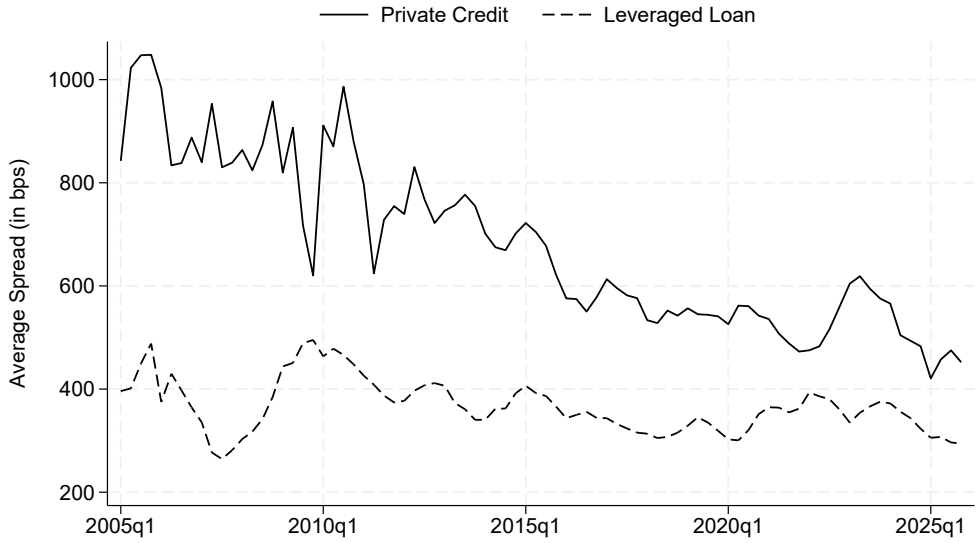



**(a) Log issuance volume (private credit and leveraged loan)**




**(b) Log issuance volume (private credit, institutional leveraged loan, pro-rata leveraged loan)**

**Figure 4: Issuance volume and average spread of private credit and leveraged loan deals (continued)**




**(c) Volume-weighted average spread (in bps)**

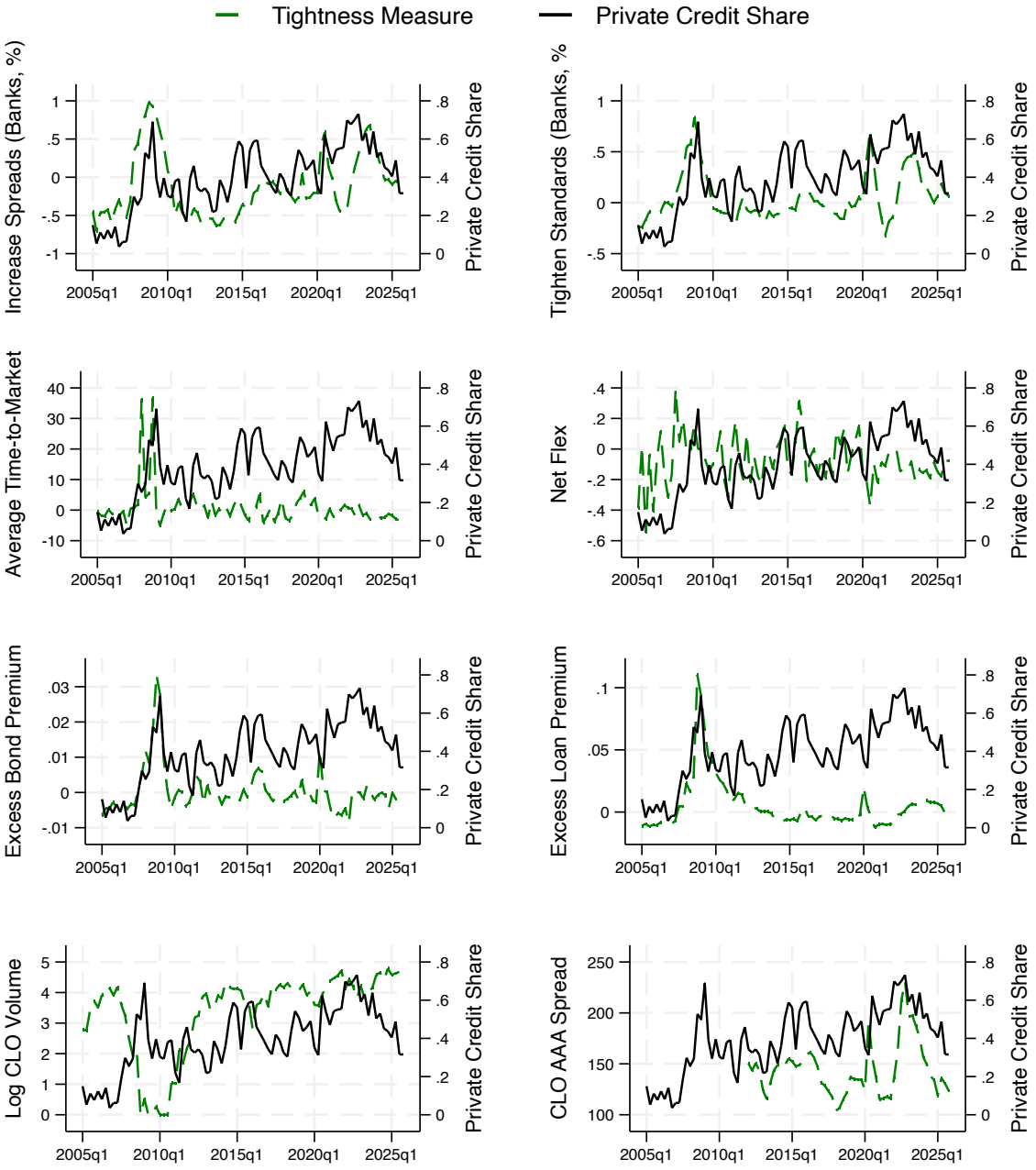
**Figure 5: Share of firms (leveraged loan and private credit) issuing private credit**

This figure documents the trailing-twelve-month share of firms issuing private credit. For each quarter, the numerator and denominator are computed as the number of firms in that quarter and the preceding three quarters (the numerator is the number of firms issuing private credit, the denominator is the number of firms issuing either private credit or leveraged loan). The sample period is from January 2005 to December 2025.



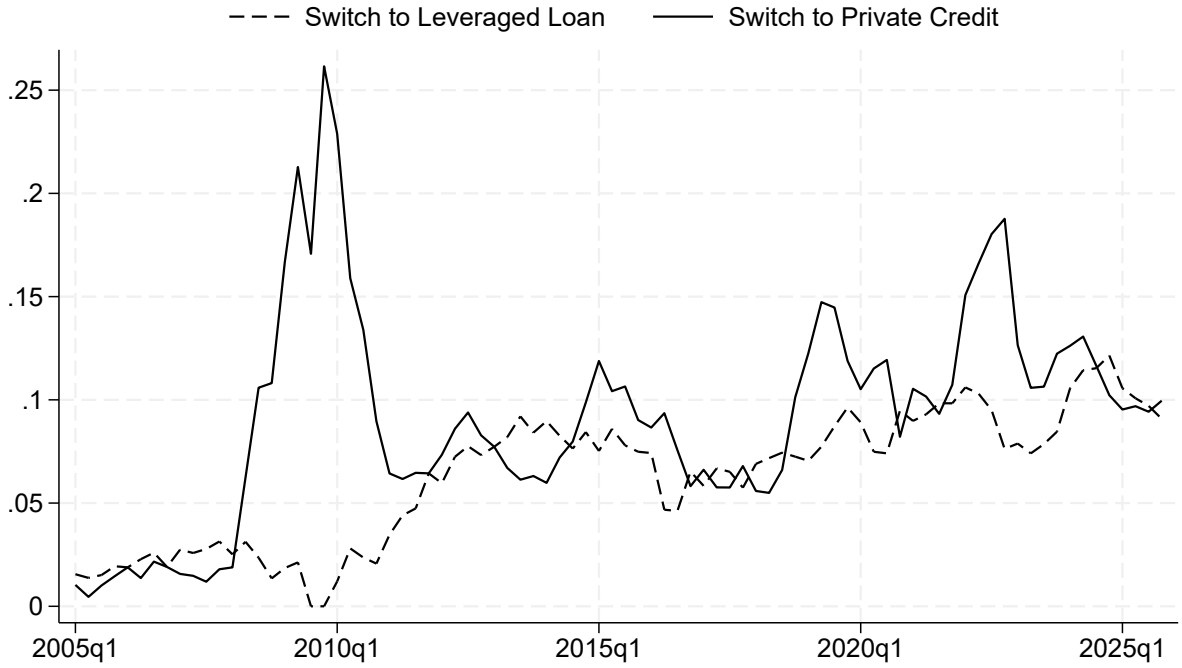
**Figure 6: Public credit tightness and share of firms issuing private credit**

This figure documents the share of firms issuing private credit in blue (as per Figure 5, but now displayed as the "raw" quarterly variable and not as a trailing-twelve-month variable) against measures of leveraged loan tightness in gray. The measures are (in order): % banks increasing loan spreads, % banks reporting stronger demand, % banks tightening standards, average time-to-market of leveraged loans, net share of leveraged loan deals flexed up, excess bond premium, excess loan premium, and log CLO volume. The sample period is from January 2005 to December 2025.



## Figure 7: Firms' switching frequency between private credit and leveraged loans

This figure documents the trailing-twelve-month switching frequency of firms between private credit and leveraged loan. The time series is constructed by looking at the financing history of each firm and counting whenever a current deal is of different type than the previous deal. The counts of switching deals for each quarter are then aggregated with the previous 3 quarters and divided by the total numbers of deals over the same period of time (leveraged loan and private credit). For this graph, we also include observations starting from 2000 so as to have some history of deals before 2005. The plot shows only the time series from January 2005 to December 2025.



## Table 1: Summary statistics

This table presents the summary statistics for the seven leveraged loan tightening measures and the share of firms issuing private credit and switching between private credit and leveraged loan deals (panel A), and general borrower and deal characteristics for private credit and leveraged loan deals (panel B). Volume is the loan deal size (sum of all facilities). Spread is the volume-weighted average of facility spreads for each deal. Panel C reports the correlation coefficients of the leveraged loan tightness measures used in the paper. Panels D and E add switching and non-switching deal spreads and amounts. The sample period is from January 2005 to December 2025, when available.

**Panel A: Time Series (Quarterly)**

| Variable | Mean | Std. Dev. | p25 | p50 | p75 | Obs. |
|---|---|---|---|---|---|---|
| BSL Tightness | 0.02 | 0.15 | -0.10 | -0.02 | 0.12 | 76 |
| Tightening Loan Standards (%) | 5.21 | 23.65 | -10.50 | -2.80 | 12.80 | 84 |
| Loan Spreads Increase (%) | -12.88 | 42.02 | -45.55 | -22.70 | 6.65 | 84 |
| Average Time-to-Market | 18.54 | 8.99 | 12.70 | 18.14 | 22.55 | 84 |
| Net Flex | -0.07 | 0.15 | -0.16 | -0.08 | 0.00 | 84 |
| Excess Bond Premium (%) | 0.02 | 0.64 | -0.30 | -0.12 | 0.07 | 84 |
| Excess Loan Premium (%) | 0.49 | 2.05 | -0.66 | -0.10 | 0.76 | 84 |
| CLO Volume (log) | 3.38 | 1.33 | 3.21 | 3.90 | 4.18 | 84 |
| CLO AAA Spread (bps) | 144.37 | 26.17 | 123.89 | 140.66 | 154.30 | 56 |
| Share of Firms issuing Private Credit (%) | 39.34 | 16.95 | 30.19 | 39.29 | 52.28 | 84 |
| Switching Frequency (%): | | | | | | |
| Private Credit to Leveraged Loan | 6.37 | 3.90 | 4.05 | 6.53 | 9.14 | 84 |
| Leveraged Loan to Private Credit | 9.30 | 6.43 | 5.01 | 9.00 | 11.99 | 84 |
| Net Switch | 2.93 | 7.36 | -1.86 | 1.38 | 5.43 | 84 |

**Panel B: Borrower / Deal Characteristics**

| | Private Credit Deals | | | Leveraged Loan Deals | | |
|---|---|---|---|---|---|---|
| Number of Deals: | 6,751 | | | 9,644 | | |
| Variable | Mean | p50 | Std. Dev. | Mean | p50 | Std. Dev. |
| Borrower Age (years) | 34.04 | 26.00 | 28.69 | 46.89 | 34.00 | 38.34 |
| Volume (in mill. USD) | 127.27 | 36.30 | 362.04 | 761.17 | 472.51 | 919.12 |
| Spread (in bps) | 612.48 | 575.00 | 370.59 | 376.56 | 350.00 | 378.50 |

**Panel C: Correlation matrix**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| BSL Tightness | 1.00 | | | | | | | | |
| Tightening Loan Standards | 0.71 | 1.00 | | | | | | | |
| Loan Spreads Increase | 0.66 | 0.92 | 1.00 | | | | | | |
| Average Time-to-Market | 0.39 | 0.10 | 0.06 | 1.00 | | | | | |
| Net Flex | 0.31 | 0.01 | 0.01 | 0.33 | 1.00 | | | | |
| Excess Bond Premium | 0.64 | 0.60 | 0.56 | 0.50 | 0.39 | 1.00 | | | |
| Excess Loan Premium | 0.51 | 0.57 | 0.62 | 0.44 | 0.21 | 0.79 | 1.00 | | |
| Log CLO Volume | -0.38 | -0.23 | -0.30 | -0.55 | -0.13 | -0.46 | -0.75 | 1.00 | |
| CLO AAA Spread | 0.80 | 0.68 | 0.55 | -0.15 | -0.12 | 0.23 | 0.28 | -0.23 | 1.00 |

**Table 1: Summary statistics (continued)**

**Panel D: Deal spread (in bps)**

| Variable | Mean | Std. Dev. | p25 | p50 | p75 | Obs. |
|---|---|---|---|---|---|---|
| Private credit (PC) deals: | | | | | | |
| New PC | 619.63 | 383.86 | 450.00 | 576.24 | 750.00 | 1,056 |
| Stay PC | 585.07 | 412.15 | 469.20 | 550.00 | 654.44 | 1,123 |
| Switching LL to PC | 575.86 | 254.18 | 400.00 | 526.56 | 700.00 | 682 |
| Leveraged loan (LL) deals: | | | | | | |
| New LL | 425.70 | 505.41 | 257.35 | 375.00 | 481.99 | 1,948 |
| Stay LL | 362.63 | 403.92 | 250.00 | 325.00 | 423.17 | 5,928 |
| Switching PC to LL | 457.14 | 301.40 | 350.00 | 425.00 | 524.29 | 750 |

**Panel E: Deal volume (in mill. USD)**

| Variable | Mean | Std. Dev. | p25 | p50 | p75 | Obs. |
|---|---|---|---|---|---|---|
| Private credit (PC) deals: | | | | | | |
| New PC | 100.31 | 233.82 | 20.00 | 42.48 | 101.05 | 1,634 |
| Stay PC | 146.44 | 375.70 | 20.10 | 45.07 | 125.00 | 1,441 |
| Switching LL to PC | 170.51 | 515.94 | 15.54 | 29.28 | 114.87 | 791 |
| Leveraged loan (LL) deals: | | | | | | |
| New LL | 617.27 | 1,093.59 | 200.00 | 344.00 | 660.00 | 2,165 |
| Stay LL | 916.37 | 1,113.63 | 280.00 | 575.00 | 1,154.50 | 6,148 |
| Switching PC to LL | 769.96 | 1,004.96 | 250.00 | 470.00 | 925.00 | 810 |

## Table 2: Private credit market share and firms' credit choice when facing leveraged loan tightening conditions

This table reports the OLS regression results on the share of firms issuing private credit when market faces leveraged loan tightening conditions (Panel A), and on the credit choice of borrowers when facing leveraged loan tightening conditions (Panel B and C). In Panel A, the dependent variable is the quarterly time series computed as the number of firms issuing private credit divided by the number of firms issuing either private credit or leveraged loan (each quarter). A time-trend control variable is included in the regression. Newey-West corrected standard errors are in parentheses. In Panel B and C, the dependent variable is a dummy variable which takes a value of 100 when the deal is a private credit deal and 0 when the deal is a leveraged loan deal. Controls are: log borrower age, private equity dummy, effective fed funds rate, deal type, and a time trend. Panel B does not include any fixed effects, whereas Panel C include firm fixed effects. Quarterly clustered standard errors are in parentheses. In both panels, all tightness measures are standardized to have mean zero and a unit standard deviation, and time-to-market is detrended. The sample period is from January 2005 to December 2025. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

**Panel A: Quarterly Time Series - Private Credit Market Share**

| Dependent Variable: | Private credit market share | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | Tigthening Standards | Excess Bond Premium | Log CLO Volume | CLO AAA Spread | Loan Spreads Increase | Avg. Time-to-Market | Net Flex | Excess Loan Premium |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Tightness | 6.95*** | 5.02*** | 6.09*** | -6.43** | 5.79*** | 5.19*** | 3.61** | 4.23*** | 4.95*** |
| | (1.24) | (1.65) | (1.18) | (2.24) | (1.59) | (1.58) | (1.42) | (1.26) | (1.16) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 76 | 84 | 84 | 84 | 84 | 56 | 84 | 84 | 84 |
| R-squared | 0.50 | 0.53 | 0.59 | 0.54 | 0.40 | 0.54 | 0.49 | 0.50 | 0.54 |

**Panel B: Deal Level - No Firm Fixef Effects**

| Dependent Variable: | PC Deal = 100 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | Tigthening Standards | Excess Bond Premium | Log CLO Volume | CLO AAA Spread | Loan Spreads Increase | Avg. Time-to-Market | Net Flex | Excess Loan Premium |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Tightness | 8.82*** | 5.08*** | 4.63* | -4.87** | 7.52*** | 6.39*** | 6.28*** | 4.06*** | 2.21 |
| | (1.02) | (1.50) | (2.49) | (2.05) | (1.12) | (1.58) | (2.10) | (1.35) | (1.68) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | No | No | No | No | No | No | No | No | No |
| Observations | 14,595 | 15,270 | 15,270 | 15,270 | 13,322 | 15,270 | 15,270 | 15,270 | 15,270 |
| R-squared | 0.12 | 0.12 | 0.12 | 0.12 | 0.11 | 0.12 | 0.12 | 0.12 | 0.12 |

**Panel C: Deal Level - Firm Fixed Effects**

| Dependent Variable: | PC Deal = 100 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | Tigthening Standards | Excess Bond Premium | Log CLO Volume | CLO AAA Spread | Loan Spreads Increase | Avg. Time-to-Market | Net Flex | Excess Loan Premium |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Tightness | 3.95*** | 2.08* | 2.02 | -4.43*** | 3.32*** | 2.43** | 2.98** | 2.07** | 2.96** |
| | (0.55) | (1.05) | (1.63) | (1.15) | (0.64) | (1.01) | (1.34) | (0.85) | (1.13) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 12,115 | 12,727 | 12,727 | 12,727 | 10,983 | 12,727 | 12,727 | 12,727 | 12,727 |
| R-squared | 0.67 | 0.67 | 0.67 | 0.67 | 0.68 | 0.67 | 0.67 | 0.67 | 0.67 |

## Table 3: Switching behavior of borrowers when facing leveraged loan tightening conditions

This table reports the OLS regression results on the switching behavior of borrowers when facing leveraged loan tightening conditions. Panel A shows the switching from leveraged loan to private credit. The dependent variable is a dummy equal to 100 if the previous deal of the borrower is a leveraged loan and the current deal is a private credit, and equal to 0 if both the previous and current deals are leveraged loans. Panel B shows the switching from private credit to leveraged loan. The dependent variable is a dummy equal to 100 if the previous deal of the borrower is a private credit and the current deal is a leveraged loan, and equal to 0 if both the previous and current deals are private credit. Private Equity is a dummy equal to 1 if the borrower is PE-backed. Controls are: log borrower age, private equity dummy, effective fed funds rate, and a time trend. Firm fixed effects are included in all specifications. Standard errors double clustered at the firm and quarter levels are in parentheses. The sample period is from January 2005 to December 2025. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

**Panel A: Switching from leveraged loan to private credit**

| Dependent Variable: | Switch to private credit = 100 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | Tigthening Standards | Excess Bond Premium | Log CLO Volume | CLO AAA Spread | Loan Spreads Increase | Avg. Time-to-Market | Net Flex | Excess Loan Premium |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Tightness | 3.19*** | 0.56 | -0.31 | -1.73 | 3.32*** | 1.04 | 2.32* | 2.22** | 0.81 |
| | (0.84) | (1.11) | (1.70) | (1.09) | (0.98) | (1.15) | (1.30) | (0.93) | (1.30) |
| Private Equity | 10.82*** | 10.10*** | 10.08*** | 10.00*** | 11.35*** | 10.17*** | 10.15*** | 10.24*** | 10.05*** |
| | (2.10) | (1.87) | (1.87) | (1.86) | (2.38) | (1.87) | (1.88) | (1.90) | (1.87) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 5918 | 6284 | 6284 | 6284 | 5330 | 6284 | 6284 | 6284 | 6284 |
| R-squared | 0.33 | 0.33 | 0.33 | 0.33 | 0.34 | 0.33 | 0.33 | 0.33 | 0.33 |

**Panel B: Switching from private credit to leveraged loan**

| Dependent Variable: | Switch to leveraged loan = 100 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | Tigthening Standards | Excess Bond Premium | Log CLO Volume | CLO AAA Spread | Loan Spreads Increase | Avg. Time-to-Market | Net Flex | Excess Loan Premium |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Tightness | -4.44*** | -3.56*** | -3.59* | 9.39*** | -3.50*** | -5.28*** | -6.06** | -1.93 | -3.34 |
| | (0.92) | (1.22) | (1.90) | (2.86) | (0.76) | (1.45) | (2.30) | (1.45) | (2.77) |
| Private Equity | -5.63 | -5.11 | -5.49 | -6.21 | -5.53 | -4.55 | -5.51 | -5.36 | -5.74 |
| | (4.36) | (4.37) | (4.44) | (4.57) | (4.61) | (4.45) | (4.51) | (4.38) | (4.42) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2304 | 2311 | 2311 | 2311 | 2248 | 2311 | 2311 | 2311 | 2311 |
| R-squared | 0.55 | 0.55 | 0.55 | 0.55 | 0.56 | 0.55 | 0.55 | 0.55 | 0.55 |

## Table 4: Borrower credit weakness and switching to private credit

This table reports the OLS regression results on the borrowers' switching behavior from leveraged loan to private credit and their credit quality weakness. The dependent variable is a dummy equal to 100 if the previous deal of the borrower is a leveraged loan and the current deal is a private credit, and equal to 0 if both the previous and current deals are leveraged loans. Credit weakness is measured separately by: Discount, 100 minus the loan-amount-weighted average secondary-market price of the borrower's loans in quarter $t-1$; Price decline, the fall in that price from $t-4$ to $t-1$; CCC or below, an indicator for a borrower with an outstanding loan rated CCC or below in $t-1$; and Downgrade, an indicator for a rating downgrade in the four quarters preceding the deal. Panel A reports the baseline estimates. Panel B interacts each measure with Tightening, the SLOOS measure of banks tightening commercial and industrial lending standards, standardized to mean zero and unit standard deviation. Controls are log borrower age, and private equity dummy. Paired columns exclude and include firm fixed effects; all include quarter fixed effects. Standard errors double clustered at the firm and quarter levels are in parentheses. The sample period is from January 2005 to June 2025. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

**Panel A: Credit weakness and switching to private credit**

| Dependent variable: | Switching from LL to PC = 100 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Credit weakness measure | Discount | | Price decline | | CCC or below | | Downgrade | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Credit weakness | 1.42*** | 1.39*** | 0.43* | 0.65** | 5.01** | 6.54* | 6.42*** | 6.14*** |
| | (0.28) | (0.35) | (0.25) | (0.30) | (2.45) | (3.49) | (1.92) | (1.93) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | No | Yes | No | Yes | No | Yes | No | Yes |
| Quarter Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2989 | 2694 | 2864 | 2577 | 3318 | 3004 | 3318 | 3004 |
| R-squared | 0.17 | 0.45 | 0.14 | 0.43 | 0.14 | 0.42 | 0.14 | 0.42 |

**Panel B: Interaction with tightening loan standards**

| Dependent variable: | Switching from LL to PC = 100 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Credit weakness measure | Discount | | Price decline | | CCC or below | | Downgrade | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Tightening × Credit weakness | 0.03 | 0.33 | 0.45** | 0.26 | 4.94** | 4.55 | 2.17 | 4.57 |
| | (0.30) | (0.37) | (0.19) | (0.30) | (2.45) | (2.80) | (3.18) | (2.79) |
| Credit weakness | 1.42*** | 1.37*** | 0.51** | 0.72** | 6.08** | 7.49** | 6.92*** | 7.30*** |
| | (0.29) | (0.32) | (0.23) | (0.27) | (2.44) | (3.62) | (2.25) | (2.21) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | No | Yes | No | Yes | No | Yes | No | Yes |
| Quarter Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 3125 | 2719 | 2877 | 2482 | 3439 | 2996 | 3439 | 2996 |
| R-squared | 0.25 | 0.50 | 0.24 | 0.50 | 0.23 | 0.48 | 0.23 | 0.48 |

## Table 5: Unused committed revolvers and BDC lending during market tightening

This table reports the OLS regression results on BDCs lending activity during market tightness when considering different levels of unused committed revolvers and SPV. The dependent variable is the logarithm of 1 plus the quarterly number of private credit deals originated for each BDC. Unused Revolver is measured as a ratio of unused revolver and SPV capacity relative to total committed revolvers for each BDC. Unused Revolver is lagged by one quarter. Columns alternate without and with quarter fixed effects. Standard errors clustered by quarter are in parentheses. The sample period is from 2016 to 2025. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

| Dependent Variable: | log(1 + # PC deals) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tightness Measure | BSL Tightness | | Tightening Standards | | Excess Loan Premium | | CLO AAA Spread | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Tightness Measure | -0.08* | | -0.13*** | | -0.37*** | | -0.06** | |
| | (0.04) | | (0.04) | | (0.10) | | (0.03) | |
| Tightness Measure × Unused Revolver | 0.23*** | 0.24*** | 0.19*** | 0.21*** | 0.35*** | 0.37*** | 0.18*** | 0.20*** |
| | (0.05) | (0.05) | (0.05) | (0.05) | (0.13) | (0.12) | (0.04) | (0.03) |
| Unused Revolver | 0.11** | 0.10** | 0.02 | 0.02 | 0.13** | 0.14** | 0.06 | 0.04 |
| | (0.05) | (0.04) | (0.04) | (0.04) | (0.06) | (0.06) | (0.04) | (0.04) |
| Quarter Fixed Effects | No | Yes | No | Yes | No | Yes | No | Yes |
| Observations | 2991 | 2991 | 2991 | 2991 | 2991 | 2991 | 2991 | 2991 |
| R-squared | 0.01 | 0.13 | 0.01 | 0.13 | 0.02 | 0.13 | 0.01 | 0.13 |

## Table 6: Common-parent lending persistence across markets

This table reports the OLS regression results on the persistence of parent lenders across the private credit and leveraged loan markets. Panel A uses the sample of switching deals from leveraged loan to private credit. The dependent variable equals 100 if a parent lender lends to the new private credit deal and 0 if it does not. "CLOs Held the Borrower's LL" is a dummy equal to 1 if the same parent lender held the borrower's leveraged loan 90 days before the switch to private credit through a CLO it owns. Panel B uses the sample of switching deals from private credit to leveraged loans. The dependent variable equals 100 if a parent lender holds the new leveraged loan at the end of the quarter after closing through a CLO it owns. "Lent to the Previous PC Deal" is a dummy equal to 1 if the same parent lender originated the borrower's previous private credit deal. All columns include deal fixed effects; columns (2) to (4) add parent-quarter fixed effects. Column (3) restricts eligible parents as indicated; column (4) uses event weights. Standard errors are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

**Panel A: Prior CLO ownership and subsequent private credit lending**

| Dependent Variable: | Lends to the PC Deal = 100 | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| CLOs Held the Borrower's LL | 4.046*** | 2.425*** | 2.770*** | 2.447*** |
| | (0.851) | (0.490) | (0.525) | (0.510) |
| Event FE | Yes | Yes | Yes | Yes |
| Parent-Quarter FE | – | Yes | Yes | Yes |
| Observations | 519,548 | 518,826 | 42,543 | 518,826 |
| Lending Rate, CLO Holders (%) | 4.18 | 4.18 | 4.18 | 4.18 |
| Lending Rate, Other Parents (%) | 0.17 | 0.17 | 1.11 | 0.17 |
| Parents | All | All | With CLOs | All |
| Event Weights | No | No | No | Yes |
| Dependent variable mean | 0.250 | 0.250 | 1.836 | 0.250 |

**Panel B: Prior private credit lending and subsequent CLO holdings**

| Dependent Variable: | Lends to LL Deal = 100 | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Lent to the Previous PC Deal | 25.719*** | 16.517*** | 16.505*** | 16.708*** |
| | (4.043) | (3.889) | (3.894) | (3.825) |
| Deal FE | Yes | Yes | Yes | Yes |
| Parent-Quarter FE | – | Yes | Yes | Yes |
| Observations | 59,933 | 59,528 | 21,383 | 59,528 |
| Holding Rate, PC Lenders (%) | 46.88 | 46.88 | 47.24 | 46.88 |
| Holding Rate, Other Parents (%) | 19.21 | 19.21 | 24.92 | 19.21 |
| Parents | All CLO | All CLO | PC Active | All CLO |
| Event Weights | No | No | No | Yes |
| Dependent variable mean | 19.392 | 19.460 | 25.394 | 19.460 |

## Table 7: Switching deals - Deal characteristics

This table reports the OLS regression results on the change in spread and log amount for switching and non-switching deals. The dependent variables are the difference of deals' spread (Columns 1 and 2) and deals' log amount (Columns 3 and 4) of the current deal minus the previous deal. We categorize deals as: "Switching to Private Credit", if the current deal of a borrower is a private credit and the previous deal of the same borrower is a leveraged loan, "Switching to Leveraged Loan", if the current deal of a borrower is a leveraged loan and the previous deal of the same borrower is a private credit, "Staying in Leveraged Loan", if both current and previous deals of a borrower are leveraged loans, "Staying in Private Credit", if both current and previous deals of a borrower are private credit deals. In all specifications "Staying in Private Credit" is the ommitted category. Controls are: log borrower age, private equity dummy, and a linear time trend. Fixed effects included are firm fixed effects and quarter fixed effects. Standard errors double clustered at the firm and quarter levels are in parentheses. The sample period is from January 2005 to December 2025. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

| Dependent Variable: | Δ Spread | | Δ Log Amount | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Switching to Private Credit | 126.92*** | 145.65*** | -2.23*** | -2.15*** |
| | (25.26) | (31.99) | (0.09) | (0.15) |
| Switching to Leveraged Loan | -119.83*** | -96.77*** | 2.45*** | 2.64*** |
| | (18.82) | (27.26) | (0.11) | (0.18) |
| Staying in Leveraged Loan | 10.63 | 35.81 | 0.10** | 0.26* |
| | (16.86) | (21.79) | (0.05) | (0.13) |
| Controls | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | No | Yes | No | Yes |
| Quarter Fixed Effects | Yes | Yes | Yes | Yes |
| Observations | 6649 | 6649 | 6776 | 6776 |
| R-squared | 0.04 | 0.09 | 0.35 | 0.39 |

## Table 8: Private credit, leveraged loans, and high-yield bonds

This table reports the transition matrix, with row percentages in parentheses, of the deals in our sample. We only consider three categories of deals: Private Credit (PC), Leveraged Loans (LL), and High-Yield Bonds (HY Bond). When one deal has both leveraged loan and high-yield bond facilities, we count that deal separately two times as a leveraged loan deal and as a high-yield bond deal. For each borrower, we then order chronologically its deals and compare a given deal with the previous deal. The sample period is from January 2005 to December 2025.

| | **Current Deal** | | | |
|---|---|---|---|---|
| **Previous Deal** | **PC** | **LL** | **HY Bond** | **Total** |
| PC | 2,532 | 784 | 82 | 3,398 |
| | (74.51%) | (23.07 %) | (2.41%) | |
| LL | 935 | 5,110 | 1,199 | 7,244 |
| | (12.91%) | (70.54%) | (16.55%) | |
| HY Bond | 110 | 1,200 | 2,051 | 3,361 |
| | (3.27%) | (35.70%) | (61.02%) | |
| **Total** | 3,577 | 7,094 | 3,332 | 14,003 |

## Table 9: Share of private credit issuance and firms' credit choice when facing leveraged loan tightening conditions in Europe

This table reports the OLS regression results on the share of firms issuing private credit when market faces leveraged loan tightening conditions (Panel A), and on the credit choice of European borrowers when facing leveraged loan tightening conditions (Panel B). In Panel A, the dependent variable is the quarterly time series computed as the number of firms issuing private credit divided by the number of firms issuing either private credit or leveraged loan (each quarter). A time-trend control variable is included in the regressions. Newey-West corrected standard errors are in parentheses. In Panel B, the dependent variable is a dummy variable which takes a value of 1 when the deal is a private credit deal and 0 when the deal is a leveraged loan deal. Controls are: log borrower age, private equity dummy, EONIA / €STR, and a time trend. Fixed effects included are firm fixed effects and deal type fixed effects. Quarterly clustered standard errors are in parentheses. In both panels, all tightness measures are standardized to have mean zero and a unit standard deviation. The sample period is from January 2005 to December 2024. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

**Panel A: Time-series regression**

| Dependent Variable: | Share PC | | | | |
|---|---|---|---|---|---|
| | Survey-based Measures | | Market-based Measures | | |
| Tightness Measure: | Loan Spreads Increase | Tightening Loan Standards | Log CLO Volume | TLB Spread | Excess Bond Premium |
| | (1) | (2) | (3) | (4) | (5) |
| Tightness Measure | 5.74*** | 5.29*** | -1.99 | 1.93* | 9.26*** |
| | (2.03) | (1.75) | (1.27) | (1.01) | (1.68) |
| Controls | Yes | Yes | Yes | Yes | Yes |
| Observations | 78 | 78 | 46 | 58 | 41 |
| R-squared | 0.39 | 0.36 | 0.16 | 0.16 | 0.54 |

**Panel B: Deal-level regression**

| Dependent Variable: | PC Deal = 100 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Survey-based Measures | | | | Market-based Measures | | | | | |
| Tightness Measure: | Loan Spreads Increase | | Tightening Loan Standards | | Log CLO Volume | | TLB Spread | | Excess Bond Premium | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Tightness Measure | 6.78*** | 5.18*** | 6.47** | 5.68*** | -6.28 | -8.01 | 7.57*** | 5.99*** | 11.09*** | 4.52 |
| | (2.33) | (1.88) | (2.73) | (2.03) | (4.70) | (4.90) | (2.11) | (2.24) | (2.98) | (2.93) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Observations | 1753 | 1233 | 1753 | 1233 | 1431 | 1002 | 1537 | 1075 | 487 | 258 |
| R-squared | 0.05 | 0.58 | 0.05 | 0.58 | 0.05 | 0.60 | 0.06 | 0.59 | 0.08 | 0.63 |
| Within R-squared | 0.05 | 0.03 | 0.05 | 0.03 | 0.05 | 0.06 | 0.06 | 0.05 | 0.08 | 0.08 |

# Appendices

## Appendix A Data

### A.1 PitchBook Data

We combine two sets of PitchBook data: (i) a bulk download of all the data available on PitchBook through the PitchBook API (downloaded in July 2023), (ii) regular manual downloads from the PitchBook Web Interface ("Debts & Lenders Screener") of all the newly added deals after July 2023 until the beginning of May 2026 (PitchBook can also retroactively add deals). The data is organized in deals and facilities: a deal is the complete debt package, whereas a facility is a specific debt instrument provided in that deal. For example, a leveraged loan deal can have one facility being the Term Loan B and another facility being the Revolving Credit. In this case, the two facilities will have two different Facility Ids, but the Deal Id will be the same. The first set of data does not contain a classification of the facilities between private credit and leveraged loan, while the second set of data already contains a variable indicating whether the facility is leveraged loan, direct lending, club deal, or bond. PitchBook provided us with a classification for the first set of data, but we believe that the classification is incomplete and not fully transparent (out of a total of 327,438 unique facilities in the bulk-downloaded data, PitchBook classified 50,000 observations). Therefore, we classify all the facilities using our own classification system as outlined in the main body of the paper. Using our methodology, we can classify a total of 232,960 out of the 327,438 facilities (we restrict our classification to U.S. and European deals). To assess whether our classification is consistent with PitchBook's classification, we compare the subset of deals that are both classified by us and PitchBook. Since PitchBook's classification includes the following categories "Club Deals," "Direct Lending," "High-Yield Bonds," "High-Grade Bonds," "Leveraged Loans," and "Mezzanine," whereas our classification includes "Private Credit," "Private Credit and Bank Loan," "Leveraged Loan," "Bank Loan," "Bond," we make the two classification systems more comparable by considering PitchBook's categories "Club Deals," "Direct Lending," and "Mezzanine" as our "Private Credit" category, and PitchBook's "High-Yield Bonds" and "High-Grade Bonds" as our "Bond" category.

Table A1 presents the results. When considering the two main categories of interest ("Leverage Loan" and "Private Credit"), the matching rate between the two classification systems is quite high: PitchBook classifies 8,369 facilities as leveraged loans, and we classify 6,441 of those also as leveraged loans and 1,116 as bank loans; moreover, PitchBook classifies 32,484 facilities as private credit, and we classify 29,092 of those also as private credit, 1,394

**Table A1: PitchBook's classification VS our classification**

This table compares the subset of unique facilities from the bulk-downloaded data which are classified both by PitchBook and by our classification system as described in the main body of the paper. PitchBook's category "Private Credit" includes "Club Deals", "Direct Lending", and "Mezzanine", whereas PitchBook's category "Bond" contains "High-Yield Bonds" and "High-Grade Bonds".

| | | PitchBook class. | | | |
|---|---|---|---|---|---|
| | | Bond | Leveraged loan | Private credit | Total |
| Our class. | Bank loan | 0 | 1,116 | 1,394 | 2,510 |
| | Bond | 1,001 | 0 | 228 | 1,229 |
| | Leveraged loan | 0 | 6,441 | 966 | 7,407 |
| | Private credit | 0 | 201 | 29,092 | 29,293 |
| | Private credit and bank loan | 0 | 611 | 804 | 1,415 |
| | Total | 1,001 | 8,369 | 32,484 | 41,854 |

as bank loan and 804 as private credit and bank loan. Therefore, we believe that our classification system is comparable to PitchBook's.

We then proceed by extending the bulk-downloaded data with the regularly, manually downloaded data. Whenever we have a conflict between a same deal or facility appearing both in the bulk-downloaded and the manually downloaded data, we only keep the deal information from the manually downloaded data, because we believe it has the most updated information. By adding the manual downloads, we augment our sample by 39,604 unique deals or 56,595 unique facilities. Out of the total 384,033 facilities, we can classify 275,309 observations (U.S. and European deals). Table A2 shows the results of our classification methodology applied to the augmented PitchBook sample. As explained in the main body of the paper, when going from the facility-level to the deal-level classification, we follow this logic: if a deal has only one type of facilities, then the deal classification is the same as the facilities classification. If a deal has both bond and leveraged loan facilities, then the deal is classified both as a leveraged loan and a bond (resulting in the deal being counted two times, one time as a leveraged loan and another time as a bond). Finally, a deal is classified as a private credit deal if any of its facilities is a private credit facility. If a deal contains only mixed ("Private Credit and Bank Loan") facilities, the entire deal is classified as a mixed deal. This means that the PitchBook raw number of deals (288,094) before being classified is the "true" unique number of deals (one deal id is counted only once), but when applying our classification, the same deal might be counted twice when having both a leveraged loan and a bond facility.

To get to our sample, we apply the following restrictions: the status of the deal is "completed", the deal origination date is between 2000 and 2025, the primary industry

**Table A2: PitchBook's classified sample**

This table shows the number of facilities and deals in the raw PitchBook sample (when augmenting the bulk-download sample with the regular manual downloads) and the result of our classification as described in the main body of the paper for U.S. and European deals. When classifying observations at the deal level, we are double-counting the deals where there are both leveraged loan and bond facilities (even though the deal id is the same, we count it one time as a leveraged loan and one time as a bond).

| | | # Facilities | # Deals |
|---|---|---|---|
| Raw PitchBook (bulk-download + manual downloads) | | 384,033 | 288,094 |
| classified by us | | 275,309 | 206,227 |
| U.S. | Bank loan | 92,699 | 84,303 |
| | Bond | 25,870 | 17,841 |
| | Leveraged loan | 36,315 | 19,157 |
| | Private credit | 81,367 | 56,980 |
| | Private credit and bank loan | 5,094 | 2,443 |
| | **Total** | **241,345** | **180,724** |
| Europe | Bank loan | 11,904 | 9,789 |
| | Bond | 3,900 | 3,336 |
| | Leveraged loan | 8,082 | 3,449 |
| | Private credit | 8,808 | 8,118 |
| | Private credit and bank loan | 1,270 | 811 |
| | **Total** | **33,964** | **25,503** |

sector of the borrower is not "Financial services", the lender name is not missing and is not the United States government, and the debt provided is not a revolving credit. Additionally, following Becker and Ivashina (2014) we apply the following filters to our sample: we drop any observation where the same borrower has both a private credit and a leveraged loan in the same quarter, and we only include firms that issued non-private credit deals (bonds, bank loans, and leveraged loans) in the last five years. In the end, we remove any deal that is not in the following major deal categories: Private equity and buyout, merger and acquisitions, general debt, refinancing, and recapitalization (we remove the smaller number of deals belonging to bankruptcy, convertible debt, capital spending, venture capital, secondary transactions, IPOs, PPPs). Table A3 shows the number of deals we drop in the process and the final distribution of deal types. A substantial amount of deals (about 55% of the classified PitchBook deals) is dropped when removing firm-deal observations which have not a non-private credit deal in the prior 5 years. This is driven by a large number of (small) borrowers which only had private credit deals (either one deal or few deals) recorded by PitchBook. The number of deals including these firms dropped in our main sample is documented in Figure B.1.

**Table A3: Main sample with restrictions and filters (US deals)**

This table shows the number of deals dropped at each step of our restrictions and filters applied to the classified PitchBook data. The final deal distribution composes the sample used for figures and tables in the main paper.

| | # Deals remaining | # Deals dropped |
|---|---|---|
| Classified PitchBook sample (US and Europe) | 206,227 | |
| Including only US deals | 180,724 | - 25,503 |
| Including only completed deals | 180,709 | -15 |
| Deals from 2000 to 2025 | 177,703 | -3,006 |
| Borrower not in the financial sector | 167,026 | -10,677 |
| Non-missing lender name | 165,520 | -1,506 |
| Drop revolving credit | 159,120 | -6,400 |
| Only keep firm-deal observations with a non-private credit deal in the prior 5 years | 39,469 | -122,651 |
| Remove private credit and leveraged loans in the same quarter | 38,927 | -542 |
| Keep only major deal categories | 36,513 | -2,414 |
| Drop deals smaller than 10M in issuance amount | 29,160 | -7,353 |
| Final distribution of deal types: | | |
| Bank loan | 2,977 | |
| Bond | 9,254 | |
| Leveraged loan | 9,644 | |
| Private credit | 6,751 | |
| Private credit and bank loan | 534 | |

## A.2 Prompt Structure for AI-scored BSL Tightness Index

You are a finance expert analyzing BDC earnings calls. You are evaluating: "Based on this earnings call excerpt, how does management expect competitive intensity in lending markets to change (reflected in spread levels: tightening = more competition, widening = less competition)?"

Choose exactly one:

- SUBSTANTIAL INCREASE in competition (major spread compression, capital flooding in)
- INCREASE in competition (modest spread compression)
- NO CHANGE (stable spreads)
- DECREASE in competition (modest spread widening)

- SUBSTANTIAL DECREASE in competition (major spread widening, capital scarcity)
- NO INFORMATION PROVIDED

# Appendix B Figures

### Figure B.1: Number of private credit and leveraged loan deals

This figure documents the four-quarter rolling sum of the number of private credit and leveraged loan deals. For each quarter, the plotted value represents the total number of deals completed in that quarter and the preceding three quarters. This figure, differently from Figure 2, contains all deals without filters as described in Table A3. The sample period is from January 2005 to December 2025.

