The Cyclicality of Direct Lending*

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Abstract. In direct lending, nonbank financial institutions originate bilaterally negotiated loans to risky firms. We document that issuance in this segment of the private credit market is significantly less cyclical than in other high-yield corporate credit markets, such as syndicated lending, and show this results from firms substituting across credit markets. Rather than forgo debt financing, firms switch to direct lending when credit conditions in other credit markets tighten. During tight aggregate credit conditions, the substitution behavior is especially pronounced among sponsor-backed firms, whereas in normal times direct lending absorbs firms with deteriorating credit quality. Contrary to the concern that private credit could amplify credit supply shocks, our results indicate that private credit may dampen the corporate credit cycle.

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

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1 Introduction

A central question in the financial intermediation literature is how the structure of credit markets shapes the transmission of financial shocks to firms and the real economy. Firms that depend on external funding can become financially constrained when credit conditions tighten. This poses a particular challenge for businesses reliant on intermediary credit in the form of bank loans, especially smaller and privately-held firms (Chodorow-Reich, 2014; Diamond and Rajan, 2005; Holmstrom and Tirole, 1997). A tightening of loan markets might significantly impact their business decisions. However, firms with access to alternative funding channels are less sensitive to disruptions in credit markets (Chava and Purnanandam, 2011; Greenstone, Mas, and Nguyen, 2020).

Becker and Ivashina (2014) show that large firms switch from bank loans to bonds when bank credit supply contracts. Yet, the most consequential substitution margin in corporate credit is no longer between banks and bonds. Private credit, i.e., direct lending by nonbank institutions, has grown from approximately $1 trillion in 2020 to nearly $2 trillion by 2024, with projections suggesting $5 trillion by 2029. This places private credit on par with the (syndicated) leveraged loan market ($1.4 trillion) and the high-yield bond market ($1.3 trillion), fundamentally altering the architecture of corporate debt finance (Block, Jang, Kaplan, and Schulze, 2024; Robinson and Wallskog, 2026). A natural question is whether borrowers that face contracted credit supply in the leveraged loan market during periods of tighter lending standards can access private credit as a substitute source of funding to dampen the transmission of credit supply shocks.

Recent academic work has cast nonbanks as destabilizing lenders in credit markets. Within the leveraged loan market, Fleckenstein, Gopal, Gutiérrez, and Hillenbrand (2025) find that broadly syndicated loans (BSLs), which are funded by nonbanks such as CLOs and loan mutual funds, are three times as cyclical as loans supplied by banks. Thus, the conventional narrative portrays nonbanks as procyclical lenders that can introduce fragility into a firm's

capital structure.[1]

Yet, nonbank credit provision through the private credit market appears to behave differently. When banks and syndicated loan arrangers scaled back credit supply during periods of market stress, private debt funds continued to lend and expand their market share. This countercyclical pattern suggests that not all nonbank lending amplifies financial cycles; some may actually dampen credit supply shocks by providing borrowers an alternative financing channel precisely when traditional markets freeze.

This paper investigates whether private credit functions as an effective backstop to the syndicated loan market. Post-crisis banking regulations, such as the leveraged lending guidance that constrained banks from higher-leverage transactions, have pushed significant credit origination into private markets. As private equity sponsors increasingly pursue both leveraged loans and private credit alternatives in parallel, borrowers can now substitute between credit from both markets depending on prevailing conditions. Importantly, this substitution margin is not hypothetical: the two markets share a large borrower base. We document large overlap between the private credit and the leveraged loan market. Of the firms present in these markets, 26% have accessed both markets throughout their issuance history. For the majority of these firms, we record frequent switching.

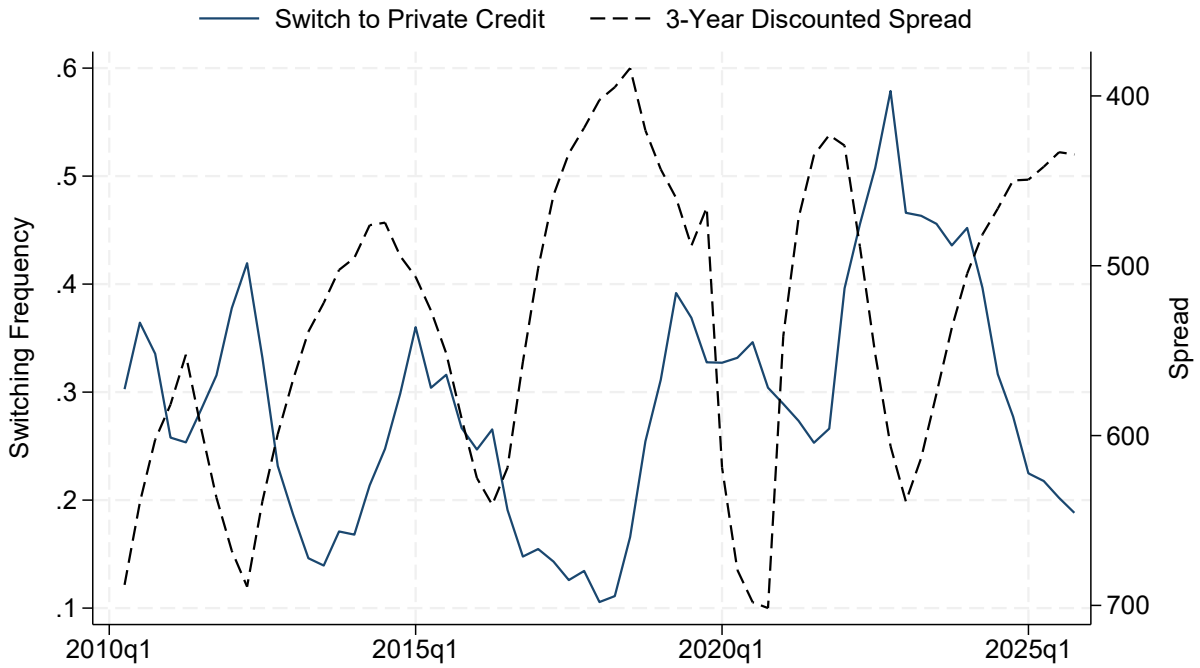
Figure 1 shows the switching of borrowers from the leveraged loan market to private credit together with the 3-year discounted spreads of U.S. leveraged loans. An increase in discounted spreads captures tighter credit conditions in the leveraged loan market. Both measures are strongly correlated ($\rho > 0.40$) which suggests that firms move into private credit when credit availability in the syndicated loan market declines.

An episode illustrates this mechanism. In October 2023, KKR took CIRCOR International, a NYSE-listed industrial manufacturer, private in a contested $1.6 billion auction. CIR-

[1]Similarly, Aldasoro, Doerr, and Zhou (2025) document this procyclicality in global syndicated markets. Acharya, Gopal, and Steffen (2025) show that banks respond to rollover risk in nonbank markets by ex ante reducing liquidity provision via credit lines.

Figure 1: Switching to private credit and leveraged loan spreads.

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 6). We also plot the trailing twelve-month average discounted spread of loans included in the LSTA U.S. Leveraged Loan Index. We obtain the discounted spread, which is computed as nominal spread plus discount from par annualized over a 3-year period, from PitchBook. We present the spread in an inverse scale to emphasize the counter-cyclicality of switching.



COR's outstanding leveraged loan traded near par throughout – the syndicated market had no concern with the credit – yet no arranger would underwrite new buyout debt: CLO formation had collapsed, and KKR removed financing risk from its bid by backstopping the entire purchase price with equity, before private credit funds managed by Apollo, Ares, and KKR supplied a $650 million loan at S+600, roughly 150 basis points above the spread at which the firm's existing loan traded at par. Eleven months later, with the leveraged loan market reopened, the same debt was refinanced with a syndicated term loan at S+350 – oversubscribed and reverse-flexed – and repriced to S+300 a year after that. The firm paid the private credit premium precisely when the syndicated market could not lend, and returned as soon as it could.[2] Its round trip took eleven months; in our sample, about half of

[2]See CIRCOR International, Inc., Definitive Proxy Statement (Schedule 14A), July 17, 2023 (background

the firms that switch into private credit return to the leveraged loan market at their next financing, on average roughly one year later.

Understanding the dynamics between the private credit and the leveraged loan markets has important implications. First, it affects the credit transmission to the real economy. If firms can bypass a frozen syndicated market by instead borrowing from private credit lenders, the traditional link between bank credit contractions and corporate financing constraints weakens. This potentially stabilizes investment and employment during downturns. Second, it highlights important financial stability trade-offs. While private credit may smooth credit supply, it simultaneously shifts intermediation into a less transparent and less regulated domain. Third, prior studies have documented firm switching between bank loans and public bonds (Becker and Ivashina, 2014). However, far less is known about substitution between different loan markets, partly due to data opacity in private markets.

Our main dataset comes from PitchBook-LCD, which tracks the universe of private credit and leveraged loan deals. We use information on deal characteristics to classify each deal as either a private credit or a leveraged loan deal. Using this classification, we measure the private credit deal share in U.S. corporate credit markets over time. We then analyze the activity between these markets at various periods and stages of the credit cycle.

In initial time-series tests, we show that, among firms receiving a loan in a given quarter, the share borrowing in the private credit market increases when conditions in the syndicated loan market tighten. For example, when spreads in the leveraged loan market widen, and deal-making becomes more difficult, the share of firms that raise funds in the private credit market increases. We test the correlation between the private credit market share against a battery of well-established measures of credit conditions that include three survey measures of the commercial and industrial loan market tightness from the Board of Governors of the

of the merger and financing commitments);"KKR's Circor Looks to Exit Private Credit With Leveraged Loan", Bloomberg News, September 27, 2024. The equity backstop is described in KKR's announcement of June 28, 2023 ("KKR Reaffirms Intention to Acquire CIRCOR International", Business Wire).

Federal Reserve System's Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), the excess bond premium by Gilchrist and Zakrajšek (2012), the excess loan premium by Saunders, Spina, Steffen, and Streitz (2025), the average time-to-market of broadly syndicated loans, the net share of broadly syndicated loans that have been flexed up, and the CLO issuance volume. Across loan supply measures, our results show strong correlations. In contrast, we do not find a strong effect for a measure of loan demand. This suggests that supply-side determinants largely govern firms' choices between borrowing in the leveraged loan and the private credit market.

To further understand this choice choice, we move to individual-firm level tests. Controlling for firm characteristics with firm fixed effects, we show that, also at this granular firm level, firms switch from the leveraged loan market to the private credit market when credit market conditions tighten. We focus on three measures of credit tightening: the net percentage of domestic banks tightening standards for commercial and industrial loans to large and middle-market firms in the SLOOS, the excess bond premium, and a tightness index constructed from AI-scored earnings reports.[3] Again, our measures suggest that this effect seems to primarily originate from supply-side reasons rather than demand-side reasons.

Next, we investigate cross-sectional heterogeneity in propensity to switch. We find that firms' sensitivity to access private credit funding during times of tighter loan standards varies with the age and sponsor-backing of the borrower. Mature firms and firms with sponsors capable of fundraising across credit markets show a higher degree of substitution as these firms respond more elastically to changes in credit conditions.

To show that it is largely firms switching that drives our aggregate time series results, and not compositional changes in the borrower base due to firm entries and exits, we employ a different time series regression approach where we use as the dependent variable the share of firms switching from leveraged loans to private credit, the share of firms switching from

[3]We document economically similar results from the other tightness measures in the Appendix.

private credit to leveraged loans, as well as net measure of switching. Across all our loan market tightness measures, we find results consistent with market share changes reflecting firms switching back and forth between these two loan markets. Additionally, we show that borrowers experiencing a recent deterioration in credit quality (reflected in declining secondary-market loan prices or rating downgrades) or being rated CCC+ or below are more likely to switch from leveraged loans to private credit under otherwise normal leveraged loan market conditions. However, this higher switching propensity among weaker borrowers does not become more pronounced during episodes of broad leveraged loan market tightening. This suggests that borrower-specific deterioration and aggregate market tightness operate as distinct, rather than complementary, drivers of switching.

To corroborate our results, we study the differential transmission of market conditions to private credit and the leveraged loan issuance. We decompose aggregate issuance effects into extensive margin changes in the number of deals and intensive margin changes in deal sizes. Interestingly, the differential impact of loan market tightness on aggregate issuance volumes operates primarily through the extensive margin. When credit conditions tighten, the number of deals in the leveraged loan market falls substantially relative to the private credit market. This suggests that private credit lenders are better equipped to withstand shocks that adversely affect their ability to originate loans than lenders in the leveraged loan market.

To further pin down, the drivers of this excess cyclicality of leveraged lending compared to private credit, we decompose the leveraged lending into bank lending part (pro rata tranches) and nonbank lending part (institutional tranches) and jointly compare their sensitivities to aggregate loan market tightness measures. Consistent with the results of Fleckenstein et al. (2025), we find that the institutional part of the syndicated lending is much more responsive to aggregate loan market conditions than the pro-rata part of syndicated lending. In contrast, nonbank direct lending with private credit is no more cyclical than bank (pro rata) lending,

but much less cyclical than syndicated nonbank lending.

Overall, our results create a detailed picture of the substitution between private credit and the leveraged loans. During periods of tighter credit conditions, private credit market funding is more stable that funding from its leveraged loan counterpart. However, this differential behavior is not the result of intensive margin adjustments within each market. Rather, we find extensive margin adjustments which can be consistent with firms strategically choosing their funding markets depending on market conditions or restrictions in credit access due to rationing.

In addition to our baseline results, we provide evidence that the substitution margin between leveraged loans and private credit is not just a U.S.-specific phenomenon. When we replicate our baseline specifications on deals in the European market using data from the ECB's Bank Lending Survey and Pitchbook, we find similar results: the private credit market share rises when the intermediation of syndicated loans becomes more constrained.

In time-series regressions, a one–standard deviation tightening in euro-area bank credit conditions is associated with economically large increases in the private credit share and the economic magnitude of the effect coincides closely with the corresponding estimates in the US market. Deal-level evidence similarly confirms that this aggregate pattern reflects active within-firm substitution rather than compositional shifts. In European regressions on the probability that a given deal is financed with private credit rather than syndicated loans, weaker competition from the leveraged loan market is strongly associated with a higher likelihood of private credit financing, and this relationship persists when isolating within-firm variation via firm fixed effects. Consistent with a supply-driven interpretation, tighter bank-lending terms and elevated market-based pricing of risk significantly shift deals toward private credit, while loan-demand measures do not. Overall, the European results mirror the core mechanism documented in the United States, that when syndicated credit tightens, private credit acts as a backstop that absorbs displaced borrowers.

Overall, as private credit is now as large as traditional leveraged lending, there is an increasing need to understand how firms choose between both markets and the implications for credit availability in good and bad times. Moreover, our results also have direct policy implications. There is an ongoing debate whether the growth of non-bank lending is stabilizing, by providing an alternative source of funds during credit contractions, or potentially destabilizing, by moving risk outside the banking system and into a less transparent domain. We contribute to this debate by showing that private credit is potentially less destabilizing than previous estimates focusing on other nonbank financial intermediaries in syndicated loan markets suggest.

Related Literature. Our paper contributes to the existing literature in several ways. A growing body of work examines whether nonbank financial intermediaries (NBFI) amplify or dampen credit cycles. The prevailing view in recent literature is that nonbanks are highly procyclical, often contracting credit supply more sharply than traditional banks during downturns. Fleckenstein et al. (2025) document that nonbank lending in the syndicated loan market is approximately three times more cyclical than bank lending. They attribute this fragility to the liability structure of key nonbank investors—specifically, the sensitivity of CLO issuance and mutual fund flows to market conditions. Similarly, Aldasoro et al. (2025) find that during global crises, nonbanks reduce syndicated lending significantly more than banks, suggesting that nonbanks retreat when liquidity risk rises.

Our results challenge this view of nonbank behavior. We document that private credit funds, a distinct subset of nonbanks, exhibit significantly more stable origination patterns relative to the syndicated market. This aligns with Jang (2024), who argues that private debt lenders resemble relationship banks more than arm's-length institutional investors, retaining loans on the balance sheet and engaging in active monitoring. By showing that private credit acts as a backstop when the syndicated market freezes, our findings offer a necessary corrective to the narrative that all nonbank lending is destabilizing. We bridge the gap between the

literature emphasizing the fragility of nonbank finance (e.g., Acharya et al., 2025) and the relationship lending literature, suggesting that private credit funds enhance system resilience during periods of market stress.

Our analysis of firms switching between loan markets builds on, for example, Becker and Ivashina (2014), who document that firms switch from bank loans to corporate bonds when bank credit supply contracts. While their work focused on the bank-vs-bond margin, we extend this framework to the increasingly relevant margin between syndicated loans (BSL) and private credit (direct lending). Complementary to our focus on the substitution between private credit and other debt markets through the credit cycle, Haque, Mayer, and Stefanescu (2026) document within-deal substitution between private credit term loans and bank credit lines by firms. Several papers have also shown this movement toward nonbank lending can be linked to more stringent bank regulation, e.g. Davydiuk, Marchuk, and Rosen (2024); Erel and Inozemtsev (2025); Irani, Iyer, Meisenzahl, and Peydro (2021).

Prior studies on debt structure choice, such as Chernenko, Erel, and Prilmeier (2022); Colla, Ippolito, and Li (2013); Denis and Mihov (2003), emphasize borrower characteristics (credit quality, opacity) as primary drivers of debt specialization. We add a dynamic, time-varying dimension to this choice. Our finding that firms choose between debt markets based on aggregate conditions aligns with Haque, Jang, and Wang (2025) and Block et al. (2024) who find that borrowers with higher leverage and complexity are increasingly using both. However, unlike Fernández, González, and Suárez (2018), who find only partial substitution between bank and nonbank credit during crises for SMEs, we show that for the U.S. middle-market and large-cap sector, the substitution into private credit effectively mutes the impact of syndicated market freezes on credit availability during crisis periods.

Finally, our results emphasize the role of financial sponsors in facilitating market substitution. Demiroglu and James (2010) and Ivashina and Kovner (2011) establish that private equity sponsors reduce information asymmetry and loosen credit constraints for portfolio companies.

We extend this by showing that private equity sponsors actively arbitrage between credit markets. Buchner, Espenlaub, Khurshed, and Mohamed (2024) and Robinson and Wallskog (2026) argue that private credit lenders are particularly well-suited for sponsored deals due to the flexibility of terms (e.g., PIK toggles) and the ability to negotiate complex covenants. Jang, Kim, and Sufi (2025) show that direct lenders and private equity sponsors match on industry specialization rather than geographic proximity.

Our finding that private equity-backed firms are significantly more likely to switch markets during tightness episodes supports the results from prior literature: sponsors use their repeated interactions with both CLO arrangers and direct lenders to secure financing from whichever source remains open. This creates a bifurcation in the corporate sector, where sponsored firms enjoy a "liquidity insurance" benefit compared to non-sponsored peers, who may face harder constraints when the syndicated market shuts down.

The remainder of the paper is structured as follows: Section 2 describes the data and discusses relevant institutional details. Section 3 presents the results. Section 4 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.

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 et al., 2025), net share of broadly syndicated loan deals flexed up (Net Flex), average time-to-market of broadly syndicated loans, CLO volume, and three measures from Senior Loan Officer Opinion Survey (SLOOS), which capture reported loan supply, reported loan demand and reported spread increases in commercial and industrial bank lending.[4].

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

[4]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, https://fred.stlouisfed.org/series/DRSDCILM and https://fred.stlouisfed.org/series/DRISCFLM)

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 previous quarter to 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").[5] 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

[5]We provide the prompt structure in Appendix 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)
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 Summary statistics

[Table 1 here]

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.

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%, while the stronger loan demand measure averages -3.81%. 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. 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 10,903 private credit deals and 9,217 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, while stronger loan demand and CLO volume are generally negatively correlated with measures of tighter market conditions.

2.3 Institutional Setting and Empirical Facts

Before proceeding to our formal analysis, we document several stylized facts about the evolution of the private credit and broadly syndicated loan markets that motivate our empirical approach.

Figure 2 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 2 here]

The Rise of Private Credit. Figure 3 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 3 here]

Private Credit Market Share. Figure 4 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 4 here]

Switching Dynamics. Next, we decompose the dynamics shown in Figure 4. Figure 5 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 5 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 5 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 5 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.

These facts matter for interpreting the cyclical patterns in Section 2. 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 4. At the same time, the large "Both Switch" population motivates our within-firm identification in Section 3: 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 6 here]

Figure 6 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. Prior to the Global Financial Crisis, switching was asymmetric: transitions from private credit to leveraged loans were relatively frequent (around 50–60%), while switches in the opposite direction were rare. Beginning in 2008, however, a pronounced asymmetry emerged. The share of firms switching from leveraged loans to private credit spiked in Q3 2009, as borrowers who could no longer access the syndicated market turned to direct lenders. While the leveraged loan market subsequently recovered some of these borrowers in the subsequent decade, a persistent asymmetry re-emerged. Especially after 2018 the frequency of firms switching from leveraged loans to private credit consistently exceeded the reverse flow, reaching peaks of roughly 50–60%, while switching from private credit back to leveraged

loans declined toward 10–25%.

This asymmetry has important implications. It suggests that firms migrate to private credit when leveraged loan conditions tighten, but only a subset return to the syndicated market when conditions normalize. The persistence of this pattern indicates that many borrowers who initially switched to private credit have remained there, consistent with relationship-based lending dynamics documented in Jang (2024).

Volume and Pricing. Figure 7 presents the log of trailing-twelve-month issuance volume (Panel A) and the volume-weighted average spread (Panel B) for both markets. Several facts stand out. First, while leveraged loan issuance volume has historically exceeded private credit volume in dollar terms, this gap has narrowed considerably, particularly since 2020. By 2023–2024, the two markets are roughly comparable in quarterly issuance. Second, 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.

[Figure 7 here]

Taken together, these patterns motivate our empirical approach. The secular rise in private credit market share (Figure 4) necessitates controlling for time trends in our regressions to avoid spurious correlation. The cyclical spikes in private credit share during stress periods suggest that loan market tightness measures will be positively associated with private credit activity. The asymmetric switching dynamics (Figure 6) imply that firm-level analysis with firm fixed effects will capture "marginal switchers" who are capable of accessing both markets but choose between them based on prevailing conditions. Finally, the convergence of issuance volumes alongside persistent spread differentials (Figure 7) suggests that substi-

tution between markets is not frictionless, i.e., borrowers pay a premium to access private credit, but is nonetheless economically meaningful at the margin.

3 Methodology and Results

3.1 Aggregate private credit market share

We start by formally testing the correlation between measures of loan market tightness and private credit deal share. We do so by employing the following time series regression

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

where $Private\ Credit\ Share_t$ 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. 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, stronger demand, and tightening standards—and five market-based measures: average time-to-market, net flex, excess bond premium, excess loan premium, and CLO volume. We standardize all tightness measures to have mean zero and unit standard deviation. Since Figure 2 shows that there exists a secular upward sloping trend in private credit share that could create spurious regression, we control for this nonstationarity by including a linear time trend t in the specification, which also allows us to isolate the cyclical component of $Private\ Credit\ Share_t$. The coefficient φ 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]

Table 2 presents the time-series regression results. The results provide strong evidence that private credit activity is counter-cyclical to the syndicated loan market. The coefficients

on nearly all tightness measures, including Tightening Loan Standards ($\beta = 6.38$), Excess Bond Premium ($\beta = 7.33$), and Net Flex ($\beta = 5.37$), are positive and statistically significant. This indicates that when the syndicated loan market becomes tighter (i.e., when banks raise standards, spreads widen, or deals require more flex to clear), the share of firms turning to private credit increases significantly. The only exception is Stronger Loan Demand, which shows a negative (though weakly significant) relationship, suggesting that the shift toward private credit is primarily driven by supply-side constraints in the public market rather than demand shocks. Overall, these findings support the hypothesis that private credit acts as a backstop, absorbing borrower demand when traditional syndicated lending channels contract.

3.2 Firms' credit choice between private credit and leveraged loan

3.2.1 Panel results

The time series results already gave early support for the interpretation that market share shifts were more associated in changes in loan supply, rather than demand. To better identify changes in loan supply, 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*, μ_f, that restrict the sample to firms with both types of deals. 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.

[Table 3 here]

Table 3 presents the results. The results confirm that the aggregate shift toward private credit observed in Table 2 is driven by firm-level substitution, not just compositional changes in the borrower pool. The coefficient on *Tightening Loan Standards* is positive and highly significant ($\beta = 3.08$), indicating that a one-standard-deviation tightening in bank lending standards increases the probability of a switcher firm choosing private credit by approximately 3 percentage points. Similarly, the *Excess Bond Premium* has a large positive effect ($\beta \approx 3.7$), further supporting our hypothesis. By contrast, *Stronger Loan Demand* is statistically insignificant, reinforcing the conclusion that the choice to borrow in private credit

markets is a response to supply-side frictions in the syndicated market rather than demand-side factors. The estimate on *Log CLO volume* are significantly negative, suggesting that when CLO volume dries up, the main funding backing the leveraged loans shrinks with it. The stability of these coefficients with and without firm fixed effects suggests the result is robust to unobserved (time-invariant) borrower heterogeneity, and absorbs firms that only use the private credit (or leveraged loan) market as a financing source.

3.2.2 Heterogeneity in credit choice

In the next step, we explore the heterogeneity in firms' decision to borrow from private credit markets by interacting tightness measures with key borrower characteristics. Specifically, we investigate whether the propensity to obtain a private credit loan during periods of syndicated loan market stress differs for private equity (PE) sponsored firms versus non-sponsored firms, and for older versus younger firms. We estimate the model

$$\textit{Private Credit}_{ft} = \beta_1 \textit{Tightness}_t \times \textit{Characteristic}_{ft} + \beta_2 \textit{Tightness}_t + \gamma X_{ft} + \mu_f + \varepsilon_{ft}. \quad (1)$$

This model adds interaction terms for the firm *Characteristics*—specifically *PE Sponsored* and ln *Age*—to the specification in Table 3. We include the main effects in our vector of controls. Table 4 presents our estimates.

[Table 4 here]

We find consistent results throughout for each of our tightness measures. The results reveal that the substitution into private credit is highly concentrated among specific types of borrowers. The interaction term *Tightening Loan Standards* $\times$ *PE Sponsored* is positive and statistically significant ($\beta \approx 3$), indicating that PE-backed firms are substantially more sensitive to credit cycle fluctuations. When bank standards tighten, PE-sponsored firms are far more likely to switch to private credit than their non-sponsored peers, consistent with the hypothesis that financial sponsors actively steer portfolio companies to the most available

liquidity source. Similarly, older firms (proxied by *ln (Age)* show a slightly higher propensity to switch ($\beta \approx 1.1$), suggesting that established borrowers with longer track records are better positioned to arbitrage between markets. These findings imply that the backstop provided by private credit primarily benefits borrowers with sophisticated financial backers or established reputations. The interaction terms for *BSL Tightness* and *Excess Bond premium* mirror these results.

3.3 Firms' switching behavior

While the results in Subsection 3.2 show that firms are more likely to choose private credit during periods of loan market tightness, they do not mechanically require firms to change their funding regime. We therefore next study firms' switching behavior between the leveraged loan and private credit markets.

3.3.1 Aggregate-level results

We start by testing the correlation between measures of loan market tightness and the share of switching deals. The measure is constructed by looking at the chronologically-ordered history of deals within each company and counting whenever a deal is of a different type with respect to the previous one (Figure 6 plots this measure). We use the same reduced sample we also used in Subsection 3.2: we only include firm-quarter observations in which firm f issued debt in quarter t, exclude firm-quarter observations in firm f has not issued non-private credit debt in the last 20 quarters, and exclude firm-quarter observations if firm f issued both private credit and non-private credit debt in that quarter. We test the correlations by employing the following time series regression:

$$Switching\ Deal\ Share_t = \alpha + \beta\ Tightness_t + \varphi t + \varepsilon_t$$

where *Switching Deal Share* is (i) the share of deals which are switching deals from private

credit to leveraged loan in quarter t (conditional on the previous deal being private credit), or (ii) the share of deals which are switching deals from leveraged loan to private credit in quarter t (conditional on the previous deal being leveraged loan), or (iii) the net switch share, defined as the difference between the number of deals switching from leveraged loans to private credit in quarter t and the number of deals switching from private credit to leveraged loans in quarter t, divided by the total number of deals in in quarter t (positive values indicate a net migration of borrowers into private credit, while negative values indicate a net migration back into the leveraged loan market). We report Newey-West robust standard errors to account for heteroscedasticity and autocorrelation of residuals.

[Table 5 here]

Table 5 presents the results for several tightness measures including both market-based and survey-based tightening measures. Panel A focuses on the share of deals switching from leveraged loans to private credit. Panel B focuses on the share of deals switching from private credit to leveraged loans. Lastly, Panel C focuses on the switching measure capturing the balance between the two flows.

The results in Panel A show a strong and economically meaningful association between leveraged loan tightening and increased switching toward private credit. Measures capturing higher BSL tightness, loan spreads, tighter lending standards, greater net flex, and elevated excess bond and loan risk premia are all positively and significantly related to the share of deals migrating from leveraged loans to private credit. Similarly, indicators of looser market conditions—such as greater CLO issuance—are negatively associated with switching to private credit. Taken together, these findings suggest that when public leveraged loan markets become more constrained, borrowers increasingly substitute toward private credit as an alternative source of financing.

Panel B presents a mirror image of these effects. Tightening in the leveraged loan market is associated with a lower share of deals switching from private credit into leveraged loans.

Higher BSL tightness, loan spreads, tighter credit standards, and elevated risk premia significantly reduce switching in this direction, while stronger loan demand and greater CLO issuance increase it.

Panel C consolidates these patterns using a net switching measure. Consistent with Panels A and B, tighter leveraged loan conditions lead to a positive net flow toward private credit. Increases in BSL tightness, loan spreads, tighter standards, net flex, and excess risk premia all raise net switching, while higher CLO issuance significantly dampens it. These results further reinforce the interpretation that market tightness reallocates deal flow across different financing channels.

3.3.2 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 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 6 here]

Panel A of Table 6 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, borrowers that experience a rating downgrade during the four quarters preceding the current financing deal are 7.4 percentage points more likely to switch to private credit rather than obtain another leveraged loan. The estimate rises to 10.2 percentage points when firm fixed effects are included, indicating that the result also holds within borrowers over time. Similar patterns emerge for secondary-market discounts, price declines, and CCC 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:

$$\begin{aligned} Switch\ LL\ to\ PC_{ft} = \beta_1\, Tightness_t \times Credit\ Weakness_{ft-1} \\ + \beta_2 Credit\ Weakness_{ft-1} + \gamma X_{ft} + \mu_f + \varepsilon_{ft}. \end{aligned}$$

The coefficient of interest is β_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.

Panels B to D of Table 6 presents our results. The β_1 coefficients using the four different

measures of credit weakness interacted with BSL tightness, tightening loan standards, and excess bond premium are all statistically insignificant and have positive, negative, or no signs. Thus, we find no evidence of complementarity between borrower-specific deterioration and aggregate leveraged loan market tightness. Meanwhile, the coefficients of the credit weakness measures not interacted with the leveraged loan tightness measures are positive and statistically significant in almost all the specifications, mirroring the previous results discussed in Panel A. Overall, private credit appears to absorb deteriorating borrowers during otherwise normal leveraged loan market conditions. During episodes of broad leveraged loan market tightening, however, the higher switching propensity of deteriorating borrowers does not become more pronounced. Therefore, any type of complementarity between the market state and firms' credit quality does not arise.

3.4 Credit cycle and debt issuance activity

3.4.1 Aggregate-level results

To corroborate the switching results, we employ an alternative empirical specification that looks at the amount of debt raised in a given quarter as in Fleckenstein et al. (2025). We construct a quarterly panel data set by aggregating all private credit lending (PC) and leveraged lending (LL) in a quarter. The panel has two dimensions: time t (origination quarter) and the two debt classes c, PC, and LL, represent the cross-section. To formally contrast PC and LL cyclicality, we estimate the sensitivity of PC and LL originations to the measures of credit cycle tightness:

$$LendingOutcome_{ct} = \beta_0 + \beta_1\, Tightness_t + \beta_2\, PC_c + \beta_3\, PC_c \times Tighteness_t + \gamma X_{ct} + e_{ct} \quad (2)$$

where PC_c is a dummy variable that equals one if the class is private credit, and zero for non-private credit. The main dependent variable, *Lending Outcome*, is the logarithm of the aggregate issuance volume $\ln(Amount)_{ct}$ of loans in class c in quarter t. β_1 quantifies the

sensitivity of leveraged loan outcomes to the credit cycle, while β_3 measures the differential sensitivity of PC loan outcomes relative to LL loan outcomes. β_2 captures the differences in averages. We include different controls in matrix X_{ct}. In particular, we include the linear time trend and its interaction with the PC indicator which controls for the different secular growth of these markets, and isolates the variation in the lending outcome strictly to the cyclical part that we are interested in measuring. The specification also allows us to add time fixed effects at the expense of absorbing the estimate for β_1. We document both results.

We first focus on issuance volumes. However, we are not just interested in the aggregate effect, but also whether the changes in loan amount are driven by the extensive margin (i.e. more deals) or the intensive margin (i.e. bigger deals). To distinguish between these explanations, we decompose the log total issuance amount $\ln(Amount_{ct})$ as follows

$$\ln(Amount)_{ct} = \ln(Amount/\#deals)_{ct} + \ln(\#deals)_{ct} \tag{3}$$

where $\ln(Amount/\#deals)_{ct}$ is the logarithm of average deal size in class c at time t, while $\ln(\#deals)_{ct}$ is the logarithm of number of deals in class c. Then we use each of these components as the dependent variable in Equation 2. More specifically, we run the following three regressions using the same $Tighteness_t$ measures as above.

$$\begin{aligned}
\ln(Amount)_{ct} &= \beta_{01} + \beta_{11}\, Tightness_t + \beta_{21}\, PC_c + \beta_{31}\, PC_c \times Tightness_t + \gamma X_{ct} + e_{ct} \\
\ln(Amount/\#deals)_{ct} &= \beta_{02} + \beta_{12}\, Tightness_t + \beta_{22}\, PC_c + \beta_{32}\, PC_c \times Tightness_t + \gamma X_{ct} + e_{ct} \\
\ln(\#deals)_{ct} &= \beta_{03} + \beta_{13}\, Tightness_t + \beta_{23}\, PC_c + \beta_{33}\, PC_c \times Tightness_t + \gamma X_{ct} + e_{ct}
\end{aligned} \tag{4}$$

The basic accounting identity implies that $\beta_{01} = \beta_{02} + \beta_{03}$, $\beta_{11} = \beta_{12} + \beta_{13}$, $\beta_{21} = \beta_{22} + \beta_{23}$ and $\beta_{31} = \beta_{32} + \beta_{33}$. These decompositions help to explain whether the effect of $Tightness_t$ on the aggregate issuance volumes (β_{11}) is driven by the intensive margin (β_{12}) or the extensive margin (β_{13}), and similarly for $Tightness_t \times PC_c$.

[Table 7 here]

The results are reported in Table 7. In Panel A, the tightness measure is the AI-scored *BSL Tightening*, in Panel B, it is the *Tightening Loan Standard* measures from SLOOS, and in Panel C, it is the *Excess bond premium*.

We start by describing the results in Panel A, but the results from all panels tell a unified story. In the first two columns of panel A, the dependent variable is the log issuance amount. First, in column (1), the coefficient on *BSL Tightness* is negative and significant. This suggests that when credit conditions in the leveraged loan market tighten, this is reflected as lower loan issuance volume across markets. In the second column, the time fixed effects absorb this variable. The decomposition exercise suggests this effect is exclusively driven by more deals rather than bigger average deal sizes. Second, the estimate for *PC* (β_{21}) is negative and significant, suggesting that, on average, issuance in private credit is lower than in the leveraged loan market. By decomposing this effect of $\beta_{21} = -4.77$ into β_{22} and β_{23}, we see that the differences in issuance volume are almost exclusively driven by the average deal size (β_{22}) rather than the number of deals (β_{23}). Third, the interaction term $Tightness_t \times PC_c$ is positive and significant, suggesting that while the increase in *BSL Tightness* seems to lower issuance amount on a given quarter, this effect is mostly driven by smaller issuance volume in the leveraged loan market, rather than the private credit market. This finding is exactly as expected if the AI-scored *BSL Tightness* index captures tighter credit conditions in the leveraged loan market.

In panels B and C, the results are qualitatively similar. In panel B, for the leveraged loan market, tightening standards significantly reduce total issuance ($\beta \approx -0.51$), and this contraction is driven almost entirely by the extensive margin (fewer deals, $\beta \approx -0.45$) rather than the intensive margin (deal sizes remain roughly constant, $\beta \approx -0.06$). In contrast, the private credit market behaves differently: the interaction term for the number of deals is positive and significant ($\beta \approx 0.31$), effectively dampening the negative effect of

the tightening of standards to leveraged loans. Interestingly, the interaction for average deal size is negligible, implying that while private credit absorbs more borrowers during downturns, it does not necessarily offer larger loans than usual. Combined with the positive and statistically significant interaction in the number of deals, this suggests that the backstop function operates by keeping the window open for borrowers who would otherwise be shut out, rather than by increasing loan sizes.

In Panel C, the coefficient for Excess Bond Premium on log(amount) is negative ($\beta \approx -0.45$), confirming that a spike in bond market risk premia leads to a severe contraction in syndicated loan issuance. Crucially, the interaction term Excess Bond Premium $\times$ PC on log(number of deals) is positive ($\beta \approx 0.37$), meaning private credit deal count holds up much better than syndicated deal count. As for the other tightness measures, the interaction term for log(amount/number of deals), the intensive margin, is negative but statistically insignificant.

Overall, we document that the differential impact of loan market tightness on aggregate issuance volumes operates primarily through the extensive margin. When credit conditions tighten, the number of deals in the leveraged loan market falls substantially relative to the private credit market. This suggests that private credit lenders are better equipped to withstand shocks that adversely affect their ability to originate loans than lenders in the leveraged loan market. In contrast, we find little differential behavior in deal sizes to credit market conditions.

3.4.2 Is cyclicality of leveraged loan market coming from banks or from non-banks?

Table 7 focused on the differential sensitivity between the leveraged lending and private credit. However, leveraged lending can be further decomposed into two groups of tranches that are called i) "pro rata", which is part that is typically financed by arranging banks, and ii) "institutional" that is primarily allocated to participating nonbank investors. To understand where the cyclicality of leveraged lending comes from, we aggregate the total

pro rata and institutional issuance volumes into separate classes and re-do our prior exercise with three classes: prorata (i.e. bank LL), institutional (i.e. nonbank LL) and private credit. Then we run the following regression

$$\ln(Amount)_{ct} = \beta_0 + \beta_1 Tightness_t + \beta_2 PC_c + \beta_3 PC_c \times Tightness_t + \beta_4 Institutional_c + \beta_5 Institutional_c \times Tightness_t + \gamma X_{ct} + e_{ct} \quad (5)$$

where the dependent variable is the logarithm of aggregate issuance volume of a given class, while $Institutional_c$ and PC_c are both dummy variables taking value of one if the class is based on institutional leveraged lending or private credit respectively, and zero otherwise. The omitted category is thus the pro-rata class. We report the results in Table 8.

[Table 8 here]

Columns (1) and (2) use the BSL Tightness index. In column (1), a one-standard-deviation increase in BSL Tightness is associated with a 0.18 decline in log pro rata leveraged loan issuance. The interaction between BSL Tightness and the private credit indicator is negative but statistically insignificant in both specifications. By contrast, the interaction with institutional leveraged loan issuance is -0.38 and statistically significant at the 1% level in both columns. Thus, institutional leveraged loan issuance declines more strongly with BSL Tightness than pro rata issuance, while the difference between private credit and pro rata issuance is not statistically significant.

Columns (3) and (4) present similar results using the tightening loan standards measure. In column (3), tightening loan standards are associated with a 0.28 decline in log pro rata leveraged loan issuance. The interaction with private credit is small and statistically insignificant, with a coefficient of -0.02 in both specifications. The interaction with institutional leveraged loan issuance is -0.20 and statistically significant at the 5% level in columns (3) and (4).

Columns (5) and (6) use the excess bond premium. In column (5), the coefficient on the excess bond premium is -0.17 and statistically significant at the 1% level. Its interaction with private credit equals -0.06 and is not statistically significant. The interaction with institutional leveraged loan issuance is -0.30 in both specifications and is statistically significant at the 1% level.

Across all specifications, the coefficient on the private credit indicator is negative, ranging from -5.17 to -5.39, and statistically significant at the 1% level. The institutional indicator is positive, ranging from 0.23 to 0.47, and is statistically significant in several specifications. The estimated interaction coefficients are similar with and without quarter fixed effects.

These results suggests that consistent with the results Fleckenstein et al. (2025), when focusing only on the leveraged loan market, the nonbank lending is much more cyclical than bank lending. However, not all nonbank lending is the same: lending within private credit seems to be different. In terms of cyclicality, nonbank direct lending in private credit market resembles much more bank lending, than syndicated loan market nonbank lending.

3.4.3 Deal-level results

Next, we use the granular firm-time-deal (ftd) level data. To assess a firm's propensity to borrow in the private credit market relative to other credit markets, we estimate the following specification:

$$LendingOutcome_{fdt} = \beta_0 + \beta_1 Tighteness_t + \beta_2 PC_d + \beta_3 PC_d \times Tighteness_t + \mu_f + e_{fdt}$$

where PC_d is a dummy variable that equals one if the deal is private credit, and zero for non-private credit. $LendingOutcome_{fdt}$ is the logarithm of the debt amount in the deal d. β_1 quantifies the sensitivity of leveraged loan outcomes to the credit cycle tightness, while β_3 measures the differential sensitivity of PC loan outcomes relative to LL loan outcomes. β_2 captures the average within-firm level difference in the lending outcomes between private

credit and leveraged loan deals when leveraged loan market tightness is at its mean level. We include firm fixed effects μ_f to control for time-invariant characteristics of firms such as the industry, which could influence their debt-raising tendency.

[Table 9 here]

Table 9 presents the results. The results reveal a notable contrast to the aggregate findings. The interaction terms *Tightening Loan Standards* $\times$ *PC* ($\beta \approx -0.15$) and *Excess Bond Premium* $\times$ *PC* (negative) indicate that at the individual deal level, private credit loan sizes actually shrink more than leveraged loan sizes during tight periods.

This reconciles an apparent contradiction with Table 7 (where aggregate private credit volume was resilient): While the private credit market continues to lend to borrowers (extensive margin), it manages risk by reducing the loan size for each individual borrower (intensive margin). Thus, private credit serves as a vital liquidity backstop by providing access, but it does not fully replace the magnitude of funding that would be available in a healthy syndicated market.

3.5 Evidence from European Credit Markets

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 and Table 3 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 6 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, reported loan demand, and reported spread increases in bank lending to small- and medium-sized enterprises.[6]

[Table 10 here]

First, Table 10 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 slightly smaller than those observed in the U.S., where the corresponding responses range from 6 to 7 percentage points. By contrast, stronger loan demand has a negative and statistically insignificant effect in Europe, reinforcing the view that private credit expansion is primarily driven by credit supply constraints rather than demand pressures, consistent with U.S. evidence.

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 7 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 a 10 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..

[6] 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

Second, Table 10 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 3 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 6 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, while reported loan demand has no statistically meaningful impact, consistent with the evidence above.

Columns 7 to 12 consider market-based measures of leveraged loan tightness. Higher Term loan B spreads and elevated excess bond premia are associated with a significantly 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. 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.

4 Conclusion

This paper challenges the prevailing view that nonbank lending uniformly amplifies credit cycles. We document that private credit lenders, unlike CLO-funded syndicated lenders, behave counter-cyclically, expanding their market share when traditional leveraged loan markets tighten. Our firm-level analysis reveals that borrowers, particularly those backed by private equity sponsors, strategically switch to private credit during periods of stress, us-

ing it as an effective "backstop" to maintain access to capital. This substitution is driven primarily by the extensive margin (more deals) rather than the intensive margin (larger deals), suggesting that private credit absorbs displaced borrowers rather than merely facilitating larger transactions. While this mechanism dampens the transmission of credit supply shocks to the real economy, it simultaneously migrates credit risk into a less regulated and more opaque sector.

While private credit provides liquidity during downturns, does this come at the expense of stricter covenants or higher effective costs of capital that might impair long-term firm growth? Future work could examine the ex-post performance of "switcher" firms compared to those that remain in syndicated markets to understand the real effects of private debt terms on borrowing firms.

As private credit grows to rival the syndicated market in size, how do shocks originate and propagate within the private credit market? Given the increasing interconnection between banks and private credit funds, future research could investigate potential contagion channels to the specific liability structures of direct lending funds.

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Figure 2: 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 4, 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.

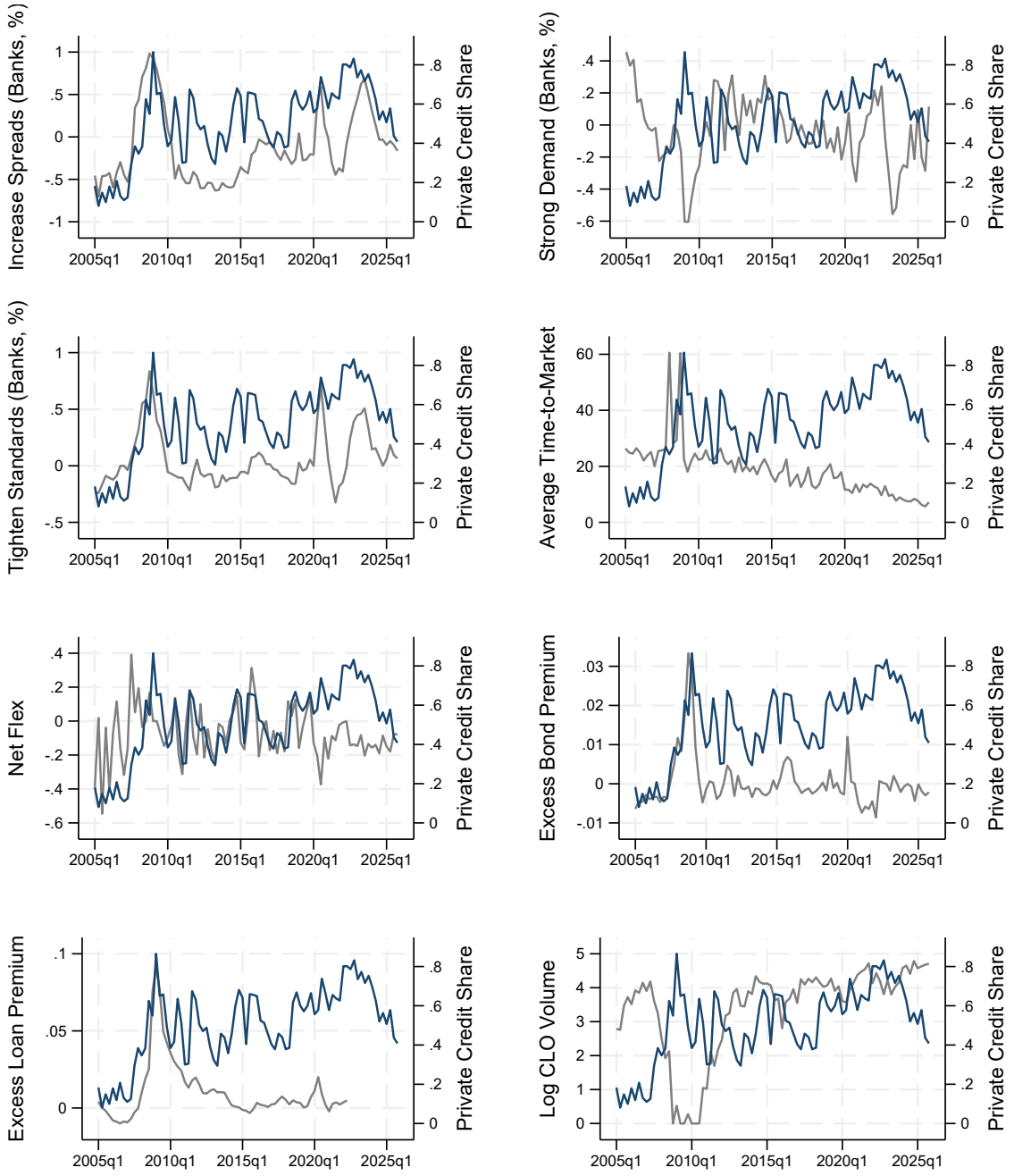


Figure 3: Number of private credit and leveraged loan deals

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.

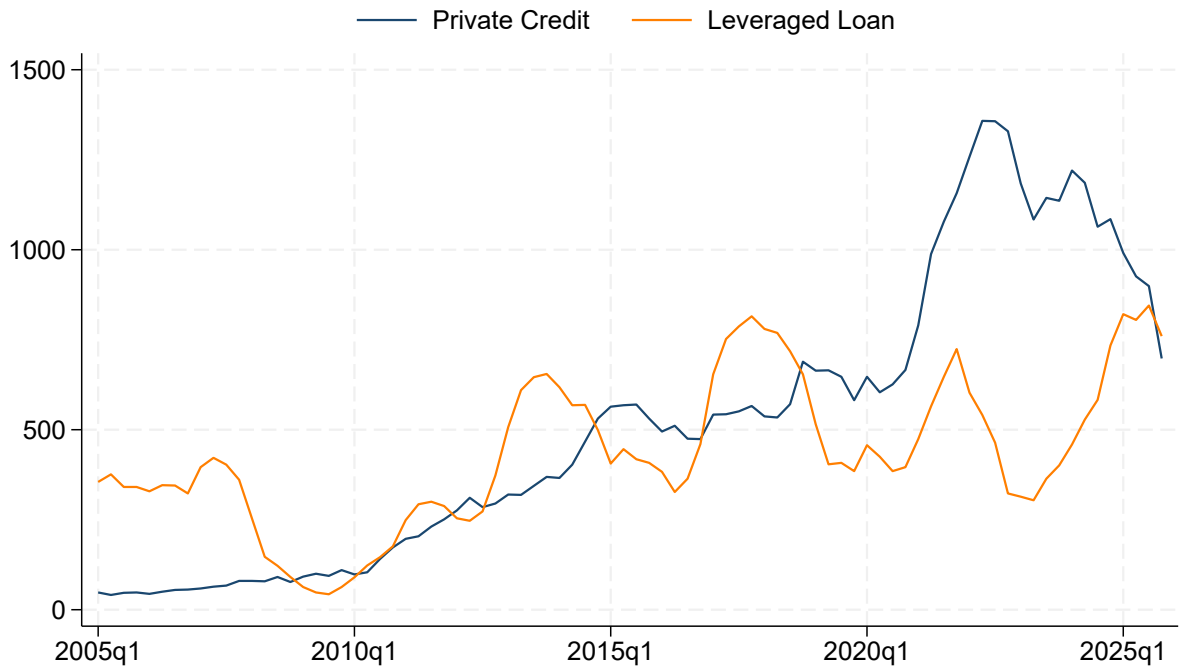


Figure 4: Share of firms (leveraged loan and private credit) issuing private credit

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.

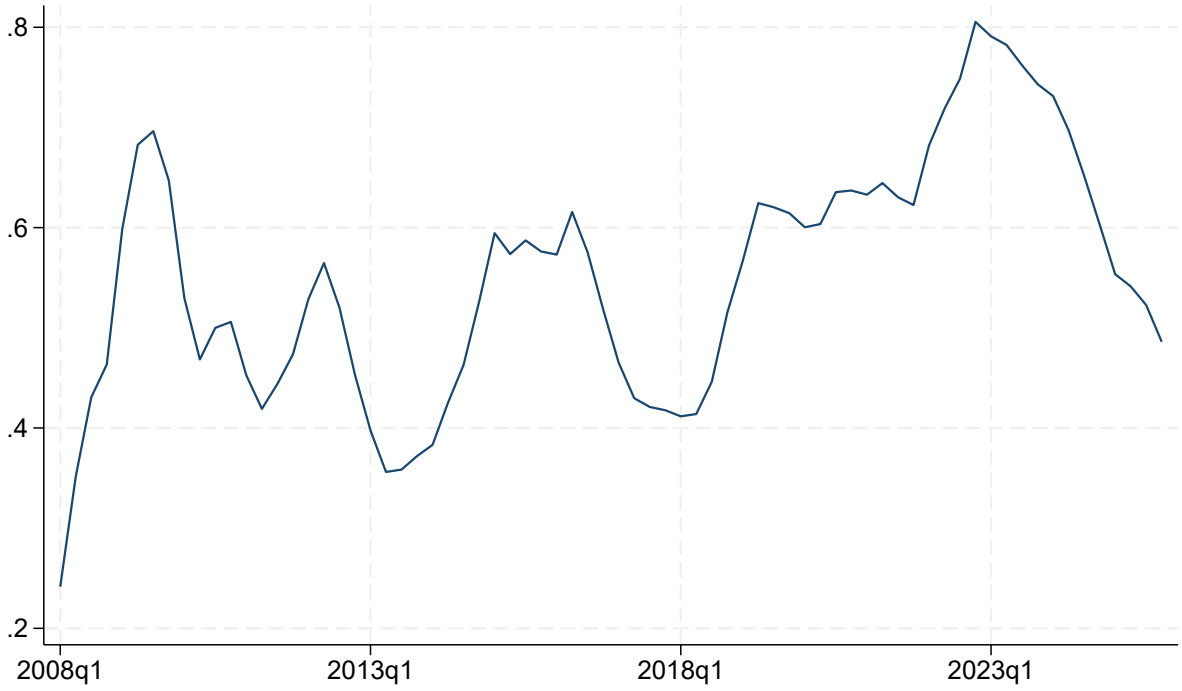
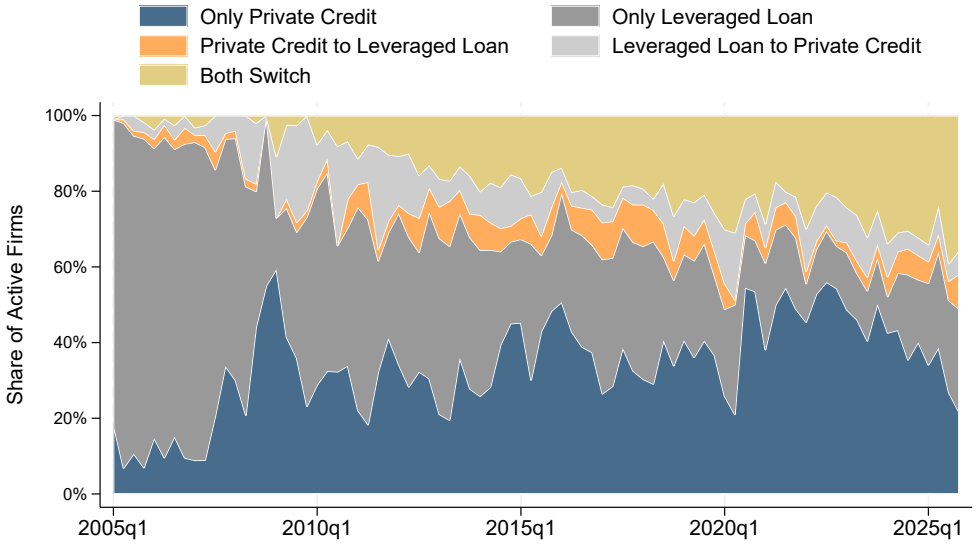


Figure 5: Firm debt profiles

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

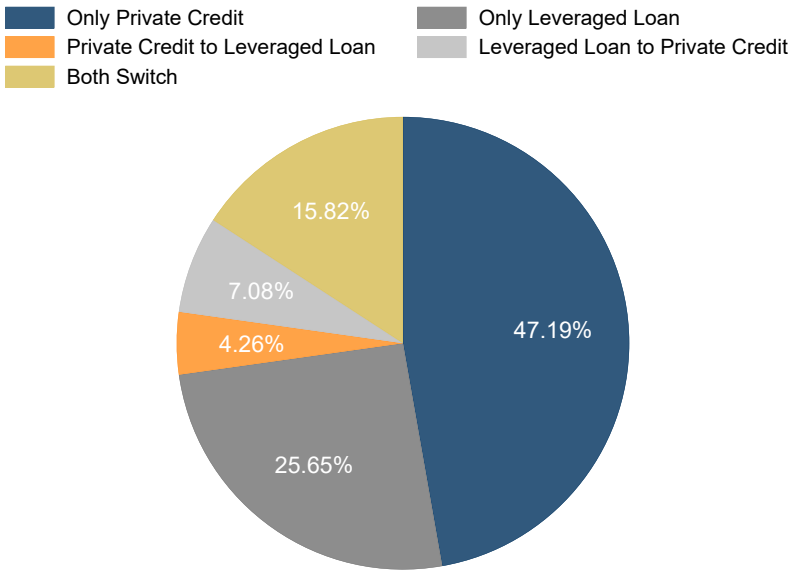


Figure 6: Firms' switching frequency between private credit and leveraged loans

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. In the case of switching from leveraged loan to private credit, the denominator is the total number of leveraged loan deals, while in the case of switching from private credit to leveraged loan, the denominator is the total number of private credit deals. 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.

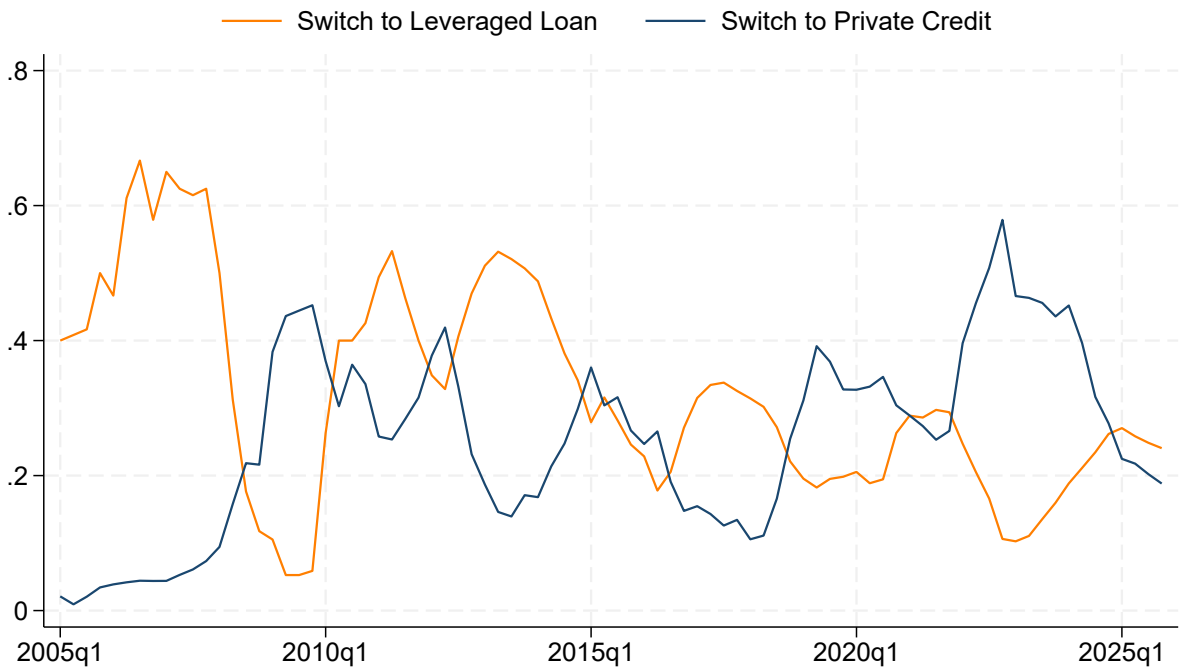
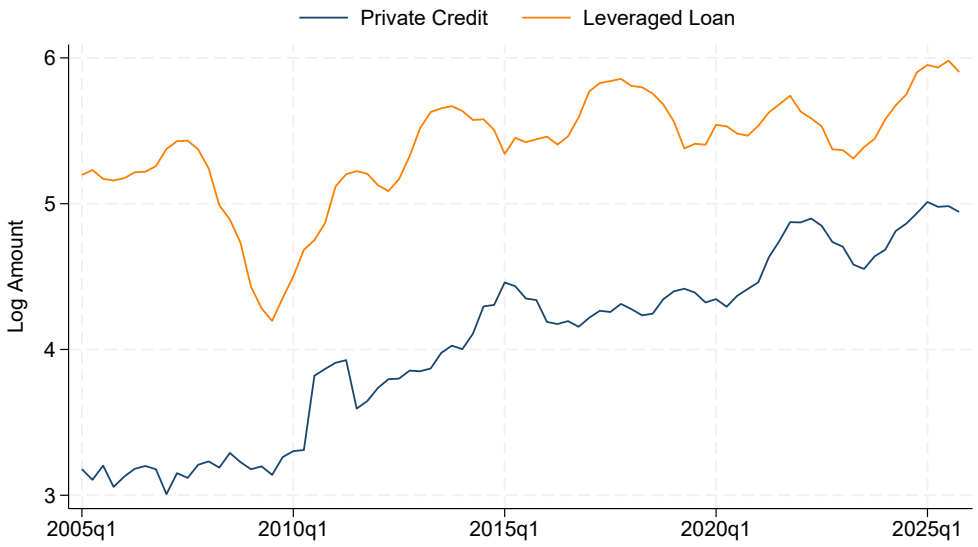
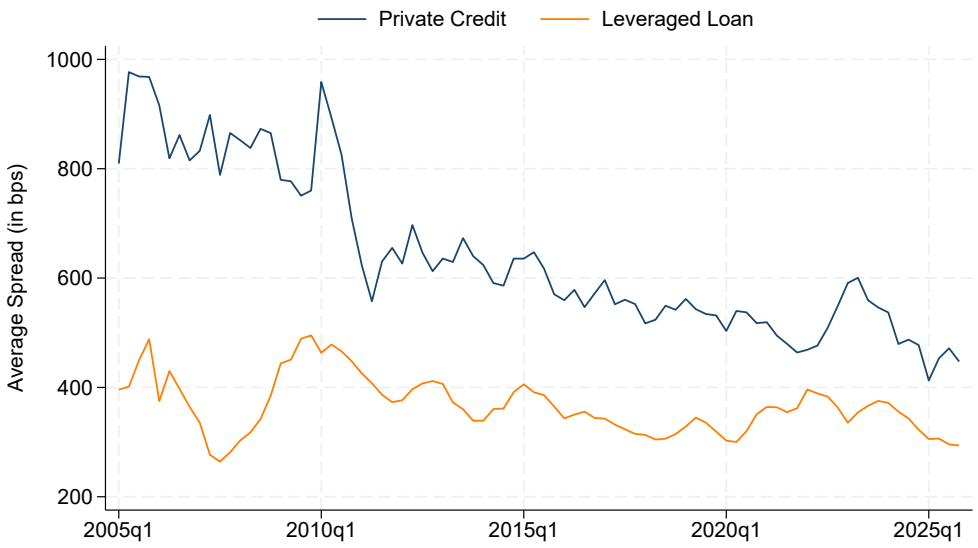


Figure 7: Issuance volume and average spread of private credit and leveraged loan deals

This figure documents the log of trailing-twelve-month total issuance (panel 7a) and the trailing-twelve-month volume-weighted average spread (panel 7b) of private credit and leveraged loan deals over time. The sample period is from January 2005 to December 2025.



(a) Log issuance volume



(b) Volume-weighted average spread (in bps)

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. 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
Stronger Loan Demand (%)	-3.84	21.83	-16.80	-2.75	10.75	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 (%)	1.02	1.90	0.04	0.39	1.22	70
CLO Volume	3.38	1.33	3.21	3.90	4.18	84
Share of Firms issuing Private Credit (%)	50.28	19.06	38.59	52.10	64.96	84
Switching Frequency (%):						
Private Credit to Leveraged Loan	29.88	19.17	15.89	27.06	42.45	84
Leveraged Loan to Private Credit	25.87	16.70	11.60	25.30	37.36	84
Net Switch	4.44	12.76	-2.98	1.15	8.46	84

Panel B: Borrower / Deal Characteristics

	Private Credit Deals			Leveraged Loan Deals		
Number of Deals:	10,903			9,217		
Variable	Mean	p50	Std. Dev.	Mean	p50	Std. Dev.
Borrower Age (years)	34.80	26.00	29.49	46.90	34.00	38.33
Volume (in mill. USD)	64.62	9.48	257.39	826.63	500.00	1,105.11
Spread (in bps)	581.08	534.73	302.69	386.06	350.00	422.06

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	0.68	0.90	1.00						
Stronger Loan Demand	-0.41	-0.55	-0.67	1.00					
Average Time-to-Market	0.55	0.40	0.34	-0.12	1.00				
Net Flex	0.40	0.02	0.04	-0.03	0.40	1.00			
Excess Bond Premium	0.72	0.68	0.63	-0.34	0.60	0.37	1.00		
Excess Loan Premium	0.46	0.56	0.64	-0.53	0.39	0.06	0.64	1.00	
Log CLO Volume	-0.46	-0.39	-0.47	0.36	-0.50	-0.07	-0.45	-0.82	1.00

Table 2: Leveraged loan tightening and share of private credit issuance

This table reports the time series regression results on the share of firms issuing private credit when the market faces leveraged loan tightening conditions. 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). Panel A shows the regression results using the AI-scored BSL tightness index. The other leveraged loan tightening measures are divided into survey-based (Panel B) and market-based (Panel C). All tightness measures are standardized to have mean zero and a unit standard deviation. A time-trend control variable is included in the regressions and the "Average Time-to-Market" variable is detrended before being included in the regression. Newey-West corrected standard errors are in parentheses. The reduced sample excludes firm-quarter observations if firm f has not issued non-private credit debt in the last 20 quarters and if firm f issued both private credit and non-private credit debt in the same quarter. The sample period is from January 2005 to December 2025.

Dependent Variable:	Share PC								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: AI-based BSL Tightness									
BSL Tightness	8.01***								
	(1.44)								
Panel B: Survey-based Measures									
Loan Spreads Increase		6.79***							
		(2.00)							
Tightening Loan Standards			6.38***						
			(1.92)						
Stronger Loan Demand				-5.59*					
				(3.19)					
Panel C: Market-based Measures									
Average Time-to-Market					3.43*				
					(1.85)				
Net Flex						5.37***			
						(1.22)			
Excess Bond Premium							7.33***		
							(1.34)		
Excess Loan Premium								11.32***	
								(1.00)	
Log CLO Volume									-10.38***
									(2.43)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	76	84	84	84	84	84	84	70	84
R-squared	0.47	0.53	0.51	0.46	0.43	0.47	0.56	0.68	0.59

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Firms' credit choice when facing leveraged loan tightening conditions

This table reports regression results on the credit choice of borrowers when facing leveraged loan tightening conditions (AI-scored BSL tightness index, tightening loan standards, stronger loan demand, excess bond premium, and log CLO volume). The dependent variable is a dummy variable that takes a value of 1 when the deal is a private credit deal and 0 when the deal is a leveraged loan deal. All tightness measures are standardized to have mean zero and a unit standard deviation. Controls are: log borrower age, private equity dummy, effective fed funds rate and a time trend. Fixed effects included are firm fixed effects and deal type fixed effects. Quarterly clustered standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Dependent Variable:	PC Deal = 1									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
BSL Tightness	9.74***	4.01***								
	(1.02)	(0.73)								
Tightening Loan Standards			5.70***	3.08***						
			(1.45)	(1.12)						
Stronger Loan Demand					-1.99	-0.59				
					(2.16)	(1.44)				
Excess Bond Premium							6.24**	3.65***		
							(2.47)	(1.32)		
Log CLO Volume									-9.66***	-7.84***
									(2.21)	(1.36)
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	17185	14568	17895	15210	17895	15210	17895	15210	17895	15210
R-squared	0.14	0.66	0.14	0.66	0.13	0.66	0.14	0.66	0.14	0.66
Within R-squared	0.14	0.03	0.14	0.03	0.13	0.02	0.14	0.03	0.14	0.04

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Heterogeneity of firms' credit choice when facing leveraged loan tightening conditions

This table reports regression results on the heterogeneity of firms' credit choice when facing leveraged loan tightening conditions (AI-scored BSL tightness index, tightening loan standards and excess bond premium). The dependent variable is a dummy variable that takes a value of 1 when the deal is a private credit deal and 0 when the deal is a leveraged loan deal. All tightness measures are standardized to have mean zero and a unit standard deviation. PE is a dummy variable which takes the value of 1 when the borrower is private equity-backed. Controls are: log borrower age, private equity dummy, effective fed funds rate and a time trend. Fixed effects included are firm fixed effects and deal type fixed effects. Quarterly clustered standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Dependent Variable:	PC Deal = 1					
	(1)	(2)	(3)	(4)	(5)	(6)
BSL Tightness	-0.06	-0.32				
	(1.00)	(1.41)				
BSL Tightness × PE	5.21***					
	(1.01)					
BSL Tightness × Log Age		1.21**				
		(0.47)				
Tightening Loan Standards			0.94	-0.77		
			(1.16)	(1.20)		
Tightening Loan Standards × PE			2.75**			
			(1.25)			
Tightening Loan Standards × Log Age				1.13***		
				(0.42)		
Excess Bond Premium					1.20	1.53
					(1.16)	(1.37)
Excess Bond Premium × PE					3.42*	
					(1.74)	
Excess Bond Premium × Log Age						0.61
						(0.58)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14568	14568	15210	15210	15210	15210
R-squared	0.66	0.66	0.66	0.66	0.66	0.66
Within R-squared	0.03	0.02	0.03	0.03	0.03	0.03

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Leveraged loan tightening and share of switching deals

This table reports the time series regression results on the share of switching deals when the market faces leveraged loan tightening conditions. Panel A uses the quarterly time series of the share of deals that are switching deals from leveraged loan to private credit as dependent variable. Panel B uses the quarterly time series of the share of deals that are switching deals from private credit to leveraged loans as dependent variable. Panel C uses the quarterly time series constructed in the following way: Net Switch = (number of switching deals from LL to PC - number of switching deals from PC to LL) / (number of switching and non-switching deals). All tightness measures are standardized to have mean zero and a unit standard deviation. A time-trend control variable is included in the regressions and the "Average Time-to-Market" variable is detrended before being included in the regression. Newey-West corrected standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Panel A: Switching to Private Credit

Dependent Variable:	Share of Switch to Private Credit								
Tightness Measure	BSL Tightness	Loan Spreads Increase	Tightening Loan Standard	Stronger Loan Demand	Average Time-to-Market	Net Flex	Excess Bond Premium	Excess Loan Premium	Log CLO Volume
Coefficients	5.79***	4.29**	3.85**	-3.97	0.02	4.74***	4.52**	8.85***	-8.51***
Standard Errors	(1.77)	(2.03)	(1.83)	(3.27)	(2.28)	(1.43)	(1.72)	(1.67)	(1.74)
Observations	76	84	84	84	84	84	84	70	84
R-squared	0.15	0.18	0.17	0.16	0.12	0.19	0.20	0.31	0.29

Panel B: Switching to Leveraged Loan

Dependent Variable:	Share of Switch to Leveraged Loan								
Tightness Measure	BSL Tightness	Loan Spreads Increase	Tightening Loan Standard	Stronger Loan Demand	Average Time-to-Market	Net Flex	Excess Bond Premium	Excess Loan Premium	Log CLO Volume
Coefficients	-11.10***	-9.36***	-7.42***	4.23	-6.90***	-5.09*	-8.34***	-10.44***	8.55*
Standard Errors	(1.94)	(1.96)	(2.60)	(4.18)	(1.67)	(2.69)	(1.93)	(2.22)	(4.47)
Observations	76	84	84	84	84	84	84	70	84
R-squared	0.48	0.34	0.25	0.14	0.24	0.16	0.31	0.26	0.23

Panel C: Net Switch

Dependent Variable:	Net Switch								
Tightness Measure	BSL Tightness	Loan Spreads Increase	Tightening Loan Standard	Stronger Loan Demand	Average Time-to-Market	Net Flex	Excess Bond Premium	Excess Loan Premium	Log CLO Volume
Coefficients	5.36***	4.90***	3.89**	-4.62*	0.94	4.44***	4.67***	8.38***	-7.26***
Standard Errors	(1.26)	(1.72)	(1.69)	(2.75)	(1.63)	(1.35)	(1.22)	(1.24)	(1.88)
Observations	76	84	84	84	84	84	84	70	84
R-squared	0.26	0.20	0.14	0.14	0.06	0.15	0.20	0.31	0.26

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Switching from leveraged loan to private credit by borrowers' quality

This table reports regression results on the switching of borrowers from leveraged loan to private credit when considering borrowers' quality. The dependent variable is a dummy variable which takes a value of 1 when the deal is a switching deal from leveraged loan to private credit and 0 when the current and previous deal are both leveraged loan deals (the dummy variable is multiplied by 100 to make the regression coefficients in percentage points). The measures of credit weakness of a borrowers' quality are: (i) "Discount", 100 minus the average secondary-market loan price in the quarter before the deal; higher values indicate lower credit quality; (ii) "Price Decline", the decline in the average quarterly loan price from $t-4$ to $t-1$; higher values indicate greater deterioration; (iii) "CCC or Below" equals one if the borrower is rated CCC or below in $t-1$, and zero otherwise; (iv) "Downgrade" equals one if the borrower experiences a rating downgrade between $t-4$ and $t-1$, and zero otherwise. In Panels B, C, and D all tightness measures are standardized to have mean zero and a unit standard deviation. Controls are: log borrower age, and private equity dummy. 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 June 2025.

Dependent Variable:	Switching from LL to PC = 1							
Panel A:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Credit Weakness	1.35***	1.21***	0.66**	0.59**	7.74***	6.74*	7.41***	10.22***
	(0.25)	(0.35)	(0.30)	(0.29)	(2.78)	(3.58)	(2.13)	(2.02)
Observations	3125	2719	2877	2579	3439	3117	3439	3117
R-squared	0.25	0.50	0.24	0.49	0.23	0.47	0.23	0.47
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.02
Panel B:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
BSL Tightness × Credit Weakness	-0.15	-0.19	0.35	0.48	3.45	5.22	-0.92	-1.11
	(0.35)	(0.40)	(0.42)	(0.37)	(3.61)	(3.42)	(3.67)	(3.25)
Credit Weakness	1.32***	1.30***	0.73**	0.74**	8.83**	8.57**	6.97**	9.77***
	(0.27)	(0.37)	(0.30)	(0.32)	(3.50)	(3.89)	(3.11)	(2.98)
Observations	3002	2608	2777	2393	3302	2875	3302	2875
R-squared	0.25	0.50	0.23	0.49	0.23	0.48	0.23	0.48
Within R-squared	0.14	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel C:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Tightening Loan Standards × Credit Weakness	-0.09	0.14	0.13	0.14	3.09	4.73	0.04	1.16
	(0.30)	(0.31)	(0.28)	(0.30)	(3.47)	(3.38)	(3.32)	(2.80)
Credit Weakness	1.36***	1.20***	0.66**	0.53*	8.52***	7.82**	7.42***	10.77***
	(0.26)	(0.35)	(0.30)	(0.28)	(3.04)	(3.83)	(2.38)	(2.28)
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
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel D:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Excess Bond Premium × Credit Weakness	-0.32	-0.26	-0.78*	-0.70*	-4.63	-3.98	-4.83	-5.91
	(0.48)	(0.39)	(0.44)	(0.35)	(2.90)	(3.51)	(3.87)	(4.18)
Credit Weakness	1.28***	1.13***	0.46	0.33	6.58**	5.41	6.11**	8.89***
	(0.25)	(0.30)	(0.31)	(0.28)	(2.86)	(3.60)	(2.47)	(2.38)
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
Within R-squared	0.13	0.04	0.11	0.03	0.11	0.02	0.11	0.03
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

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Credit cycle and debt issuance activity (aggregate level)

This table reports regression results on the sensitivity of private credit and leveraged loan origination (in aggregate) to leveraged loan tightness measures (AI-scored BSL tightness index in panel A, tightening loan standards in panel B, and excess bond premium in panel C). The dependent variables are: the log of the total quarterly issuance amounts for private credit and leveraged loan deals (columns 1 and 2), the log of the total quarterly issuance amounts for private credit and leveraged loans divided by the quarterly number of deals of the respective loan class (columns 3 and 4), and the log of the quarterly number of private credit and leveraged loan deals (columns 5 and 6). All tightness measures are standardized to have mean zero and a unit standard deviation. PC is a dummy variable, which takes a value of 1 when the observation denotes a private credit issuance and 0 when the observation denotes a leveraged loan issuance. Controls included are a time trend interacted with the PC dummy variable. Fixed effects included are quarter fixed effects. Robust standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Panel A: AI-based BSL Tightness

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
BSL Tightness	-0.57***		-0.07*		-0.51***	
	(0.08)		(0.04)		(0.05)	
PC	-4.77***	-4.77***	-3.64***	-3.64***	-1.12***	-1.12***
	(0.33)	(0.31)	(0.21)	(0.21)	(0.25)	(0.26)
BSL Tightness × PC	0.33***	0.33***	-0.04	-0.04	0.37***	0.37***
	(0.11)	(0.09)	(0.07)	(0.07)	(0.07)	(0.06)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	152	152	152	152	152	152
R-squared	0.91	0.96	0.94	0.97	0.78	0.91

Panel B: Tightening Loan Standards

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Tightening Loan Standards	-0.51***		-0.06		-0.45***	
	(0.08)		(0.04)		(0.06)	
PC	-4.79***	-4.79***	-3.41***	-3.41***	-1.38***	-1.38***
	(0.26)	(0.26)	(0.20)	(0.22)	(0.21)	(0.24)
Tightening Loan Standards × PC	0.21**	0.21***	-0.10	-0.10	0.31***	0.31***
	(0.10)	(0.08)	(0.08)	(0.08)	(0.07)	(0.08)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.92	0.96	0.94	0.97	0.78	0.88

Panel C: Excess Bond Premium

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Excess Bond Premium	-0.45***		-0.04		-0.41***	
	(0.06)		(0.05)		(0.05)	
PC	-4.99***	-4.99***	-3.30***	-3.30***	-1.70***	-1.70***
	(0.26)	(0.26)	(0.18)	(0.20)	(0.20)	(0.20)
Excess Bond Premium × PC	0.23**	0.23***	-0.14	-0.14	0.37***	0.37***
	(0.09)	(0.07)	(0.08)	(0.10)	(0.07)	(0.09)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.91	0.96	0.94	0.97	0.76	0.90

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Credit cycle and debt issuance activity - Private credit vs Institutional leveraged loan vs Pro rata leveraged loan

This table reports regression results on the sensitivity of private credit and institutional vs pro rata leveraged loan origination (in aggregate) to leveraged loan tightness measures (AI-scored BSL tightness index, tightening loan standards, and excess bond premium). The dependent variable is the log of the total quarterly issuance amounts for private credit and either institutional or pro rata leveraged loan deals. All tightness measures are standardized to have mean zero and a unit standard deviation. Institutional is a dummy variable which takes a value of 1 when the observation denotes an institutional leveraged loan issuance and 0 when it is either private credit or pro rata leveraged loan issuance, while PC is a dummy variable which takes a value of 1 when the observations denotes a private credit loan issuance and 0 when it is a leveraged loan. Controls include a time trend control interacted with the debt issuance categories. Fixed effects included are quarter fixed effects. Robust standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Dependent Variable:	log(amount)					
	(1)	(2)	(3)	(4)	(5)	(6)
BSL Tightness	-0.18***					
	(0.05)					
BSL Tightness × PC	-0.07	-0.07				
	(0.09)	(0.06)				
BSL Tightness × Institutional	-0.38***	-0.38***				
	(0.09)	(0.06)				
Tightening Loan Standards			-0.28***			
			(0.04)			
Tightening Loan Standards × PC			-0.02	-0.02		
			(0.08)	(0.07)		
Tightening Loan Standards × Institutional			-0.20**	-0.20***		
			(0.09)	(0.07)		
Excess Bond Premium					-0.17***	
					(0.04)	
Excess Bond Premium × PC					-0.06	-0.06
					(0.07)	(0.05)
Excess Bond Premium × Institutional					-0.30***	-0.30***
					(0.06)	(0.04)
PC	-5.17***	-5.17***	-5.39***	-5.39***	-5.35***	-5.35***
	(0.31)	(0.30)	(0.27)	(0.25)	(0.25)	(0.25)
Institutional	0.47	0.47**	0.23	0.23	0.47**	0.47***
	(0.27)	(0.27)	(0.23)	(0.23)	(0.22)	(0.23)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	228	228	252	252	252	252
R-squared	0.91	0.96	0.92	0.95	0.91	0.96
Within R-squared	0.91	0.94	0.92	0.94	0.91	0.95

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Credit cycle and debt issuance activity (deal level)

This table reports estimates from deal-level regressions of the sensitivity of private credit and leveraged loan origination to the leveraged loan tightness measures BSL Tightness, Tightening Loan Standards and the Excess Bond Premium. The dependent variable is the log of the deal amount. All tightness measures are standardized. PC 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 included are a time trend interacted with the PC dummy variable. 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.

Dependent Variable:	log(amount)					
	(1)	(2)	(3)	(4)	(5)	(6)
BSL Tightness	-0.17***					
	(0.02)					
BSL Tightness × PC	-0.12*	-0.10				
	(0.07)	(0.07)				
Tightening Loan Standards			-0.10***			
			(0.03)			
Tightening Loan Standards × PC			-0.17***	-0.15***		
			(0.06)	(0.06)		
Excess Bond Premium					-0.11***	
					(0.04)	
Excess Bond Premium × PC					-0.23***	-0.22***
					(0.07)	(0.07)
PC	-3.57***	-3.33***	-3.71***	-3.38***	-3.22***	-3.11***
	(0.33)	(0.28)	(0.31)	(0.25)	(0.29)	(0.24)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	14261	14261	14928	14928	14928	14928
R-squared	0.74	0.75	0.74	0.75	0.74	0.75

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: 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 regression results 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.

Panel A: Time-series regression

Dependent Variable:	Share PC					
	Survey-based Measures			Market-based Measures		
Tightness Measure:	Loan Spreads Increase	Tightening Loan Standards	Stronger Loan Demand	Log CLO Volume	TLB Spread	Excess Bond Premium
	(1)	(2)	(3)	(4)	(5)	(6)
Tightness Measure	5.74***	5.29***	-3.34	-1.99	1.93*	9.26***
	(2.03)	(1.75)	(2.67)	(1.27)	(1.01)	(1.68)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78	78	78	46	58	41
R-squared	0.39	0.36	0.29	0.16	0.16	0.54

Panel B: Deal-level regression

Dependent Variable:	PC Deal = 1											
	Survey-based Measures						Market-based Measures					
Tightness Measure:	Loan Spreads Increase		Tightening Loan Standards		Stronger Loan Demand		Log CLO Volume		TLB Spread		Excess Bond Premium	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Tightness Measure	6.78***	5.18***	6.47**	5.68***	-0.57	-0.76	-6.28	-8.01	7.57***	5.99***	11.09***	4.52
	(2.33)	(1.88)	(2.73)	(2.03)	(1.95)	(2.18)	(4.70)	(4.90)	(2.11)	(2.24)	(2.98)	(2.93)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1753	1233	1753	1233	1753	1233	1431	1002	1537	1075	487	258
R-squared	0.05	0.58	0.05	0.58	0.04	0.57	0.05	0.60	0.06	0.59	0.08	0.63
Within R-squared	0.05	0.03	0.05	0.03	0.04	0.02	0.05	0.06	0.06	0.05	0.08	0.08

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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: 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

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 as bank loan and 804 as private credit and bank loan. Therefore, we believe that our classification system is appropriate and 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.

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**

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)?"

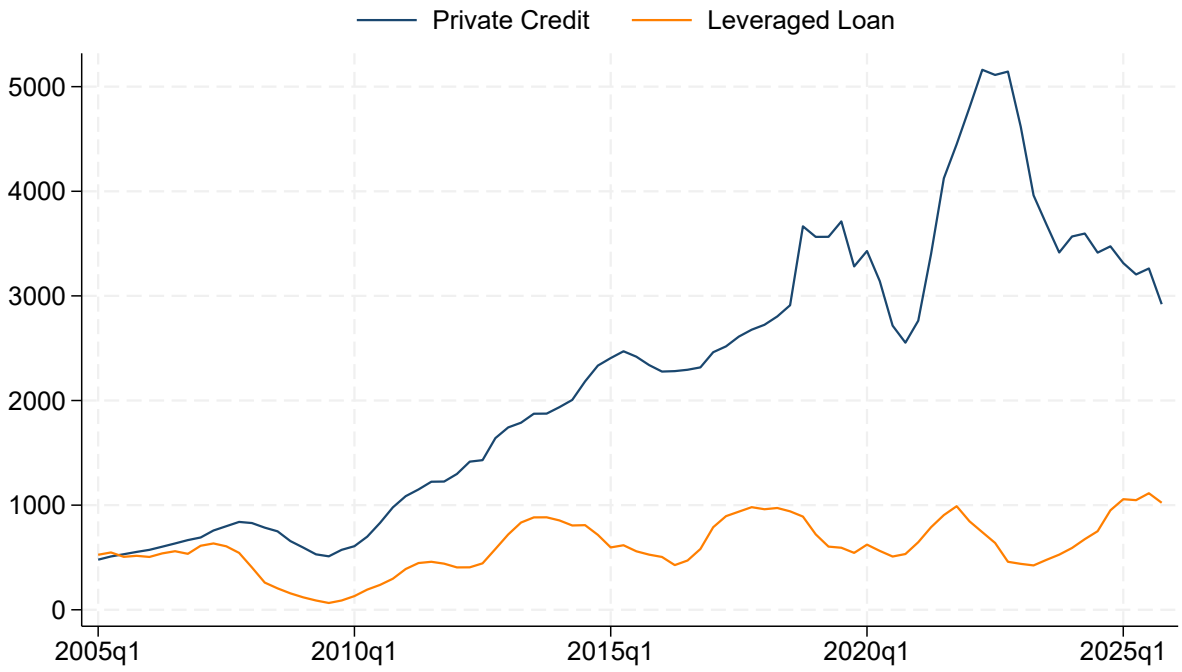
Choose exactly one:

- 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. The complete (not filtered) sample is used. The sample period is from January 2005 to December 2025.



Appendix C Tables

Table C3: Variables definitions

Variable	Description	Level	Source
Panel A: Tightness Measures			
BSL Tightness	AI-score indicating time variation in BSL market tightness from earnings-call of BDCs (standardized)	Quarterly	Authors' Calculation
Tightening Loan Standards	Net Percentage of Domestic Banks Tightening Standards for Commercial and Industrial Loans to Large and Middle-Market Firms (standardized)	Quarterly	FRED
Stronger Loan Demand	Net Percentage of Domestic Banks Reporting Stronger Demand for Commercial and Industrial Loans From Large and Middle-Market Firms (standardized)	Quarterly	FRED
Loan Spreads Increase	Net Percentage of Domestic Banks Increasing Spreads of Loan Rates Over Banks' Cost of Funds to Large and Middle-Market Firms (standardized)	Quarterly	FRED
Average Time-to-Market	Average time-to-market of leveraged loans (detrended and standardized)	Quarterly	Pitchbook
Net Flex	Net share of leveraged loan deals flexed up (deals flex up minus deals flexed down) (standardized)	Quarterly	Pitchbook
Excess bond premium	Risk compensation in corporate bond spreads not explained by expected defaults (standardized)	Quarterly	Gilchrist and Zakrajšek (2012)
Excess loan premium	Risk compensation in leveraged loan spreads orthogonal to expected defaults (standardized)	Quarterly	Saunders et al. (2025)
Log CLO volume	Logarithm of the aggregate issuance volume of collateralized loan obligations (standardized)	Quarterly	Pitchbook
Loan Spreads Increase (Avg) (EA)	Credit terms and conditions: margin on average loans (Euro Area) (standardized)	Quarterly	ECB BLS
Tightening Loan Standards (EA)	Credit standard: small- and medium-sized enterprises (Euro Area) (standardized)	Quarterly	ECB BLS
Stronger Loan Demand (EA)	Loan demand: small- and medium-sized enterprises (Euro Area) (standardized)	Quarterly	ECB BLS
Log CLO Volume (EA)	Logarithm of the aggregate issuance volume of collateralized loan obligations in EA (standardized)	Quarterly	Pitchbook
TLB Spread (EA)	Term loan B spreads of newly-issued leveraged loans in EA (standardized)	Quarterly	Pitchbook
Excess Bond Premium (EA)	Risk compensation in corporate bond spreads not explained by expected defaults in EA (standardized)	Quarterly	De Santis (2018)
Panel B: Dependent Variables in Regressions			
Share PC	Number of firms issuing private credit divided by the number of firms issuing either private credit or leveraged loan	Quarterly	Authors' Calculation
PC Deal = 1	Dummy variable taking a value of 1 when the deal is a private credit deal and 0 when the deal is a leveraged loan deal	Firm-Deal	Authors' Calculation
Share of Switch to Private Credit	Number of switching deals from leveraged loan to private credit divided by total number of leveraged loan deals	Quarterly	Authors' Calculation
Share of Switch to Leveraged Loan	Number of switching deals from private credit to leveraged loan divided by total number of private credit deals	Quarterly	Authors' Calculation
Net Switch	(Number of switching deals from leveraged loan to private credit minus number of switching deals from private credit to leveraged loan) divided by number of switching and non-switching deals	Quarterly	Authors' Calculation
Log(amount)	Logarithm of the issuance amounts of private credit or leveraged loan facilities	Quarterly / Firm-Deal-Facility	Authors' Calculation
Log(amount/# deals)	Logarithm of the total issuance amounts for private credit and leveraged loans divided by the number of deals of the respective class	Quarterly	Authors' Calculation
Log(# deals)	Logarithm of the number of private credit and leveraged loan deals	Quarterly	Authors' Calculation

Variable	Description	Level	Source
Panel C: Other Variables			
Private Credit Flag	Categorical variable indicating for each facility of each deal what type it is: Bond, Bank Loan, Leveraged Loan, Private Credit, or Mixed (both Private Credit and Bank Loan)	Firm-Deal-Facility	Authors' Calculation
Time Trend	Linear trend variable constructed as one-unit increase from quarter to quarter	Quarterly	Authors' Calculation
Borrower Age	Age of the borrower computed at each deal date as the date of the deal minus the funding year of the borrower	Firm-Deal	Authors' Calculation
Private Equity Dummy	Dummy variable equal to 1 if the borrower in the deal is Private Equity-backed. The information is stored in a Pitchbook variable called "Financing Status"	Firm-Deal	Authors' Calculation
Federal Funds Effective Rate	Weighted-average interest rate banks charge each other for overnight loans of reserves in US (quarterly average of daily rates)	Quarterly	FRED
EONIA / €STR	Euro overnight unsecured interbank lending rate (until 2021) and Euro short-term rate based on overnight unsecured wholesale transactions (from 2021) (quarterly average of daily rates)	Quarterly	ECB
Borrower Financing Status	Categorical variable indicating for each deal what is the financing status of the borrower at the time of the deal, e.g. Private Equity-backed, Venture Capital-backed, Private Debt Financed, Corporation, etc.	Firm-Deal	Pitchbook
Deal Type	Categorical Variable indicating for each deal what is the type of deal. We group smaller categories into the four following broader categories: General, PE / Buyout, Recapitalization, M&A. Smaller categories like bankruptcy, PIPE, etc. are dropped from the sample	Firm-Deal	Authors' Calculation
Spread	Spread (in bps) of private credit or leveraged loan facilities	Firm-Deal-Facility	Pitchbook

Table C4: Firms' credit choice when facing leveraged loan tightening conditions (additional leveraged loan tightness measures)

This table reports regression results on the credit choice of borrowers when facing leveraged loan tightening conditions (loan spreads increase, de-trended average time-to-market, net flex, excess loan premium). 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. All tightness measures are standardized to have mean zero and a unit standard deviation. Controls are: log borrower age, private equity dummy, fed funds rate and a time trend. Fixed effects included are firm fixed effects and deal type fixed effects. Quarterly clustered standard errors are in parentheses.The sample period is from January 2005 to December 2025.

Dependent Variable:	PC Deal = 1							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Loan Spreads Increase	6.56***	3.01***						
	(1.49)	(1.14)						
Average Time-to-Market			6.90***	1.37				
			(2.34)	(1.52)				
Net Flex					4.95***	1.27		
					(1.47)	(0.85)		
Excess Loan Premium							8.80***	7.42***
							(2.93)	(1.56)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes
Observations	17895	15210	17895	15210	17895	15210	13999	11705
R-squared	0.14	0.66	0.14	0.66	0.14	0.66	0.12	0.66
Within R-squared	0.14	0.03	0.14	0.02	0.14	0.02	0.12	0.03

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C5: Heterogeneity of firms' credit choice when facing leveraged loan tightening conditions (additional leveraged loan tightness measures)

This table reports regression results on heterogeneity of firms' credit choice when facing leveraged loan tightening conditions (loan spreads increase, stronger loan demand, de-trended average time-to-market, net flex, excess loan premium, log CLO volume). 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. All tightness measures are standardized to have mean zero and a unit standard deviation. PE is a dummy variable which takes the value of 1 when the borrower is private equity-backed. Controls are: log borrower age, private equity dummy, fed funds rate and a time trend. Fixed effects included are firm fixed effects and deal type fixed effects. Quarterly clustered standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Dependent Variable:	PC Deal = 1											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Loan Spreads Increase	0.46	-0.72										
	(1.27)	(1.54)										
Loan Spreads Increase × PE	3.45**											
	(1.36)											
Loan Spreads Increase × Log Age		1.08**										
		(0.53)										
Stronger Loan Demand			0.56	1.92								
			(1.27)	(2.03)								
Stronger Loan Demand × PE			-1.51									
			(1.48)									
Stronger Loan Demand × Log Age				-0.74								
				(0.71)								
Average Time-to-Market					0.28	0.32						
					(1.43)	(1.99)						
Average Time-to-Market × PE					1.71							
					(1.51)							
Average Time-to-Market × Log Age						0.31						
						(0.68)						
Net Flex							-0.34	0.33				
							(0.85)	(1.56)				
Net Flex × PE							2.29**					
							(1.14)					
Net Flex × Log Age								0.28				
								(0.47)				
Excess Loan Premium									3.61*	1.16		
									(2.05)	(3.57)		
Excess Loan Premium × PE									5.79***			
									(2.15)			
Excess Loan Premium × Log Age										1.78*		
										(0.94)		
Log CLO Volume											-5.80***	-2.65
											(1.43)	(2.43)
Log CLO Volume × PE											-2.91*	
											(1.67)	
Log CLO Volume × Log Age												-1.52*
												(0.80)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15210	15210	15210	15210	15210	15210	15210	15210	11705	11705	15210	15210
R-squared	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Within R-squared	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C6: Switching from leveraged loan to private credit by borrowers' quality - Additional tightness measures

This table reports regression results on the switching of borrowers from leveraged loan to private credit when considering borrowers' quality. The dependent variable is a dummy variable which takes a value of 1 when the deal is a switching deal from leveraged loan to private credit and 0 when the current and previous deal are both leveraged loan deals (the dummy variable is multiplied by 100 to make the regression coefficients in percentage points). The measures of credit weakness of a borrowers' quality are: (i) "Discount", 100 minus the average secondary-market loan price in the quarter before the deal; higher values indicate lower credit quality; (ii) "Price Decline", the decline in the average quarterly loan price from $t-4$ to $t-1$; higher values indicate greater deterioration; (iii) "CCC or Below" equals one if the borrower is rated CCC or below in $t-1$, and zero otherwise; (iv) "Downgrade" equals one if the borrower experiences a rating downgrade between $t-4$ and $t-1$, and zero otherwise. In Panels B, C, and D all tightness measures are standardized to have mean zero and a unit standard deviation. Controls are: log borrower age, and private equity dummy. 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 June 2025.

Dependent Variable:	Switching from LL to PC = 1							
Panel A:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Loan Spreads Increase × Credit Weakness	-0.18	0.14	-0.03	0.06	2.13	3.01	-0.37	2.00
	(0.33)	(0.31)	(0.26)	(0.26)	(3.87)	(3.59)	(3.69)	(3.19)
Credit Weakness	1.37***	1.19***	0.67**	0.52*	8.18***	7.23*	7.33***	10.93***
	(0.27)	(0.36)	(0.30)	(0.28)	(3.02)	(3.85)	(2.34)	(2.29)
Observations	3125	2719	2877	2482	3439	2996	3439	2996
R-squared	0.25	0.50	0.24	0.49	0.23	0.48	0.23	0.48
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel B:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Stronger Loan Demand × Credit Weakness	0.17	0.01	-0.04	-0.11	-2.27	-1.95	-3.28	-3.20
	(0.32)	(0.29)	(0.22)	(0.22)	(4.56)	(4.69)	(3.79)	(3.36)
Credit Weakness	1.42***	1.21***	0.65**	0.51*	7.56***	6.35*	7.18***	10.28***
	(0.30)	(0.43)	(0.30)	(0.26)	(2.75)	(3.63)	(2.06)	(1.98)
Observations	3125	2719	2877	2482	3439	2996	3439	2996
R-squared	0.25	0.50	0.24	0.49	0.23	0.48	0.23	0.48
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel C:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Average Time-to-Market × Credit Weakness	-0.00	-0.27	-0.10	-0.51	-1.81	-2.85	-0.41	-3.10
	(0.36)	(0.44)	(0.69)	(0.60)	(6.88)	(6.21)	(5.50)	(5.43)
Credit Weakness	1.35***	1.19***	0.66**	0.54*	7.71***	6.32*	7.37***	10.11***
	(0.26)	(0.36)	(0.30)	(0.28)	(2.79)	(3.64)	(2.34)	(2.14)
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
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel D:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Net Flex × Credit Weakness	0.18	0.32	-0.28	-0.09	1.22	1.28	-1.17	-0.71
	(0.26)	(0.30)	(0.48)	(0.43)	(3.40)	(3.22)	(2.84)	(2.72)
Credit Weakness	1.39***	1.33***	0.62*	0.51*	7.69***	6.38*	7.32***	10.41***
	(0.32)	(0.28)	(0.31)	(0.28)	(2.79)	(3.68)	(2.11)	(2.06)
Observations	3125	2719	2877	2482	3439	2996	3439	2996
R-squared	0.25	0.50	0.24	0.49	0.23	0.48	0.23	0.48
Within R-squared	0.13	0.04	0.11	0.02	0.11	0.02	0.11	0.03
Panel E:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Excess Loan Premium × Credit Weakness	-0.88***	-0.66**	-0.55*	-0.42	0.12	-2.58	-24.46**	-19.66*
	(0.20)	(0.27)	(0.31)	(0.28)	(12.73)	(15.12)	(10.40)	(11.36)
Credit Weakness	1.17***	0.96***	0.70**	0.57*	7.45	6.14	-5.76	-1.63
	(0.22)	(0.27)	(0.31)	(0.29)	(7.81)	(9.10)	(6.25)	(5.94)
Observations	2532	2244	2306	2032	2797	2488	2797	2488
R-squared	0.25	0.49	0.24	0.49	0.23	0.48	0.23	0.48
Within R-squared	0.13	0.03	0.10	0.02	0.10	0.02	0.10	0.02
Panel F:								
Credit Weakness Measure:	Discount		Price Decline		CCC or Below		Downgrade	
Log CLO Volume × Credit Weakness	0.50***	0.70***	0.35	0.30	-5.42	-12.03	6.61	21.13***
	(0.16)	(0.18)	(0.21)	(0.21)	(10.18)	(11.46)	(7.27)	(7.70)
Credit Weakness	1.31***	1.43***	0.75**	0.65*	11.25	13.93*	3.04	-3.19
	(0.22)	(0.24)	(0.31)	(0.33)	(7.39)	(7.86)	(5.58)	(5.14)
Observations	3125	2719	2877	2482	3439	2996	3439	2996
R-squared	0.26	0.50	0.24	0.50	0.23	0.48	0.23	0.48
Within R-squared	0.14	0.05	0.11	0.03	0.11	0.02	0.11	0.03
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

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C7: Credit cycle and debt issuance activity (aggregate level) - Additional survey measures

This table reports regression results on the sensitivity of private credit and leveraged loan origination (in aggregate) to leveraged loan tightness measures (loan spreads increase in panel A, and stronger loan demand in panel B). The dependent variables are: the log of the total quarterly issuance amounts for private credit and leveraged loan deals (columns 1 and 2), the log of the total quarterly issuance amounts for private credit and leveraged loans divided by the quarterly number of deals of the respective loan class (columns 3 and 4), and the log of the quarterly number of private credit and leveraged loan deals (columns 5 and 6). All tightness measures are standardized to have mean zero and a unit standard deviation. PC 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 included are a time trend interacted with the PC dummy variable. Fixed effects included are quarter fixed effects. Robust standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Panel A: Loan Spreads Increase

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Loan Spreads Increase	-0.55***		-0.07*		-0.49***	
	(0.07)		(0.04)		(0.06)	
PC	-4.74***	-4.74***	-3.43***	-3.43***	-1.31***	-1.31***
	(0.26)	(0.25)	(0.21)	(0.23)	(0.20)	(0.22)
Loan Spreads Increase × PC	0.22**	0.22***	-0.11	-0.11	0.33***	0.33***
	(0.10)	(0.08)	(0.08)	(0.08)	(0.07)	(0.07)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.93	0.96	0.94	0.97	0.80	0.89

Panel B: Stronger Loan Demand

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Stronger Loan Demand	0.39***		0.02		0.37***	
	(0.10)		(0.03)		(0.09)	
PC	-4.85***	-4.85***	-3.46***	-3.46***	-1.39***	-1.39***
	(0.32)	(0.29)	(0.20)	(0.21)	(0.26)	(0.26)
Stronger Loan Demand × PC	-0.07	-0.07	0.20**	0.20**	-0.26**	-0.26**
	(0.13)	(0.10)	(0.09)	(0.09)	(0.11)	(0.11)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.90	0.96	0.94	0.97	0.71	0.87

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C8: Credit cycle and debt issuance activity (aggregate level) - Additional market-based measures

This table reports regression results on the sensitivity of private credit and leveraged loan origination (in aggregate) to leveraged loan tightness measures (de-trended average time-to-market in panel A, net flex in panel B, excess loan premium in panel C, and log CLO volume in panel D). The dependent variables are: the log of the total quarterly issuance amounts for private credit and leveraged loan deals (columns 1 and 2), the log of the total quarterly issuance amounts for private credit and leveraged loans divided by the quarterly number of deals of the respective loan class (columns 3 and 4), and the log of the quarterly number of private credit and leveraged loan deals (columns 5 and 6). All tightness measures are standardized to have mean zero and a unit standard deviation. PC 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 included are a time trend interacted with the PC dummy variable. Fixed effects included are quarter fixed effects. Robust standard errors are in parentheses. The sample period is from January 2005 to December 2025.

Panel A: Average Time-to-Market

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Average Time-to-Market	-0.26*		-0.03		-0.23***	
	(0.16)		(0.09)		(0.07)	
PC	-4.98***	-4.98***	-3.35***	-3.35***	-1.63***	-1.63***
	(0.32)	(0.28)	(0.21)	(0.22)	(0.26)	(0.28)
Average Time-to-Market × PC	0.16	0.16	-0.02	-0.02	0.18*	0.18**
	(0.17)	(0.14)	(0.09)	(0.08)	(0.09)	(0.08)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.89	0.96	0.94	0.97	0.68	0.86

Panel B: Net Flex

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Net Flex	-0.19**		-0.01		-0.18***	
	(0.08)		(0.04)		(0.06)	
PC	-4.90***	-4.90***	-3.35***	-3.35***	-1.54***	-1.54***
	(0.32)	(0.28)	(0.20)	(0.21)	(0.25)	(0.25)
Net Flex × PC	0.15	0.15	-0.11*	-0.11*	0.26***	0.26***
	(0.11)	(0.10)	(0.07)	(0.07)	(0.08)	(0.06)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.88	0.96	0.94	0.97	0.67	0.87

Panel C: Excess Loan Premium

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Excess Loan Premium	-0.75***		-0.13**		-0.62***	
	(0.07)		(0.06)		(0.04)	
PC	-5.01***	-5.01***	-3.14***	-3.14***	-1.87***	-1.87***
	(0.26)	(0.27)	(0.19)	(0.23)	(0.18)	(0.17)
Excess Loan Premium × PC	0.45***	0.45***	-0.12	-0.12	0.56***	0.56***
	(0.12)	(0.11)	(0.11)	(0.14)	(0.07)	(0.07)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	140	140	140	140	140	140
R-squared	0.93	0.96	0.95	0.97	0.82	0.93

Panel D: Log CLO Volume

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
	(1)	(2)	(3)	(4)	(5)	(6)
Log CLO Volume	0.70***		0.14***		0.56***	
	(0.10)		(0.04)		(0.09)	
PC	-5.51***	-5.51***	-3.34***	-3.34***	-2.16***	-2.16***
	(0.26)	(0.27)	(0.21)	(0.25)	(0.21)	(0.20)
Log CLO Volume × PC	-0.49***	-0.49***	0.02	0.02	-0.51***	-0.51***
	(0.16)	(0.12)	(0.10)	(0.11)	(0.10)	(0.09)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	168	168	168	168	168	168
R-squared	0.92	0.97	0.94	0.97	0.77	0.90

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C9: Credit cycle and debt issuance activity (deal level) - Additional tightness measures

This table reports regression results on the sensitivity of private credit and leveraged loan origination (at the deal level) to leveraged loan tightness measures (loan spreads increase, stronger loan demand, de-trended average time-to-market, net flex, excess loan premium, and log CLO volume). The dependent variable is the log of the deal amount. All tightness measures are standardized to have mean zero and a unit standard deviation. PC 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 included are a time trend interacted with the PC dummy variable. 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.

Dependent Variable:	log(amount)											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Loan Spreads Increase	-0.10***											
	(0.03)											
Loan Spreads Increase × PC	-0.26***	-0.21***										
	(0.06)	(0.07)										
Stronger Loan Demand			0.04									
			(0.04)									
Stronger Loan Demand × PC			0.24***	0.23***								
			(0.06)	(0.06)								
Average Time-to-Market					-0.09*							
					(0.06)							
Average Time-to-Market × PC					0.16	0.15						
					(0.14)	(0.11)						
Net Flex							-0.08***					
							(0.03)					
Net Flex × PC							0.07	0.02				
							(0.07)	(0.06)				
Excess Loan Premium									-0.06			
									(0.05)			
Excess Loan Premium × PC									-0.42***	-0.36***		
									(0.10)	(0.11)		
Log CLO Volume											0.08**	
											(0.04)	
Log CLO Volume × PC											0.49***	0.34***
											(0.12)	(0.10)
PC	-3.91***	-3.54***	-3.69***	-3.42***	-3.48***	-3.26***	-3.40***	-3.19***	-3.53***	-3.41***	-2.67***	-2.78***
	(0.31)	(0.26)	(0.31)	(0.25)	(0.30)	(0.24)	(0.29)	(0.24)	(0.33)	(0.26)	(0.28)	(0.24)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	14928	14928	14928	14928	14928	14928	14928	14928	10597	10597	14928	14928
R-squared	0.74	0.75	0.74	0.75	0.74	0.75	0.74	0.75	0.76	0.77	0.74	0.75

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$