

The Cyclicalities of Direct Lending

Franz Hinzen Giorgio Mondini Paul Rintamäki Sascha Steffen

Toulouse Business School

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The nonbank credit narrative is incomplete

- How does the structure of credit markets shape 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 (Holmstrom and Tirole 1997; Diamond and Rajan 2005).
 - ▶ Firms with access to alternative funding channels are less sensitive to disruptions in credit markets (Greenstone, Mas, and Nguyen 2020; Chava and Purnanandam 2011).
- Structural transformation of corporate credit markets - substitution margin in corporate lending is between banks and private credit.
 - ▶ Private credit, which includes direct lending by nonbank institutions, reached about \$2 trillion by 2024 (similar to leveraged loans (BSL) and high-yield bonds).
- Canonical view: nonbanks amplify credit cycles (Fleckenstein et al. 2025)
- Empirical puzzle: private credit expands during stress (2008–09, 2020, 2022–23)

Example

Why This Matters

- To assess the transmission of credit supply shocks to the real economy, we need to assess credit markets holistically
- If firms can substitute between alternative credit markets, the cyclicalities of individual markets overstates changes in credit conditions faced by firms
- Consequently, any real effects found by the literature could even be understated

Research question

- Does private credit provide a backstop when credit conditions in the bank-based syndicated loan market tighten?
- To what extent do firms switch between these markets throughout credit cycles?
- Is this switching determined by changes in supply-side conditions or demand-driven?
- Which firms switch and how do contracts change when they switch?

Main results

- ① Private credit and syndicated loans move counter-cyclically.
- ② Substitution is driven by loan supply, not demand
- ③ Switching occurs within firms, not through borrower composition
- ④ The switching margin is concentrated among PE-backed firms
- ⑤ Private credit stabilizes access, not volume

Related literature

- Nonbank intermediaries in corporate credit are **often more procyclical than banks** and can **amplify downturns**, largely due to market-sensitive funding and liquidity risk
 - ▶ Fleckenstein et al. 2025, Aldasoro, Doerr, and Zhou 2025, Acharya, Gopal, and Steffen 2025.
- Firms **substitute across debt markets when credit supply tightens** (classic evidence on the bank–bond margin), implying a key role for financing regime switching over the cycle.
 - ▶ Becker and Ivashina 2014, Denis and Mihov 2003, Colla, Ippolito, and Li 2013, Fernández, González, and Suárez 2018
- Direct lenders often look **more like relationship lenders**, and **sponsors reduce frictions** and shape access/terms through repeat interactions and specialization.
 - ▶ Jang 2024, Ivashina and Kovner 2011, Demiroglu and James 2010, Block et al. 2024, Jang, Kim, and Sufi 2025

This paper: Private credit is different: when BSL tightens, **(especially PE-backed) firms reallocate issuance into private credit**, stabilizing access even if loan sizes adjust.

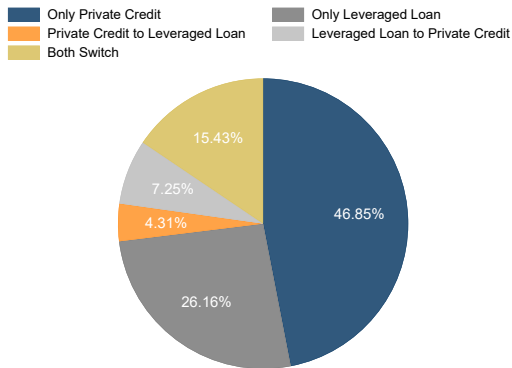
Data

We combine a comprehensive deal-level loan dataset with multiple independent measures of credit market tightness and a novel AI-based competition index.

- Deal-level issuance data (core sample: 2005–2024; histories from 2000)
 - ▶ **PitchBook–LCD**: leveraged loans + private credit (direct lending) transactions (deal & facility characteristics).
 - ▶ We construct a **Private Credit Flag** to consistently classify facilities into Leveraged Loan vs Private Credit (plus bonds/bank debt where relevant).
- Credit market tightness measures (U.S.) — “BSL tightening” proxies
 - ▶ **SLOOS** (Federal Reserve / FRED): Tightening, spread increase, stronger demand
 - ▶ **Market-based risk premia**: EBP (Gilchrist and Zakrajšek 2012) and ELP (Saunders et al. 2025)
 - ▶ **Securitization / market plumbing**: CLO issuance volume, market flexes (from PitchBook)

Outcome variables: **private credit share**, **switching indicators (LL→PC; PC→LL)**, and **issuance volumes** (total, # deals, size per deal).

Two markets, overlapping borrowers: 49% of borrowers access both markets

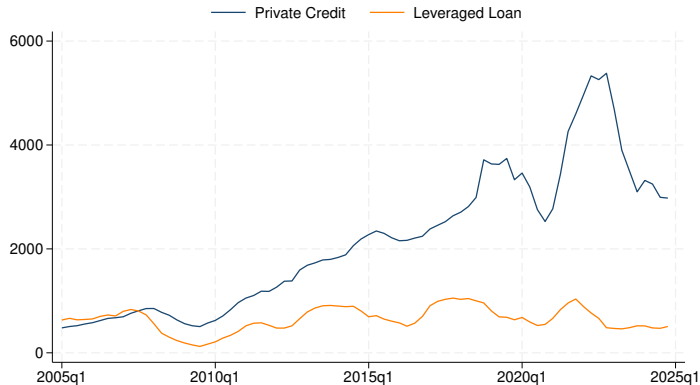


- BSL: syndicated, tradable, CLO-funded
- Private credit: held-to-maturity, relationship-based

Markets by Size

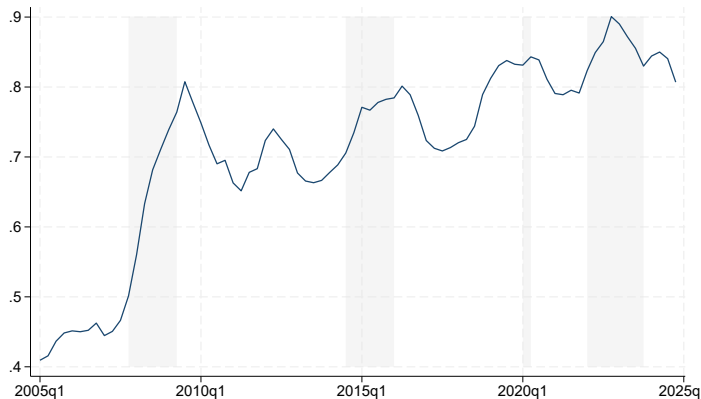
Firm Level

Private credit is now quantitatively large



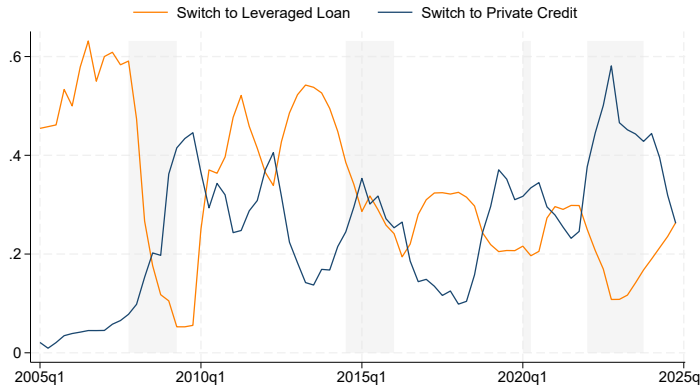
- Number of private credit deals increased from about 1,000 (2005) to >5,000 (2024)-exceeding leveraged loans
- Private credit less cyclical, consistent with a backstop role.

Private credit market share spikes in stress



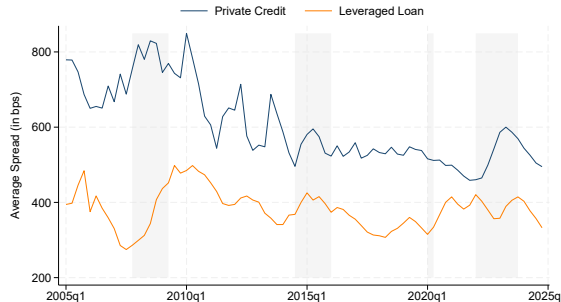
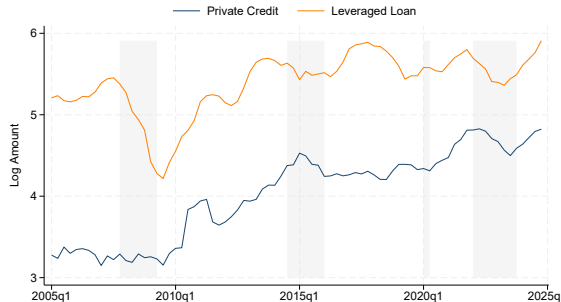
- Private credit has become the dominant issuance venue: the trailing-twelve-month share of firms borrowing via private credit rises from roughly 45% (2005) to 90% (2024).
- The share jumps in stress periods (e.g., GFC, 2015–16, COVID), consistent with firms substituting into private credit when syndicated lending tightens.

Switching is asymmetric



- **Switching becomes asymmetric** after the GFC: LL → PC jumps sharply in 2008–09 and, especially since 2018, consistently exceeds the reverse flow.
- **Switching back is limited:** PC → LL declines toward 10–20% in recent years, while LL → PC reaches 50–60% at peaks, suggesting a sizable share does not return.

Prices move together, quantities don't



- **Quantities converge:** issuance volumes in private credit and leveraged loans become much closer by 2023–2024.
- **Pricing differs but co-moves:** private credit spreads are consistently higher (200–250 bps premium), yet both spread series move together over time, indicating common credit-cycle pricing even as issuance reallocates across venues.

Measuring credit market tightening

We proxy “tightening” using complementary, well-established indicators of syndicated-loan supply, pricing of risk, and “market plumbing”

① Bank-reported conditions (SLOOS / FRED)

- ▶ **Tightening loan standards (C&I, large & mid-market):** $\uparrow$ = banks restrict supply
- ▶ **Loan spreads increase:** $\uparrow$ = tighter terms / higher intermediation rents
- ▶ **Stronger loan demand:** demand proxy (placebo for supply-driven mechanism)

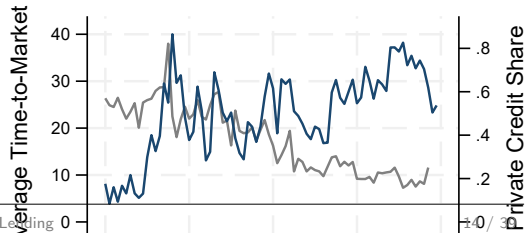
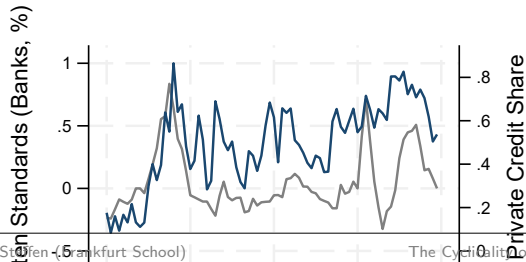
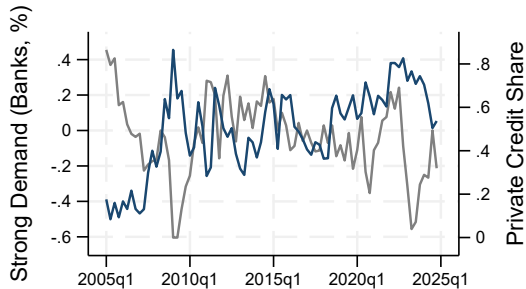
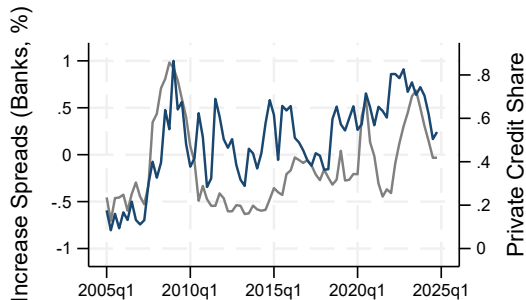
② Market-based risk pricing (credit cycle stress)

- ▶ **Excess Bond Premium (EBP):** $\uparrow$ = higher priced risk / stress conditions
- ▶ **Excess Loan Premium (ELP):** $\uparrow$ = tighter loan risk premia

③ Syndicated-loan market frictions & funding capacity

- ▶ **Average time-to-market (leveraged loans):** $\uparrow$ = syndication difficulty (detrended)
- ▶ **Net flex (share of deals flexed up):** $\uparrow$ = weaker demand / tougher placement
- ▶ **CLO issuance volume:** $\downarrow$ = reduced securitized funding capacity for BSL

Private credit share rises when BSL tightens



Methodology - Aggregate private credit market share

- We run the following time series regression

$$\textit{Private Credit Share}_t = \alpha + \beta \textit{Tightness}_t + \varphi t + \varepsilon_t$$

- $\textit{Private Credit Share}_t$ is the share of firms issuing private credit in quarter t relative to all firms issuing either private credit or leveraged loans in quarter t .
- $\textit{Tightness}_t$ comprises (1) Competition score; (2) survey-based measures from SLOOS (increased spreads, stronger demand, tightening standards); (3) 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.
- We include a linear time trend t ; Newey-West robust standard errors

Time-series evidence - Private credit share rises when BSL tightens

Dependent Variable:		Share PC							
<i>Panel A: BSL Tightness Index</i>									
BSL Tightness	-0.04*** (0.01)								
<i>Panel B: Survey-based Measures</i>									
Loan Spreads Increase		0.04*** (0.01)							
Tightening Loan Standards			0.03** (0.01)						
Stronger Loan Demand				-0.03 (0.02)					
<i>Panel C: Market-based Measures</i>									
Average Time-to-Market					0.04*** (0.01)				
Net Flex						0.04*** (0.01)			
Excess Bond Premium							0.05*** (0.01)		
Excess Loan Premium								0.06*** (0.01)	
Log CLO Volume									-0.06*** (0.01)
Observations	72	80	80	80	78	78	80	70	80
R-squared	0.70	0.72	0.70	0.67	0.73	0.71	0.78	0.78	0.79

Interpretation

- **Private credit share rises when the syndicated loan market tightens** - consistent with counter-cyclical substitution into private credit rather than an overall contraction in borrowing.
- **“BSL competition/funding channel”**: higher Competition Score and higher CLO volume (looser BSL conditions / more funding capacity) predict a lower private credit share, while weaker competition / CLO retrenchment predict higher private credit share.
- Magnitudes are economically meaningful: a **1σ tightening** shifts the share of firms using private credit by roughly **3–6pp**, which is large relative to the quarterly variation in the series.
- This is **not just “secular growth”**: the regression includes a time trend (and NW errors), so we isolate the cyclical component. **Key takeaway**: Private credit expansion is state-contingent and consistent with a backstop when BSL market becomes constrained.

Methodology - Firm-level regressions

- We exploit within-firm variation among borrowers with access to both markets (Becker and Ivashina 2014).

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

- *Private Credit* is a dummy variable that equals one if firm (f) issues private credit, and zero for non-private credit
- *Tightness* is a standardized quarterly time-series (t) measure that captures market tightness in the loan market.
- 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.

Main firm-level result

Dependent Variable:		PC Deal = 1								
BSL Tightness	0.08*** (0.01)	0.07*** (0.01)								
Tightening Loan Standards			0.04*** (0.01)	0.04*** (0.01)						
Stronger Loan Demand					-0.01 (0.02)	-0.01 (0.02)				
Excess Bond Premium							0.06*** (0.02)	0.07*** (0.02)		
Log CLO Volume									-0.08*** (0.02)	-0.09*** (0.02)
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	17206	14576	17997	15296	17997	15296	17997	15296	17997	15296
R-squared	0.14	0.56	0.15	0.56	0.15	0.56	0.15	0.56	0.15	0.56
Within R-squared	0.14	0.05	0.15	0.04	0.15	0.03	0.15	0.04	0.15	0.05

- Firms choose private credit when loan supply tightens.
- 1 std-dev tightening → +4–7pp probability of private credit usage

Interpretation - Firm-level results

- **Within-firm substitution, not composition** - evidence that the aggregate patterns reflect active switching rather than different firms entering/exiting.
- **Supply-driven tightening proxies move choice toward private credit:** Tightening loan standards and the EBP have large, positive, highly significant coefficients—consistent with borrowers using private credit as a backstop when syndicated credit supply contracts.
- **Funding/competition channel:** Higher CLO volume and higher competition score (i.e., looser BSL conditions / more competitive pressure on private credit) reduce the likelihood of a private credit deal.
- **Demand is not the driver:** The shift into private credit is primarily a response to loan supply and pricing of risk, not a demand shock.

Borrower heterogeneity

Dependent Variable:	PC Deal = 1					
BSL Tightness	-0.02** (0.01)	-0.04** (0.02)				
BSL Tightness × PE	-0.05*** (0.01)					
BSL Tightness × Log Age		-0.01* (0.00)				
Tightening Loan Standards			0.01 (0.01)	0.02 (0.02)		
Tightening Loan Standards × PE			0.03*** (0.01)			
Tightening Loan Standards × Log Age				0.01* (0.00)		
Excess Bond Premium					0.04** (0.02)	0.05** (0.02)
Excess Bond Premium × PE					0.04* (0.02)	
Excess Bond Premium × Log Age						0.01 (0.01)
Observations	14576	14576	15296	15296	15296	15296
R-squared	0.56	0.56	0.56	0.56	0.56	0.56

- Switching is concentrated among PE-backed firms (information advantage, repeated interactions, liquidity insurance for PE backed firms).

Interpretation - Borrower heterogeneity

- **Switching is not uniform:** When loan markets tighten (or competition from BSL weakens), **PE-sponsored borrowers shift disproportionately** into private credit, consistent with sponsors actively arbitraging across markets.
- **Competition channel is strongest for sponsored deals:** The Competition Score $\times$ PE interaction is significantly negative, implying that when BSL competition falls, PE-backed firms are especially likely to choose private credit.
- **Tightening standards/risk premia matter more for PE borrowers:** The Tightening Standards $\times$ PE (and, to a weaker extent, EBP $\times$ PE) interactions are positive, indicating that supply tightening and priced risk translate into a larger reallocation toward private credit for PE-backed firms than for others
- **Older firms also switch more (but second-order):** Interactions with log age are smaller but generally positive, suggesting that established borrowers have greater ability to operate at the intersection of markets.

Switching, not entry/exit

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
Coefficients	-0.05***	0.05***	0.04**	-0.05*	0.04**	0.05***	0.06***	0.09***
Standard Errors	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	(0.01)	(0.01)	(0.01)
Observations	72	80	80	80	78	78	80	70
R-squared	0.22	0.19	0.15	0.15	0.10	0.13	0.27	0.37

- Aggregate patterns reflect active switching between both markets.
- Tightening reallocates flow toward private credit (LL $\Rightarrow$ PC increases; PC $\Rightarrow$ LL collapses)
- When syndication and securitized funding are strong, borrowers net migrate back toward leveraged loans.
- Does private credit replace volume or just access?

Private credit cushions tightening via the extensive margin (deal count)

Panel B: Tightening Loan Standards

Dependent Variables:	log(amount)		log(amount/# deals)		log(# deals)	
Tightening Loan Standards	-0.39*** (0.06)		-0.03 (0.03)		-0.36*** (0.04)	
PC	-3.38*** (0.26)	-3.38*** (0.13)	-3.18*** (0.18)	-3.18*** (0.13)	-0.20 (0.15)	-0.20* (0.11)
Tightening Loan Standards $\times$ PC	0.14 (0.09)	0.14*** (0.04)	-0.03 (0.07)	-0.03 (0.05)	0.17*** (0.05)	0.17*** (0.04)
Time Trend	0.02*** (0.00)		0.01*** (0.00)		0.01*** (0.00)	
Time Trend $\times$ PC	0.02*** (0.00)	0.02*** (0.00)	0.00 (0.00)	0.00 (0.00)	0.02*** (0.00)	0.02*** (0.00)
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	160	160	160	160	160	160
R-squared	0.87	0.97	0.96	0.99	0.87	0.96

Interpretation - Aggregate Issuance

- **Leveraged loans contract sharply when standards tighten:** a 1σ increase in *Tightening Loan Standards* is associated with a large drop in LL aggregate issuance ($\log(\text{amount})$ about -0.39).
- **The contraction is almost entirely extensive-margin:** tightening reduces the number of LL deals strongly ($\log(\# \text{ deals})$ about -0.36), while average deal size is essentially unchanged ($\log(\text{amount}/\# \text{ deal})$ about -0.03).
- **Private credit is more resilient in downturns:** the *Tightening* $\times$ *PC* interaction is positive and significant for $\log(\# \text{ deals})$ ($+0.17$), implying PC deal activity falls much less (or holds up) relative to LL in the same tightening episode.
- **Backstop = access, not larger loans:** the *Tightening* $\times$ *PC* interaction is ~ 0 on $\log(\text{amount}/\text{deal})$ (≈ -0.03 , n.s.), so private credit absorbs more borrowers primarily by doing (relatively) more deals, not by scaling up loan sizes.

“Same-sized loans” vs “access with smaller loans”

- “Resilience” in aggregate volume can hide risk management inside private credit. Even if PC keeps the window open (more deals), it may still respond to stress by reducing exposure per borrower (smaller facilities) - effects that are only partially visible in an average amount-per-deal decomposition.
- By moving to facility-level $\log(\text{amount})$ and adding firm fixed effects + quarter fixed effects, we can isolate whether the same firm, in the same quarter-level tightening environment, receives smaller (or larger) private credit facilities relative to leveraged loan facilities.
- Conditional on lending, does private credit cut facility size more in tight periods?

Facility-level confirmation

Dependent Variable:		log(amount)				
BSL Tightness	0.13*** (0.02)					
BSL Tightness × PC	0.05 (0.06)	0.06 (0.05)				
Tightening Loan Standards			-0.06*** (0.02)			
Tightening Loan Standards × PC			-0.11** (0.05)	-0.08* (0.05)		
Excess Bond Premium					-0.02 (0.04)	
Excess Bond Premium × PC					-0.13** (0.06)	-0.11* (0.06)
Time Trend	0.01*** (0.00)		0.01*** (0.00)		0.01*** (0.00)	
Time Trend × PC	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)	-0.02*** (0.00)
PC	-1.71*** (0.27)	-1.84*** (0.24)	-1.73*** (0.23)	-1.81*** (0.19)	-1.49*** (0.23)	-1.70*** (0.19)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	No	Yes	No	Yes	No	Yes
Observations	42203	42203	45022	45022	45022	45022
R-squared	0.64	0.65	0.65	0.65	0.65	0.65

- At the micro level, private credit cuts deal size more.

Is this a U.S. phenomenon?

- **External validity / structural vs. institutional story:** The U.S. results could be driven by U.S.-specific effects (deep CLO markets, BDC ecosystem, covenant-lite). Europe lets us ask whether the substitution margin (BSL $\leftrightarrow$ private credit) is a structural feature of modern credit markets or a U.S. artifact.
- **Different intermediaries and constraints:** Europe relies more on banks and faces different regulatory/supervisory regimes and market infrastructures. This lets us test *which* tightening channel matters most and whether the backstop operates through the *same mechanisms*.
- **Macro/financial-stability relevance is arguably higher:** If private credit substitutes for syndicated lending in Europe, it affects credit transmission, the effectiveness of bank-focused macroprudential policy, and where risk migrates in downturns.

Bank tightening and risk premia drive private credit share

Dependent Variable:	Share PC								
<i>Panel A: BSL Tightness Index</i>									
BSL Tightness	-0.02*								
	(0.01)								
<i>Panel B: Survey-based Measures</i>									
Loan Spreads Increase (Avg)		0.06***							
		(0.02)							
Loan Spreads Increase (Risky)			0.07***						
			(0.02)						
Tightening Loan Standards				0.05***					
				(0.02)					
Stronger Loan Demand					-0.03				
					(0.03)				
<i>Panel C: Market-based Measures</i>									
Log CLO Volume						-0.02			
						(0.01)			
TLB Spread							0.02*		
							(0.01)		
Excess Bond Premium								0.09***	
								(0.02)	
Unobserved Systematic Component									0.05***
									(0.01)
Observations	70	78	78	78	78	46	58	41	41
R-squared	0.10	0.39	0.39	0.36	0.29	0.16	0.16	0.54	0.34

Europe: firm-level choice

Dependent Variable:	PC Deal = 1								
<i>Panel A: BSL Tightness Index</i>									
BSL Tightness	-0.05*** (0.01)								
<i>Panel B: Survey-based Measures</i>									
Loan Spreads Increase (Avg)		0.05*** (0.02)							
Loan Spreads Increase (Risky)			0.08*** (0.03)						
Tightening Loan Standards				0.06*** (0.02)					
Stronger Loan Demand					-0.01 (0.02)				
<i>Panel C: Market-based Measures</i>									
Log CLO Volume						-0.08 (0.05)			
TLB Spread							0.06*** (0.02)		
Excess Bond Premium								0.05 (0.03)	
Unobserved Systematic Component									0.04* (0.02)
Observations	1153	1233	1233	1233	1233	1002	1075	258	258
R-squared	0.58	0.58	0.58	0.58	0.57	0.60	0.59	0.63	0.63

Conclusion

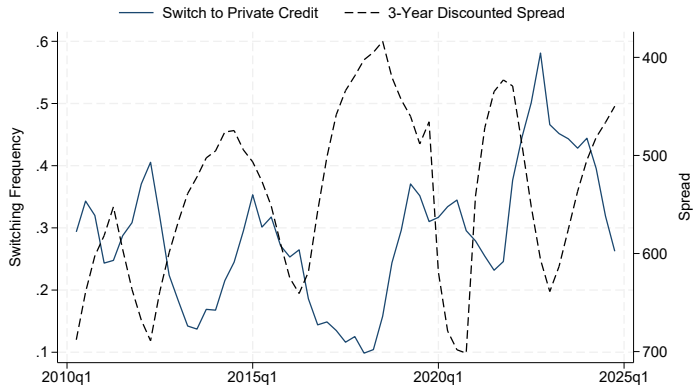
- **Core finding:** Private credit and leveraged loans are counter-cyclical - when BSL tightens, borrowers reallocate into private credit rather than forgo financing.
- **Mechanism:** This is **within-firm switching**, concentrated among **PE-backed borrowers**, consistent with sponsor-enabled access at the intersection of both markets.
- **How the backstop works:** Private credit stabilizes **access (deal count)** more than **volume (deal size)** - a backstop for funding availability, not unlimited liquidity.
- **Policy relevance:** Private credit can **dampen real-economy credit supply shocks**, but it also **shifts intermediation and risk into a less transparent perimeter**, raising questions about monitoring, leverage, and interconnectedness with banks.

Appendix Slides

Novel measure: AI-based BSL Tightness Index

- We directly measure competition faced by private credit lenders from the syndicated loan market.
- Earnings calls of BDC
- LLM classification of competitive conditions
- Interpretable, forward-looking

Switching to private credit and leveraged loan spreads

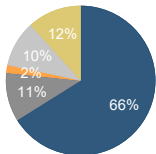


- Switching into private credit rises when credit availability in the syndicated loan market declines. [Back](#)

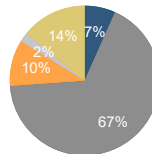
Distribution of debt profiles by loan size



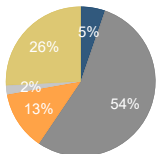
(a) Loans with Amounts < \$250M



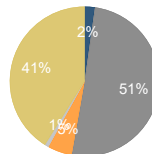
(b) Loans with Amounts \$250M - \$500M



(c) Loans with Amounts \$500M - \$1B



(d) Loans with Amounts > \$1B



Firm-level view on debt issuances

	Only PC Firms	Only LL Firms	Only PC to LL Firms	Only LL to PC Firms	Both Switching Firms	Total
< 250M	3,195	512	84	478	570	4,839
250M – 500M	52	520	77	14	111	774
500M – 1,000M	24	243	57	9	117	450
> 1,000M	7	168	17	3	134	329
Total	3,278	1,443	235	504	932	6,392

- Overall, our sample comprises 6,392 firms.

[Back](#)

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