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THE ROLE OF PRIVATE DEBT IN THE FINANCIAL ECOSYSTEM

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The Role of Private Debt in the Financial Ecosystem

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ABSTRACT

This paper provides a comprehensive introduction to private debt, examines the key drivers behind its expansion, and frames the discussion around potential risk accumulation in the broader economy. Overall, the development of private debt can be viewed as the emergence of a new technology that facilitated the expansion of the high-yield corporate debt market into the middle market. Throughout its history, the evolution of the high-yield debt and the rise of private debt have been closely intertwined with the growth of private equity. Historically, banks have not had significant exposure to financing buyouts or other highly leveraged transactions, whether in the large-cap or mid-cap segments.

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All firms require financing, which at a high level can take the form of either debt or equity. Historically, equity has been categorized as either publicly traded or privately held, with the latter typically owned by specialized private equity firms. A similar distinction has existed in debt markets: academic economists traditionally divided debt into public debt (bonds) and private debt, referring primarily to bank lending. However, as commercial debt markets have evolved, “private debt” has come to denote debt originated by, and typically held on the balance sheets of, *alternative* financing vehicles—namely, nontraditional structures such as private credit funds and business development companies. Thus, nonpublic debt now consists of two broad segments: bank-originated lending and private debt.

In the 15 years following the 2007–09 global financial crisis, the private debt market evolved from a niche investment strategy into a major segment of global debt markets. This development raises important questions about the implications for traditional debt markets and the banking sector in particular, as well as broader financial stability. The goal of this paper is to provide an introduction to private debt, examine the drivers of its expansion, and frame the discussion around potential risk build-up in the economy.

In what follows, I begin by providing background on the evolution of private debt and outlining the key factors that drove the emergence of the modern private debt market after the global financial crisis of 2008–09. This is followed by a deep dive into the unique features of private debt, and the reasons private creditors are able to provide these compared with other sources of capital. I then introduce the two funding structures common in the private debt space: (1) private equity–style credit funds that raise illiquid commitments from large institutional investors; and (2) evergreen structures oriented toward retail investors.

As highlighted by the surge in subprime lending prior to the global financial crisis of 2007–09 and, more recently, the collapse of Silicon Valley Bank in 2023, it is prudent to monitor the rapid growth of isolated segments of the financial market—especially when accompanied by high levels of debt and structural complexity. Unsurprisingly, the expansion of private debt has drawn increasing scrutiny (for example, IMF, 2024; Avalos Doerr and Pinter, 2025; Bank of England, 2025). Thus, I conclude with a discussion of the broader implications of the rise of private debt for financial stability. To be upfront, while my perspective is nuanced, I view private debt overall as a positive development—and one that is here to stay.

Evolution of the Private Debt Market

To date, much of the growth in private debt has been concentrated in the high-yield—or highly leveraged—segment of the corporate debt market.¹ The bulk of private debt consists of loans with high credit risk typically secured by some form of collateral. A representative use of private debt is the financing of a leveraged buyout (LBO), in which a private equity sponsor acquires a company using a combination of debt and equity.

More broadly, the evolution of high-yield debt markets, including the rise of private debt, has been closely tied to the history of private equity, particularly leveraged buyouts. Over the past fifty years, the buyout industry has gone through three major growth waves, each expanding the footprint of private equity in the economy and each closely linked to the development of a distinct segment of the risky debt market: first high-yield bonds, then leveraged loans, and most recently private debt.² While leveraged loans and, especially, high-yield bonds primarily serve larger companies, the growth of private debt has extended high-yield corporate credit to middle market companies. The usual dividing line is that core middle market refers to firms have EBITDA (earnings before interest, taxes, depreciation, and amortization) of \$25–75 million, while firms with larger EBITDA are classified as large-cap.

As of the end of 2025, multiple sources estimate that the global private debt market has reached roughly \$2.0 trillion in committed capital, up from negligible levels in 2008, with much of it concentrated in the U.S. About one third of this capital is committed by investors but remains undeployed. Accordingly, in terms of outstanding amounts, the private debt market is now broadly comparable in size to the US leveraged loan market, at about \$1.6 trillion, and the US high-yield bond market, at about \$1.5 trillion.

Debt is an intrinsic feature of private equity financing. In a typical modern buyout transaction, specialized investment firms acquire a controlling position in a company with the goal of pursuing growth through operational changes, generally over an ownership horizon of about five years. Because such transactions involve acquiring a controlling stake, the required investment is usually substantial and is financed with a combination of equity and debt. Moreover, private equity funds typically target a fixed, leveraged gross return of around 20 percent. This return expectation is embedded in

¹ As a reference point, over the past decade loans backing buyout transactions have delivered gross of fees returns of roughly 9 percent per year. See Sundar (2025).

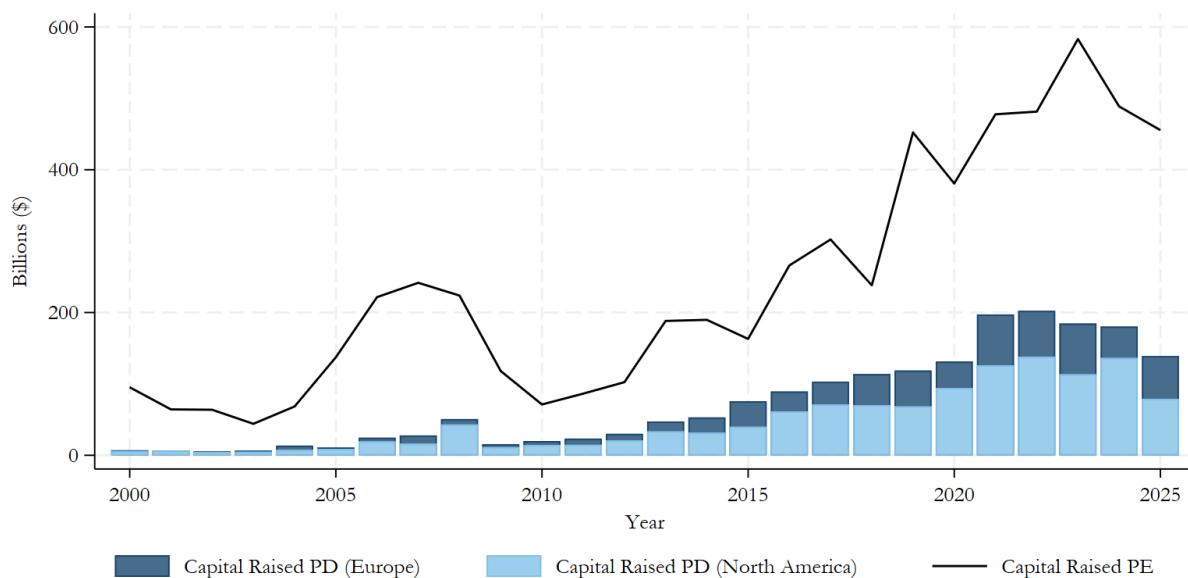
² High-yield bonds are bonds rated “BB”/“Ba” or below. Leveraged loans include loans rated “BB”/“Ba” or below, as well as unrated loans that carry a comparable level of risk and, accordingly, offer similar interest rates.

market practice and acts as an additional constraint on the types of financing used in buyout transactions. For a comprehensive introduction to leveraged buyouts and private equity, a useful starting point is Kaplan and Strömberg (2009).

Figure 1 illustrates the growth of private debt fundraising since 2000 and compares it with the growth of private equity. It provides useful background for distinguishing between the two periods of the private debt market (pre- and post-2007–2008 financial crisis) while also highlighting its connection to private equity market.

Figure 1

Evolution of Private Debt and Private Equity Fundraising



Note: The figure is based on Preqin data. Private equity includes buyout and growth equity strategies, with the line representing fundraising in North America and Europe. Private debt fundraising excludes fund-of-funds strategies to avoid double counting, as well as distressed debt, which is a hostile strategy distinct from the rest of private debt.

Private Debt 101

As the private equity industry experienced rapid growth in the early 2000s, increasing competition pushed firms to target smaller companies. However, the high-yield debt market serving these smaller, mid-sized firms remained relatively shallow and underdeveloped. In contrast, the bulk of the debt financing for larger buyouts was raised in the leveraged loan market—the non-investment-grade loan market funded by a broad base of institutional investors. For example, according to PitchBook Leveraged Data & Commentary database (“PitchBook” from now on), the average LBO loan in the US

leveraged loan market in 2004 was approximately \$354 million, representing roughly 44 percent of total buyout financing. In contrast, loans backing mid-sized buyouts were often too small to be syndicated for similar reasons that explain why smaller firms typically do not issue bonds: the process involves significant fixed costs related to rating, underwriting, and placement (for a description of the process, see Ivashina and Mylavarapu, 2025).

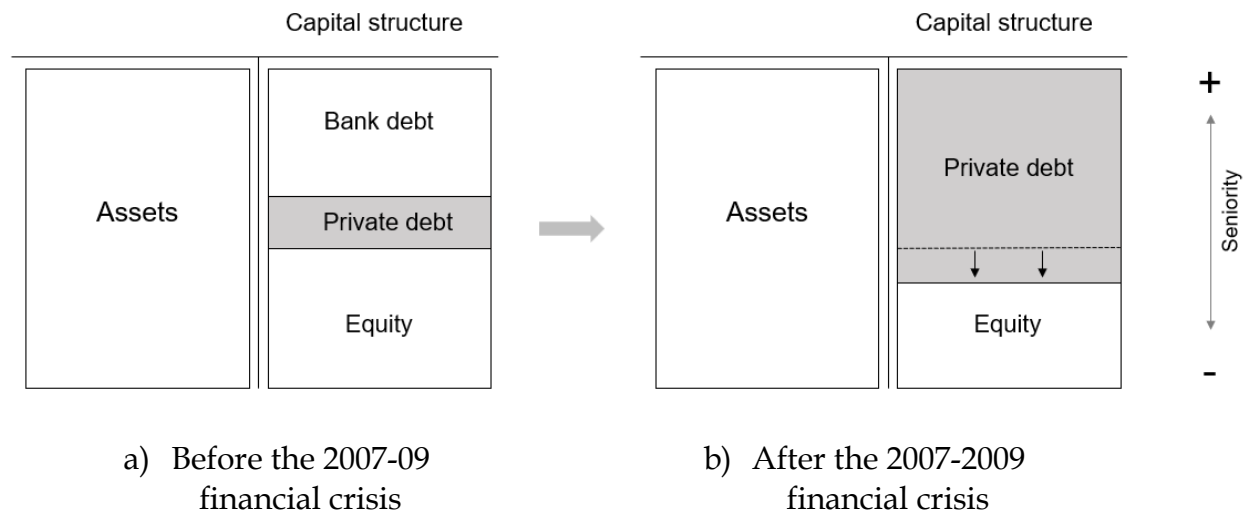
At the same time, on-balance-sheet bank debt was an insufficient source of debt financing for these buyouts. Due to capital and supervisory requirements, banks typically provided only a small, most senior position in the capital structure when lending to buyouts. (Figure 2 shows an illustrative capital structure of a middle market buyout before the 2007-09 financial crisis.) Moreover, in the late 1990s and early 2000s, driven by regulatory changes, the US banking sector underwent significant consolidation and expansion in scope. By some accounts, this marked the beginning of large banks' retreat from mid-market and small commercial lending, as they shifted their focus toward larger clients. These clients presented opportunities for banks to cross-sell fee-based services such as underwriting, M&A advisory, and loan syndication.

It was in this context—amid growing demand for mid-sized leverage and as banking activity increasingly focused on larger firms—that the first generation of private debt funds emerged. These were the so-called “captive” private debt funds. These funds became ubiquitous among mid-cap private equity managers in the years leading up to the 2007-09 financial crisis. During this period, many large growth-equity and mid-market buyout firms began raising not only equity funds, but also debt funds designed to invest in the same deals. The common fundraising pitch was: “You already invest in equity with us—why not also invest in the senior, safer claims of the same companies?” The issue, of course, is that when things go wrong, there is an inherent conflict of interest between debt and equity holders which is very difficult to mitigate. That did not stop captive funds from making meaningful strides in fundraising.

Between the limited presence of private equity in the middle market before the 2007-09 financial crisis and the conflicts of interest associated with captive credit funds, this early form of private debt remained modest in scale. After the financial crisis, as a new generation of arm's-length private credit providers began to emerge alongside the rise in mid-cap LBO activity, the economics of captive debt funds became unattractive and they largely disappeared. Figure 2 illustrates the role of banks and the shift in the private debt market in financing middle market buyouts before and after the 2007-09 financial crisis.

Figure 2

Representative Middle Market Buyout Structure



Emergence of Modern Private Debt Industry

Much of today's private debt industry traces its roots back to the 2007-09 financial crisis. As pointed out above, the groundwork had already been laid in the years leading up to the crisis. Although private debt remained relatively small at the time, it was no longer unfamiliar to private equity sponsors or to institutional investors, who would become the core investor base for credit funds. While multiple factors have contributed to the growth of private debt since 2008, two primary forces stand out.

First, the banking sector emerged from the 2007-09 financial crisis with tighter regulation and increased scrutiny. Among other things, the revised Leveraged Lending Guidance issued in 2013 articulated stricter supervisory expectations for bank-originated leveraged loans. Davydiuk, Marchuk, and Rosen (2024) provide a thorough account of the regulatory and structural changes that drove the retreat of traditional lenders from riskier segments, perhaps disproportionately in the middle market, which—unlike the leveraged loan market—has never been a significant source of fee generation for banks.

However, while post-financial crisis pressures on banks likely contributed to the rise of private debt, banks had not been significant providers of risky lending to the middle market to begin with (Figure 2). As a result, a simple credit provider substitution (that is, a credit supply explanation) cannot fully account for the rapid expansion of risky, high-yield lending to middle market firms by private debt. Instead, understanding what was happening on the private equity side (that is, the demand for private credit) is essential.

The 2007-09 financial crisis marked the beginning of an extended period of historically low interest rates across advanced economies. During the crisis, central banks around the world cut policy rates to near zero in an effort to stabilize financial markets and stimulate the economy, a move reinforced by unconventional monetary policies. In this environment, institutional investors with long-term liabilities significantly increased their target allocations to private asset classes, including private debt. This rise in target allocations fueled many years of a fundraising boom for these asset classes.

Ivashina and Lerner (2018) examine pension funds around the world and show that, across countries and fund sizes, there has been a clear shift toward private markets. In developed economies, allocations to private assets rose from 7 percent to 12 percent of assets under management between 2008 and 2017. In emerging markets, allocations increased from less than 1 percent to nearly 7 percent over the same period. Much of this capital flowed into US private equity and debt funds. It was a structural shift in allocation policies and a global phenomenon that cannot be explained by country-level factors.

The economic rationale behind the massive inflow of capital into private space is nuanced and is beyond the scope of this paper. Nevertheless, it is a fact that, between 2013 and Q2:2023, private assets grew at 14 percent compound annual growth rate per year. Over the same period, aggregate private debt assets expanded 25 percent per year, albeit starting from a much smaller base (Bain & Company, 2024).

In sum, after the 2007-09 financial crisis, the low interest-rate environment has been associated with significant capital inflows into the alternatives space, facilitating fundraising for both private equity and private debt. At the same time, banks have been more reluctant than ever to use their balance sheets to lend in the high-yield space. This combination has led to the emergence of large, arm's-length private debt providers to support private equity activity.

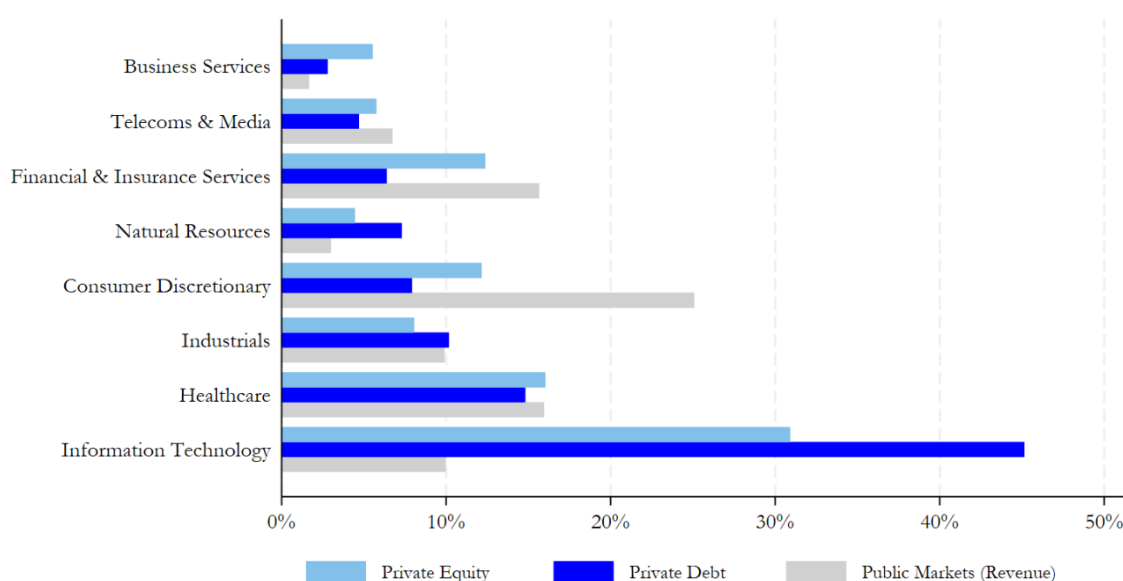
As of the end of 2025, the private debt market remains heavily concentrated in “direct lending,” and is primarily still serving the private equity industry. Pinning down the exact share of private debt that backs buyout activity is not straightforward. PitchBook – a widely used database for tracking investments of business development companies – does flag buyout transactions, but this flag tends to refer only to the initial buyout deal. Any interim refinancing or follow-on lending within that five-year window may not be marked as buyout-related, even though the borrower remains under private equity ownership. As a result, the data may understate the full extent of private equity involvement in the private debt market.

To address this, I used standard assumptions about the typical lifecycle of a private equity deal to be able to attribute loans to companies backed by private equity. My estimates suggest that approximately 60 percent of business development companies' investments—whether measured by volume or by number of loans—support private equity activity. This is likely a conservative figure. A survey by Block, Jang, Kaplan, and Schulze (2024), conducted in 2021, indicates that on average 78 percent of US private credit funds in their sample were backing private equity activity (with a median of 85 percent). Conversations with investment committee members at several of the largest business development companies suggest that the actual share is closer to 85 percent.

The connection between private equity and private debt is also evident in the industry distribution of deals. Figure 3 shows that 45 percent of credit fund transactions by dollar volume were concentrated in information technology, with the bulk directed toward cloud computing, followed by mobile applications and artificial intelligence-related businesses. Information technology was likewise the dominant industry focus for private equity, corresponding to roughly one third of deal volume. In contrast, over the same period, the sample of US publicly traded companies was dominated by the consumer discretionary sector on a revenue basis and by the financial and insurance sector on an asset basis (the latter is reported in the online Appendix available on the JEP website.)

Figure 3

Industry Distribution of US Private Debt and Private Equity Deals, 2020–2024



Note: Compiled using Preqin and Compustat data. Calculated on a dollar volume basis. Energy & Utilities, Real Estate, and Unknown sectors are omitted from the figure, but included in the calculations of total volumes.

Unique Features of Private Debt

As with other high-yield corporate credit markets, private debt primarily involves lending against enterprise value (vs. the value of a fixed asset); this type of lending is referred to as “cash flow credit.” In practical terms, this means lending against forecasted Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) or another measure of enterprise value. To manage credit risk—that is, the risk of not recovering promised payments in full or on time—all cash-flow lenders rely on a system of credit screening and ongoing monitoring.

Leveraged loans and high-yield bonds, however, depend on being widely distributed and are actively traded.³ Given its smaller size, private credit is funded from the balance sheet of the private credit provider and does not have an active secondary market. That is, private debt is primarily originated to hold. This, in turn, underpins how private lenders manage credit risk and some other distinctive features of this type of credit.

Different Approach to Information Collection

Similar to private equity, private debt involves proactive sourcing (vs. a borrower reaching out to the lender). For example, in private equity, one often hears that the average time from first contact to deal closure is about four years, during which the investment firm actively follows the target company and engages with its management. This relationship management is an intrinsic part of deal origination and due diligence in private equity. A very similar multi-year dynamic takes place in the modern private debt space although the relationship focus is on the private equity managers (which manages funds from which buyout investments are made), and due diligence is conducted not only on the underlying deal, but also on the private equity sponsor, their fund, and the broader private equity industry.⁴

³A common misconception is that any non-bank financial intermediary (NBFI) holding corporate loans qualifies as private debt. In practice, large-cap collateralized loan obligations and leveraged loans more broadly are not considered part of the private debt market.

⁴ Private debt lenders also invest in developing in-house industry expertise, though it is unlikely to be superior to that of large banks and therefore is not a substantial differentiator.

This costly screening and monitoring function does not appear necessary in the context of bank middle-market lending to buyouts, where banks typically hold only a small, very safe exposure (Figure 2.a). Leveraged loans, on the other hand, are risky, but they are originated by banks and funded primarily by a broad syndicate of non-bank institutional investors, with collateralized loan obligations (CLOs), a type of securitization vehicle, serving as the dominant source of capital.⁵ (Within the high-yield space, leveraged loans are often referred to as “bank debt,” though the term more accurately reflects “bank-originated debt.”) Since they are funded primarily by non-banks, leveraged loan funding is highly dependent on market conditions, much like bond underwriting.

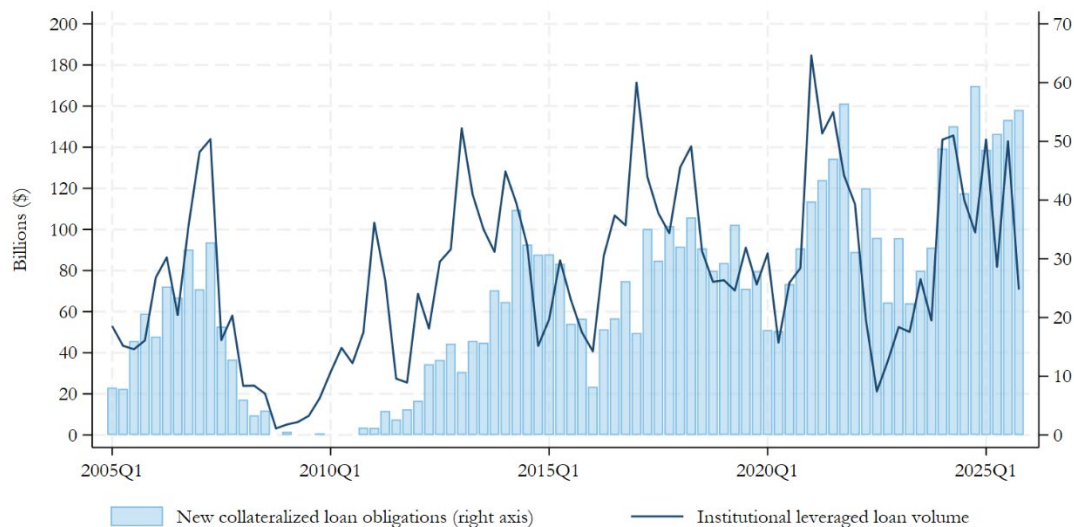
Figure 4 illustrates this point. The bars represent new collateralized loan obligations issuance. The line shows the volume of newly issued leveraged loans funded by institutional money. Figure 4 conveys that new collateralized loan obligations issuance is highly sensitive to market conditions—it came to a complete halt in 2007-09, dropped sharply during the COVID-19 pandemic, and declined again amid rising inflation and heightened recession risk that followed. Figure 4 also shows significant fluctuations in loan issuance volume that closely mirror movements in collateralized loan obligations issuance. This stands in contrast to private creditors, whose on-balance-sheet funding and on-demand access to committed but uncalled capital (for credit funds) allows for a fundamentally different approach to operations.

In sum, bank bilateral originate-to-hold lending in the middle market is not as risky and therefore does not require the costly proprietary information processing developed by private creditors. At the same time, bank originate-to-distribute leveraged loans are risky but allow for risk diversification through distribution and, in addition, are unlikely to justify investment in actively managed, long-term relationships when funding conditions are ultimately externally determined.

⁵ Securitization is the process of funding a *diversified* pool of *risky* claims through the issuance of *safe debt* and equity. Traditionally, such debt has been raised by issuing public bonds (for example, in mortgage securitization), though it can take other forms. Collateralized loan obligation (CLOs) are a specific example of securitization, in which a pool of leveraged loans is financed by issuing safe debt and equity.

Figure 4

Leveraged Loan Market: Collateralized Loan Obligations Issuance and Total Institutional Volume



Note: The figure shows new collateralized loan obligations issuance and contemporaneous total institutional leveraged loan volume which corresponds to funding of newly issued loans. The figure is compiled using PitchBook LCD data.

Beyond operationalizing high-yield lending to middle market firms, private debt has also ventured into areas that are largely new to debt, including recurring revenue lending (common in the technology industry) and client acquisition financing (common among start-ups)—segments that were historically funded primarily by equity. This is reflected in Figure 3, where many of the technology companies receiving private debt financing are fast-growing but not yet profitable SaaS (software as a service) businesses.

While private debt has certainly developed expertise in this area, its dominance likely stems less from superior information processing and more from the fact that—unlike banks—it is not constrained to lending only to EBITDA-positive businesses (Chernenko, Erel, and Prilmeier, 2022). This flexibility allows private debt lenders to underwrite and contract on other measures of enterprise value, such as recurring revenue. By contrast, the bank-originated leveraged loan market remains EBITDA-based, with a typical loan size in the range of 4.5x to 5x EBITDA—a structure that is not a feasible funding option for many highly valuable but not yet profitable software companies.

Private Debt Loans vs. Bank-Originated Loans

The way private creditors collect information and originate credit helps explain how private debt is doing something that has not previously been done on a significant scale: providing arm's-length high-yield debt to middle market firms. This is what makes it a unique segment of the broader high-yield corporate debt space. On the margin, however, there is some overlap between borrowers who can tap either the private debt market or the leveraged loan market.⁶ Thus, larger or fast-growing mid-cap firms with stable and positive EBITDA often consider two alternative debt financing structures: one backed by a private debt provider and the other funded through the leveraged loan market.⁷ In this sub-section, I outline the core features that tend to be weighed when such a direct comparison is applicable.

First, private debt is illiquid, on-balance-sheet lending in which the borrower typically interacts with a *single and stable counterparty*. Paired with the deep pools of “dry powder” capital available to credit funds, this can make private debt a preferred source of financing. At closing, it offers borrowers speed, certainty of terms, and confidentiality, all of which can be valuable in the highly competitive private equity context. The same factors and dynamics apply when a loan needs to be refinanced or restructured (Bolton and Scharfstein, 1996).

In contrast, leveraged loans and public bonds are widely distributed among investors and actively traded in the secondary market. Placing either instrument requires obtaining credit ratings and conducting a roadshow to market the deal to potential investors—a process that can take up to two months, even in favorable market conditions. During this time, the borrower remains exposed to both deal risk and market risk, as conditions may shift adversely before the transaction is completed.

Note that on-balance-sheet lending by a single or limited group of creditors is typically associated with stricter contractual terms. However, this is an endogenous outcome, as renegotiation in this setting is easier.

⁶ The median borrower in the two markets continues to be very different: according to PitchBook, between 2020 and 2024, the median buyout loan funded by private creditors was about \$260 million, compared with \$1.2 billion for the median buyout loan in the leveraged loan market.

⁷ See Ivashina and Mylavarapu (2025) for a representative real-life illustration of buyout financing decisions with multiple debt package options, including representative term sheets.

Second, where other options are available, private debt has generally been somewhat *more expensive*. PitchBook indicates that, between 2018 and 2024, average interest rates on leveraged loans were consistently lower than those on private credit loans of comparable seniority and collateralization, with the difference in the range of 1.4 percent to 2.2 percent. Although, this statistic likely overstates the gap, as it is conditional on the type of debt issued and therefore does not account for selection, nor for the fact that the leveraged loan market can be subject to significant fluctuations. It also does not adjust for leverage, and private creditors tend to tolerate slightly higher levels of debt than bank-originated leveraged loans. This gap has narrowed over time, likely due to rising competition and ongoing consolidation within the private debt market, which has reduced operating costs.

It is common to hear the argument that bank credit is cheaper than private debt because of banks' funding costs: bank deposits are protected by deposit insurance and, at least for the largest banks, there may be benefits from an implicit bailout guarantee. This is a misleading argument, as banks' on-balance-sheet lending is not directly comparable to private debt (Figure 2). The relevant comparison is the leveraged loan market (bank-originated debt), which, as discussed above, is heavily dependent on market conditions and this is what dictates the cost of the leveraged loans.

The differences in funding costs between direct lending and "bank lending" in the large-cap high-yield space stem primarily from diversification and liquidity, rather than banks' cost of funding. In the case of a direct lender, a \$200 million loan would enter the balance sheet of private creditors. In the case of a leveraged loan, the loan is distributed among a range of institutional investors, with each individual creditor holding only about a \$2-\$5 million position. Moreover, liquidity in the leveraged loan market is comparable to that of the bond market. In contrast, secondary sales by private creditors are rare.

Third, structurally, while private debt – like leveraged loans – tends to be senior secured, *it can also take the form of equity* or, more commonly, a custom hybrid of debt and equity. According to PitchBook data, as of the end of 2024, 86 percent of aggregate business development company holdings consisted of senior secured debt, with an additional 3 percent in second-lien debt. Subordinated debt accounted for about 3 percent, while equity represented around 8 percent. Importantly, in situations that call for flexibility, such as borrowers emerging from or currently in financial distress, equity features become far more prominent, often through warrants or debt-to-equity conversion. This structural flexibility, combined with a single-counterparty relationship, provides restructuring optionality that is typically unavailable in the bank-originated market due to institutional constraints and the lack of coordination among a dispersed creditor base.

Relatedly, using PitchBook data, I estimate that in 2024, 17.5 percent of loans held by business development companies included payment-in-kind provisions on a value-weighted basis, and 11.4 percent on an equal-weighted basis.⁸ Typically, a borrower is required to make quarterly cash interest payments. The pay-in-kind feature allows the borrower to defer these payments by adding the interest to the loan's principal.

Fourth, there is one important area where banks continue to play a pivotal role: the issuance of *revolving credit*. Broadly speaking, there are two main types of commercial loans – term loans and revolving lines of credit. Term loans are drawn at origination and are terminated once they are repaid, much like a mortgage or a student loan. Revolving lines of credit, by contrast, can be drawn up to an authorized amount and repaid multiple times until maturity, similar to a credit card. Most companies maintain a revolving line of credit, which they use to manage working capital or finance small acquisitions and investments.

While a revolving line remains unused, the borrower pays only a small, fixed fee to keep it open. From the creditor's perspective, this represents a challenge, since most individual lines remain undrawn for long periods, generating little compensation while remaining callable at any time. Making the economics of revolving lines viable therefore requires both scale, and the diversification that comes with it, as well as sophisticated liquidity management. Banks – especially deposit-taking banks – have a clear advantage in issuing revolving lines, a central insight of Kashyap, Rajan, and Stein (2002).

Given that revolving credit lines are a necessity, how is this addressed in the private debt space? In some cases, borrowers obtain revolving lines directly from banks, in which case private debt is subordinated to the balance on the revolving line. More frequently, private lenders themselves obtain a revolving line from banks, which is then used to fund the revolving lines they issue on the asset side. However, revolvers continue to be a “loss leader” for most private creditors, and their volume remains modest.

Funding Structures of Private Debt Vehicles

To discuss the financial stability implications of the growth of private debt, it is essential to first understand its funding structure. The market for private debt vehicles is currently

⁸ These estimates are likely a lower bound, as for at least some business development companies, the presence of payment-in-kind provisions can only be observed in Securities and Exchange Commission filings or in PitchBook data when they are actually used. I classify a loan as having a payment-in-kind feature if it was utilized at any point prior to the end of 2024.

divided between two core funding structures. One consists of traditional closed-end funds that primarily serve institutional investors. The other includes structures designed for retail investors, with business development companies being the dominant form in the US. As of 2025, roughly two-thirds of total private debt capital was managed by credit funds, with the remaining one-third in business development companies.

Credit Funds

Credit funds are normally structured in a way similar to private equity funds; that is, they are closed-end limited partnerships. These funds generally have a finite lifespan, with managers expected to return capital within ten years of the fund's launch. Funding is provided primarily by institutional investors with long-term liabilities – pension funds, insurance companies, and, to a lesser extent, endowments, sovereign wealth funds, and family offices. Capital is committed upfront and locked in for a specified time horizon, but is drawn down by the fund manager only as investment opportunities arise. To maintain business continuity, new funds are raised on an overlapping basis.

Due to the locked-up nature of their capital commitments, private debt funds tend to maintain substantial funding capacity even during economic downturns.⁹ For example, in 2024, private debt “dry powder” – that is, committed but not deployed *equity* capital – exceeded half a trillion dollars.

Credit funds can employ leverage, most commonly through bank credit lines secured against existing assets. A survey by Block, Jang, Kaplan, and Schulze (2024) indicates that almost all US funds in their sample use some leverage, with the average fund reporting a 1:2 debt-to-equity ratio (median of 1:3). The same study finds that 60 percent of European credit funds do not use leverage at all.

From a financial stability perspective, the central point is that the bulk of private credit equity capital and, importantly, uncalled capital commitments is locked in over long horizons. As a result, like private equity funds, existing credit fund structures are relatively insensitive to market fluctuations.

Business Development Companies

Business development companies (BDCs) are legal structures under US law. They are a form of “retail vehicles,” meaning that they allow a wide range of households to gain

⁹ Defaulting on capital commitments is highly punitive for investors in private equity and private debt funds. As a result, investors are far more likely to sell their commitments on the secondary market at a discount than to default outright.

exposure to the private debt asset class. According to *Raymond James BDC Weekly Insight*, average institutional ownership of business development companies was only 22.2 percent as of the end of April 2026.

Unlike credit funds, business development companies do not have unused equity capital reserves and must provide some form of liquidity to their equity investors. Accordingly, business development companies are either publicly traded or offer periodic (typically quarterly) liquidity to investors. Private business development companies are generally “gated” by default, limiting redemptions to about 5 percent of net asset value, although these limits can be—and in some cases have been—lifted.

Business development companies are subject to regulatory minimum capital requirements set by the Securities and Exchange Commission. Historically, this meant maintaining a 1:1 debt-to-equity ratio, regardless of the risk profile of their loan portfolios. In 2018, this requirement was relaxed to a 2:1 ratio, allowing greater leverage. That said, the median business development company still operates at about a 1:1 ratio—higher than that of credit funds but significantly lower than that of banks.

Chernenko, Ialenti, and Scharfstein (2025) provide a comprehensive analysis of business development companies using a bank regulatory framework, concluding that if these firms were regulated as banks, their capitalization would be equivalent to approximately 36 percent of risk-weighted assets. The same paper shows that about 20 percent of their funding is drawn from bank lines of credit, and 30 percent is funded through bonds.

I will expand on issues of financial stability risk in more detail in the next section, but the liability structure outlined above already points to three key elements to consider.

First, the reliance of business development companies on market-based sources of capital may limit their ability to lend during market downturns, as access to funding tightens.

Second, business development companies have non-trivial links to the banking sector, with roughly 20 percent of their funding coming from bank-provided revolving credit lines. These connections create potential channels of contagion between business development companies and traditional banks. However, these revolving credit lines also act as a form of liquidity hedge for business development companies, offering some protection against deteriorating market conditions (Acharya, Cetorelli, and Tuckman forthcoming).

Third, business development companies are subject to redemption pressures, and even if liquidity gates are upheld, prolonged pressure could be an important constraint on new loan origination over the medium and long run.

Implications for Financial Stability

In what follows, I explore key themes and concerns that have emerged around the potential systemic risks associated with the growth of private debt.

Evaluating Potential Structural Vulnerabilities of Private Creditors

Much like banks, private lenders rely on proprietary screening and monitoring technology. As a result, it is time-consuming and costly for the borrower to switch lenders (Rajan, 1992) or, relatedly, for the lenders to sell their portfolio without incurring a substantial discount. In that sense, there is lender-dependence for many borrowers in the middle market, while larger firms tend to be an exception. If a lender becomes constrained, it is a shock that could spillover to the borrowers, and the broader economy.

Neither business development companies nor credit funds are runnable, as they generally fund themselves with equity and long-term debt. However, their use of leverage and reliance on market funding are two potential constraints that warrant careful attention when evaluating the structural vulnerabilities of private creditors.

The vast literature on banking shocks and their spillovers points to the *use of leverage* as a central mechanism in the propagation of financial stress. Private debt lenders operate with significantly more conservative leverage limits and capitalization standards than banks—for example, business development companies are typically subject to a 2:1 debt-to-equity limit, compared to approximately 10:1 for banks. As a result, even relatively small shocks to a bank's asset value can cause capital constraints to become binding, prompting banks to contract lending to meet regulatory requirements. In contrast, due to their lower leverage, business development companies are far less sensitive to such shocks.

Still, loans on the balance sheets of private credit providers are also much riskier than those held by banks, and, therefore, warrant higher capital levels. Using the bank regulatory framework to assess capitalization of business development companies, Chernenko, Ialenti, and Scharfstein (2025) find that as of 2023, the median risk-based capital ratio for business development companies was approximately 36 percent, compared to 10 percent for banks. They also find business development companies to be resilient to bank stress testing frameworks. So, based on existing standards, the current capitalization of private credit lenders exceeds regulatory benchmarks by a significant margin.

An additional point to highlight is that, traditionally, banks have been reluctant to raise equity to recapitalize following negative shocks to their assets. A plausible reason could

be that incumbent equity holders do not wish to dilute their holdings, and would instead prefer to make higher-risk loans in a gamble for resurrection—or hope for a government bailout. However, alternative-asset conglomerates are rich in unused capital. Capital commitments in private equity, private debt, and other types of alternative funds are typically raised—and tend to significantly expand—during benign economic cycles. As a result, an adverse macroeconomic shock often finds alternative funds with substantial “dry powder” capital ready to deploy. Thus, alternative conglomerates have the ability to inject new capital if necessary, rather than enter into portfolio unwinding mode as banks typically do.

Another potential concern for private debt is its *reliance on market funding*. Specifically, business development companies depend on demand for bonds backed by a pool of risky loans. This is similar to pressures faced by the collateralized loan obligations—the key type of institutional investors in the leveraged loan market—which, as shown in Figure 4, can fluctuate substantially in response to market conditions. From a financial stability perspective, credit fund structures are less sensitive to market fluctuations. Indeed, all major private debt managers employ a range of alternative funding structures, which—at least anecdotally—they view as complementary tools to diversify funding sources.

Exposures of Banks to Private Creditors

Roughly 20 percent of funding of business development companies comes from bank-provided revolving credit lines. Several studies—including Berrospide, Cai, Lewis-Hayre, and Zikes (2025); Fillat, Landoni, Levin, and Wang (2025); and Haque, Jang, and Wang (2025)—have examined this connection. The question is whether this indirect exposure of the banking sector could serve as a channel through which potential problems in private creditor portfolios might spill over into the banking system.

To understand banks’ potential exposure, we must consider how risk can build up within a private credit portfolio. Two subtle mechanisms—both with precedents in the history of high-yield debt markets—deserve close attention: (1) a deterioration in credit standards and (2) the use of contingent credit.

In the first setting, competitive pressures or the drive for rapid growth could push private creditors to loosen underwriting standards to such an extent that, if losses materialize, they are absorbed by senior creditors rather than by the equity tranche. Such an outcome would be unexpected. These loan agreements are expected to define and protect collateral, ensure creditors’ seniority in the capital structure, and put in place a system of reliable early warnings, through financial covenants. But the recent history of leveraged loan markets provides an example of how these mechanisms can fail.

In 2009, approximately 30 percent of leveraged loans included quarterly compliance requirements for leverage and interest coverage limits. By 2015, over 90 percent of these loans had eliminated the limits for interest coverage, and the leverage test shifted from periodic to conditional verification. At the same time, leverage limits were weakened in various ways: they started to accommodate higher indebtedness, changes to the definitions of financial variables used for covenant testing, and the introduction of broad exemptions (Ivashina and Vallée, 2025). When leveraged creditors faced the COVID-19 shock and its aftermath, which led to a wave of restructurings, senior creditors absorbed significant risk. In 2024, the default rate in the leveraged loan market stood at 1.45 percent – well below its historical average – but an additional 3.25 percentage points of companies underwent distress-driven restructurings (as reported by Kakouris, 2025).

It is somewhat early to say whether similar dynamics could emerge in the private credit market. Competitive pressure is certainly present in the private debt industry, and fundraising booms create pressure to deploy capital, a dynamic that warrants particular attention as fundraising from retail investors continues to expand. On the positive side, the private credit market remains largely bilateral, illiquid, and held on lenders' balance sheets – unlike the broadly syndicated loan market, which functions more like an auction involving a wide range of smaller, dispersed creditors. Regardless, contractual data is very scarce.

Separately from covenant protection, private debt is expected to provide flexibility, and one such flexible feature is called payment-in-kind. When a payment-in-kind provision is exercised, the interest rate on a private credit loan usually increases by about 2 percentage points. For example, suppose that in the first quarter of 2025 a borrower owes \$2 million in quarterly interest on an 8 percent loan with \$100 million in principal. If the borrower elects to use payment-in-kind, there is no cash outlay, but the interest rate increases to 10 percent, and the principal rises to \$102.5 million. If the borrower continues to use pay-in-kind throughout 2025, the principal would grow to \$110.4 million by year-end. Borrowers are more likely to utilize payment-in-kind when they are struggling to meet cash obligations, thereby shifting the risk to the lender. Normally, leverage and interest coverage covenants would help to constrain use of payment-in-kind: conversely, the erosion of covenants protection would enable more aggressive use of payment-in-kind.

Again, some history suggests the concerns that can arise with payment-in-kind contracts. Kaplan and Stein (1993) examined the wave of leveraged buyouts during the 1980s. At that time, high-yield bonds were the primary form of risky debt financing, with approximately 60 percent of bonds backing buyouts including a payment-in-kind feature

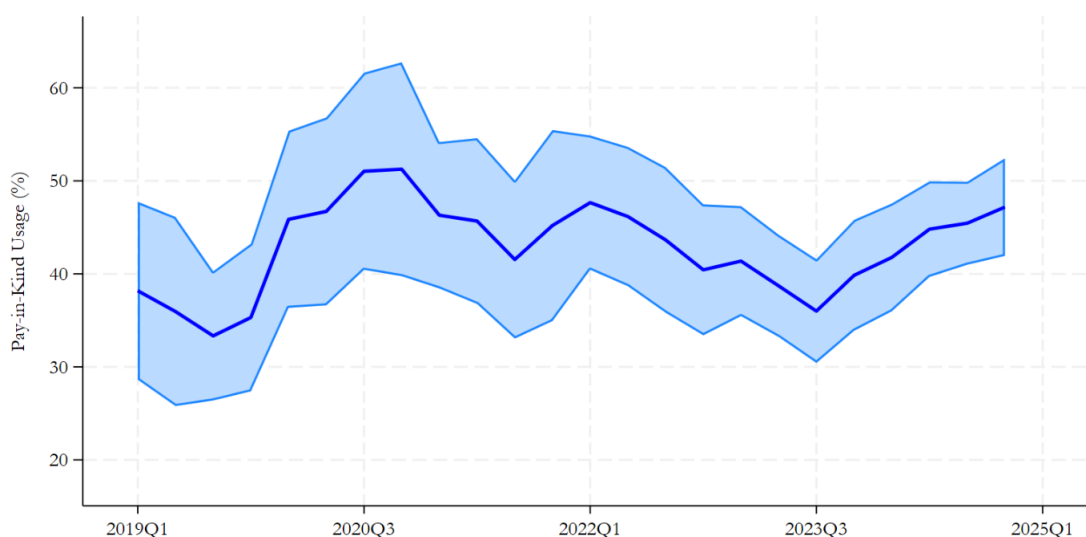
at the end of the decade. Lacking meaningful covenant protection, high-yield bonds became exposed to “gambling for resurrection,” as buyout sponsors took increasingly risky bets when valuations came down in the late 1980s.

Measuring the use of payment-in-kind is not straightforward, even for business development companies, where detailed portfolio data are available. One challenge is that firms with these provisions can choose to pay some or all of the interest in cash. To simplify, I use a proxy: total payment-in-kind interest reported by business development companies in their quarterly statements, scaled by the maximum potential payment-in-kind interest. If all firms with payment-in-kind provisions chose to use them in full, this ratio would be equal to one.

Using this measure, Figure 5 shows that the principal-weighted exercised share of loans with pay-in-kind provisions increased from 36 percent in 2019 to 48 percent during the pandemic. This illustrates how pay-in-kind structures can serve as a channel through which macroeconomic shocks are transmitted to the balance sheets of private creditors.

Figure 5

Prevalence of Pay-in-Kind Usage Among Eligible Borrowers



Note: The figure provides an estimate of payment-in-kind usage, defined as the ratio of reported in-kind interest to its estimated maximum level. The bold line represents the average across business development companies in the PitchBook data, and the shaded bands indicate 95 percent confidence intervals.

Pay-in-kind usage has recently risen again, returning to pandemic-era levels in the second half of 2024. This may signal a deterioration in the credit quality of the underlying portfolio.¹⁰ Yet, the magnitudes remained modest through 2025.

Overall, because banks typically provide senior secured debt to well-capitalized structures, even if private creditors were to incur significant losses, it remains unlikely that bank lenders would face impairment. That said, the contingent nature of bank exposure is important: as private debt borrowers begin to exercise payment-in-kind provisions, private creditors may become more likely to draw on their revolving bank credit lines. As of the end of 2025, approximately half of these facilities were utilized, implying that banks' exposure could potentially double just as the credit quality of the underlying portfolios begins to deteriorate. However, this view overlooks important mitigating factors, particularly bank debt maturities and covenant protections; at least historically, banks have imposed tight covenant structures to constrain such lending. If so, there may still be meaningful risks for private creditors, as covenants can become binding early and, in the absence of refinancing options, create significant liquidity pressures for private debt funds. In sum, utilization of revolving credit facilities and their terms warrants careful monitoring.

Is There Hidden Leverage?

Another concern raised in policy discussions is whether the expansion of private debt is leading to a worrisome buildup of complexity alongside leverage. Private equity firms have employed leverage to fund buyouts for decades. Today, leverage extends beyond the underlying investment level and is increasingly prevalent at both the fund level (across private equity and private debt) and the fund manager level. This raises concerns that leverage may be additive in periods of stress.

The closest historical parallel is the 2007–2009 global financial crisis, when banks' off-balance-sheet leverage became a major source of stress. In the years leading up to the crisis, large banks commonly moved mortgage-backed securities into off-balance-sheet vehicles funded with short-term debt. In crisis, these assets were forced back onto banks' balance sheets, leading to a sudden recognition of previously embedded leverage.

¹⁰ In additional estimates using a sample of 114 business development companies, I find that income arising from payment-in-kind peaked at 10.1 percent of total investment income in 2020:Q4 during the pandemic, declined to 6.3 percent at the beginning of 2023, and then rose again to 9.2 percent by the end of 2024. Data and an illustrative figure are provided in the online Appendix available on the JEP website.

The rise in the use of leverage throughout the alternative asset management industry warrants close monitoring, but the fact that leverage is employed at both the fund and manager levels is less concerning than it may initially appear. Figure 6 offers a simplified representation of the structure of a typical private equity or private credit fund. The objective is to make investments—debt investments in the case of private debt and equity investments in the case of private equity. This is carried out through a fund owned by investors, also known as “limited partners.” The fund is managed by an intermediary, the alternative asset manager, which charges fixed, upfront management fees; these fees are essentially risk-free once the fund is closed.

The numbers below the figure represent the three main points of leverage. Node 1 is the traditional leverage taken on by a portfolio company in a leveraged buyout, issued against expected cash flows of the underlying company (for example, Burger King) and secured by collateral.

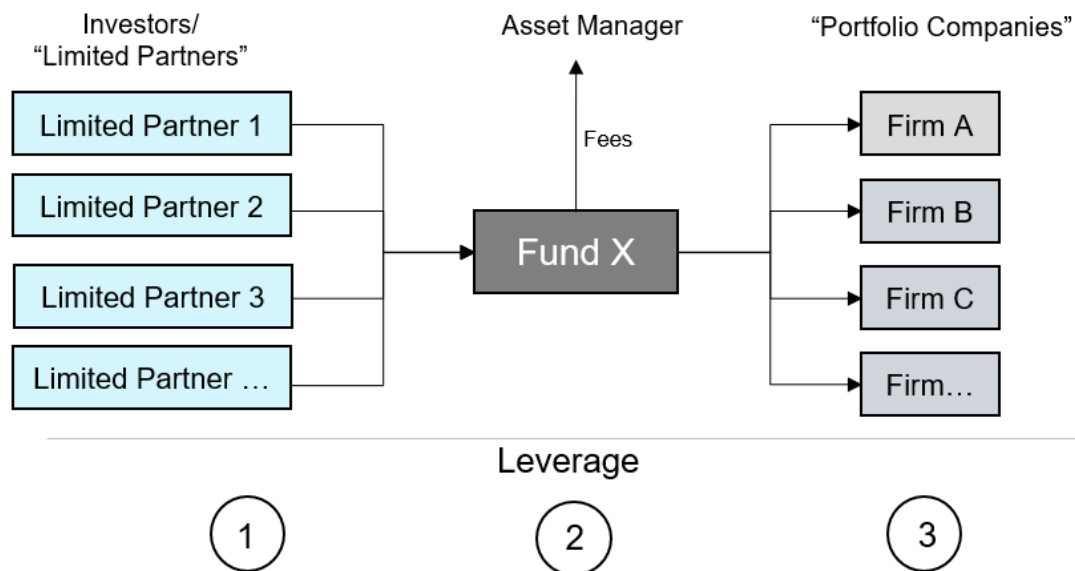
Fees to the private equity firm represent a separate and largely independent stream of cash flows from the fund’s investment returns. Therefore, both the underlying buyout and the firm managing the fund can have their own capital structures—in other words, both can be levered. The most established firms—those managing multiple funds across a range of strategies—are generally better positioned to leverage their franchise value as they have a more stable stream of fees (node 2).

This brings us to leverage at the fund level (node 3). This form of leverage is effectively borne by limited partners and is typically backed either by their uncalled capital commitments or by the invested portfolio. Earlier, I discussed the level of leverage used in private debt fund structures and concluded that, at this stage, it appears relatively conservative. Whether it is appropriate for, say, a pension fund (a representative limited partner) to apply leverage to its portfolio of investments is an important question, but one that lies beyond the scope of this paper.

Finally, today’s private debt market is dominated by very large players—such as the “big four” of Blackstone, Apollo, KKR, and Carlyle. Most are alternative asset conglomerates operating across a wide range of investment strategies beyond private debt. Private debt funds represent just one segment of the many investment vehicles they manage, and even individual funds are only one of several structures within broader credit platforms. While this adds further complexity to the analysis, it is also relevant when considering incentives—including reputational capital—as well as institutional resources, sophistication, and access to capital.

Figure 6

Representative Private Equity Fund Structure



Complementarity High-Yield Corporate Sectors

One final thought about potential macroeconomic spillovers from private debt funds is that the interplay between three distinct but complementary high-yield corporate markets—high-yield bonds, leveraged loans, and private debt—introduces a stabilizing element. For example, during the 2009–2010 period—when issuance of collateralized loan obligations remained shut down (shown in Figure 4)—PitchBook LCD data shows that \$179 billion in loans were refinanced through high-yield bond issuance.

However, bonds are essentially inaccessible for smaller companies; moreover, as interest rates started to rise after the pandemic, companies looked for flexibility if debt restructuring might become necessary. In this context, private debt became a more attractive option. Table 1 summarizes the total volume of loans refinanced in the leveraged loan market using private debt, and vice versa. The difference between total institutional capital and issuance collateralized loan obligations reflects inflows into loan mutual funds. For example, in 2023, the market for collateralized loan obligations was depressed and loan mutual funds experienced outflows. In this context, \$22.4 billion in loans were refinanced by taking on new loans from private credit providers to repay

existing leveraged loans. By 2024, the situation began to shift as the leveraged loan market recovered, with the balance slightly reversing back toward the leveraged loans market in the first half of the year.

Table 1

Cross-Market Refinancing Flows: Leveraged Loans and Private Credit

(\$ billion)	2022	2023	2024	2025:H1
Leveraged loans refinancing private credit loans	2.19	1.99	28.86	16.11
Private credit loans refinancing leveraged loans	10.99	22.37	30.83	12.83
Net refinancing into private credit	8.80	20.38	1.97	-3.28
New issuance of collateralized loan obligations	129.32	115.81	201.94	99.83
Total institutional loan issuance	225.30	234.18	502.17	225.44

Note: Compiled using PitchBook data.

While switching lenders likely remains prohibitively costly for smaller companies, the coexistence of multiple sources of high-yield capital offers larger borrowers valuable funding diversification, which can be beneficial not only for the companies themselves but ultimately for the broader economy.

To conclude, my overall assessment is that, as of the first quarter of 2026, the systemic risk posed by the expansion of private debt remains moderate. However, private debt continues to grow and evolve. We may be approaching a critical juncture, as the anticipated entry of 401(k) plans into private assets could bring a substantial amount of new capital in search of investment opportunities. At the same time, the easing of supervisory and regulatory requirements for banks could lead to further increases in leverage. Continuous engagement among policymakers, industry participants, and academics will be essential to understanding the potential macroeconomic implications.

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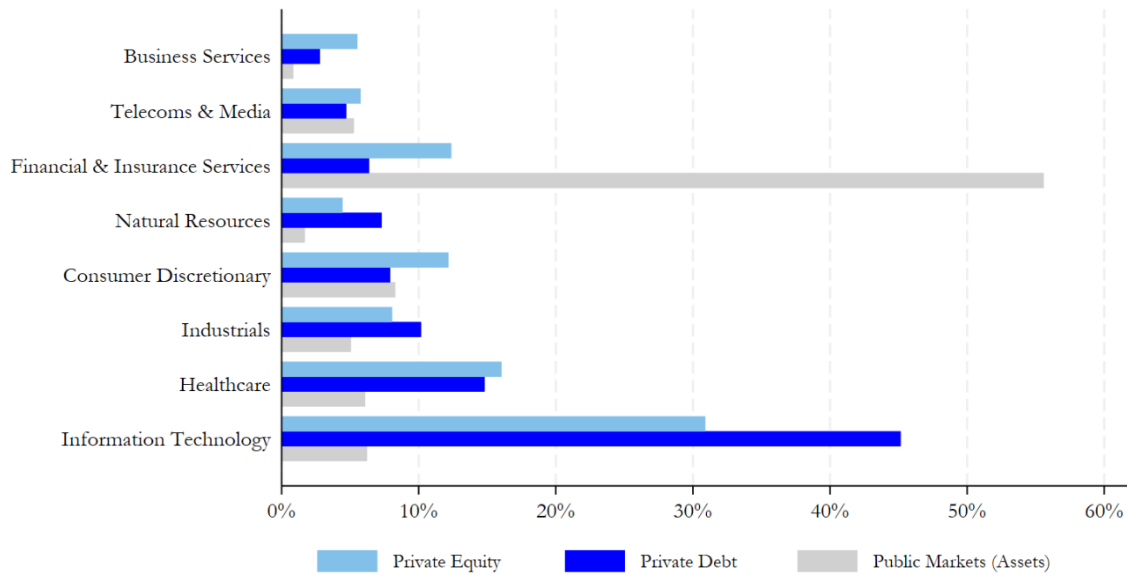
Online Appendix

The Role of Private Debt in the Financial Ecosystem

Victoria Ivashina

Figure A.1

Industry Distribution of US Private Debt and Private Equity Deals, 2020–2024



Note: Compiled using Preqin and Compustat data. Calculated on a dollar volume basis. Energy & Utilities, Real Estate, and Unknown sectors are omitted from the figure, but included in the calculations of total volumes.

Figure A.2

Pay-in-Kind Income for Business Development Companies



Note: The sample includes 114 business development companies as of Q2:2025. Data are drawn directly from SEC quarterly and annual filings, using periods where disaggregated reporting of investment income is available. Because such reporting is not always consistent—and because some business development companies entered the sample later—the panel is unbalanced. Reported averages correspond to equal-weighted means across business development companies and brackets denote 95 percent confidence intervals.