

Background Analysis 1.3.

Private Credit: Leverage and Contingent Liquidity in Direct Lending

Overview

- **The financial stability relevance of the direct lending ecosystem is growing.** While the sector remains moderate in size, its extensive cross-border interconnections among banks and nonbank financial institutions, combined with growing reliance on contingent funding arrangements, have created transmission channels that have not been tested in a severe global downturn.
- **A sizeable share of direct lending borrowers is unable to cover debt service and other mandatory cash obligations, while leverage is rising.** These borrowers' continued reliance on sponsor support, lender forbearance, and depleting internal cash buffers leaves the direct lending ecosystem vulnerable to severe shocks that could simultaneously increase liquidity demands and weaken the capacity of private capital providers to meet them.
- **Direct lending funds provide not only long-term credit but also substantial contingent liquidity commitments.** During periods of stress, borrower drawdowns could accelerate just as funds' own asset-based borrowing capacity diminishes, creating liquidity mismatches that may undermine the patient-capital model and amplify procyclicality.
- **Increased surveillance of these interconnected aspects of private credit is necessary.** Closing data gaps and strengthening disclosures are essential to improve surveillance, stress testing, and early detection of potential systemic risks.

Introduction

This analysis examines two key developments in the direct lending (DL) ecosystem. First, it assesses the current credit risk profile of DL borrowers, focusing on their ability to meet cash obligations through internally generated cash flows. Second, it examines liquidity risks in direct lending funds, in particular, how potential disruptions in asset-based lending facilities provided to DL funds may create or amplify liquidity mismatches during stress.

Direct lending—private leveraged finance for middle-market and smaller large-cap companies—embodies two opposing financial stability forces. High borrower leverage¹ makes credit losses inherently procyclical during downturns, while the patient-capital structure of DL funds and flexible financing tools can help support both funds and borrowers through stress. Most DL borrowers are private equity (PE) owned, with PE sponsors playing an important role in supporting portfolio companies during periods of stress.

Having outgrown its origins as a niche financing channel, DL remains moderate in size, with outstanding DL loans globally reaching nearly \$2 trillion.² That said, the importance of DL stems from its deep cross-border interconnectedness with banks, life insurers, and other institutional investors. The key policy challenge is therefore to assess and quantify its impact on the resilience of the broader financial system.

Recent developments point to a buildup of vulnerabilities. First, leverage is increasing across the private asset industry, both at the investment fund level and among borrowers or portfolio companies. Despite solid growth in earnings before interest, taxes, depreciation, and amortization (EBITDA), prolonged uncertainty in recent years has sharply reduced the sales of PE portfolio companies and, consequently, capital distributions to investors (Figure 1.3.1, panel 1). With fewer exits generating liquidity, PE funds have increasingly turned to alternative

¹ Borrower leverage is higher than in any other credit risk instruments such as high-yield bonds and traded leveraged loans.

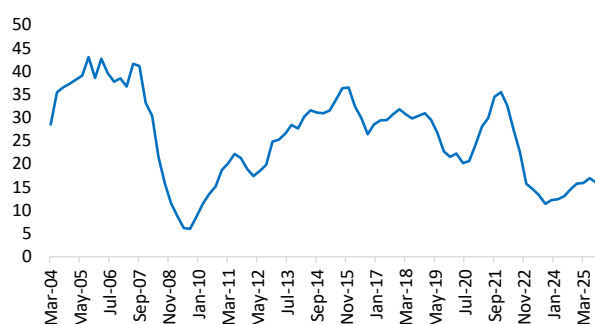
² The deployed loans estimate excludes uninvested dry powder and incorporates leverage at the direct lending vehicle level.

sources of liquidity, most notably by adding leverage through net asset value (NAV) loans³ at the fund level and through dividend recapitalizations⁴ at portfolio companies. Exhausting NAV borrowing capacity during benign periods—or reduced capacity following collateral value deterioration—limits PE funds' ability to support portfolio companies during a shock, while higher portfolio-company leverage increases their need for that support. Second, semiliquid vehicles have become a major source of capital formation in the US DL ecosystem (Figure 1.3.1, panel 2). As their importance has grown, investor inflows and outflows have become an increasingly important driver of credit availability in DL markets. Together, these developments have increased contingent liquidity risks, raising the potential for procyclical behavior during periods of stress and challenging the notion that private asset markets provide patient, countercyclical—or at least acyclical—capital.

Figure 1.3.1. Recent Developments in the Private Asset Ecosystem

Weak exit activity has materially reduced distributions to private equity limited partner investors.

1. Trailing 12-Month Distribution Rate from Private Equity Funds
(Percent)

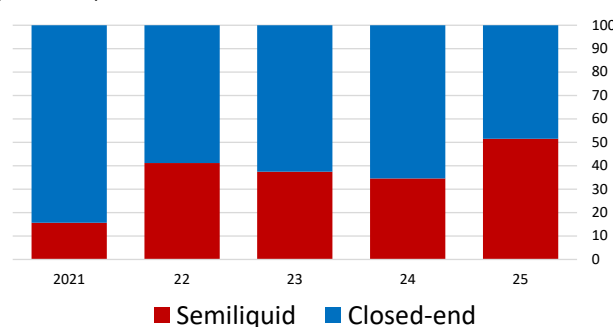


Sources: PitchBook.

Note: Distribution rate is cash distributions to investors as a share of fund net asset value.

Semiliquid vehicles have become a major source of capital formation in the US direct lending ecosystem.

2. Annual Gross Fundraising for US Funds with Direct Lending Mandates, by Semiliquid and Institutional Closed-End Vehicles
(Percent)



Sources: PitchBook; and IMF staff calculations.

Note: Semiliquid vehicles are funds that provide periodic redemptions, often subject to limits. For semiliquid vehicles, annual gross fundraising is gross subscriptions.

Credit Risk Profile of Direct Lending Borrowers

Persistent Vulnerabilities behind Improving Aggregate Metrics

A key structural vulnerability in the DL market is the sizeable share of financially weak borrowers. Declining policy rates and nominal EBITDA growth over the past two years have improved aggregate debt-service capacity and reduced the share of DL borrowers with interest coverage ratios lower than 1 (Figure 1.3.2, panel 1). However, a substantial share of borrowers remains unable to generate sufficient cash flow to service debt and other mandatory cash obligations. Approximately 20 percent have a fixed charge coverage ratio⁵ below 1, and an even higher percentage generate negative free operating cash flow. These borrowers remain dependent on previously accumulated liquidity reserves as well as on continued external support—including sponsor equity, lender concessions, amendments and extensions, and payment in kind—to sustain operations.

Fragilities are worsening from persistently rising leverage. The increased use of dividend recapitalizations to finance distributions to investors has contributed to higher DL borrower leverage, as measured by sequentially

³ NAV loans are fund-level loans to PE funds secured by the net asset value of a PE fund's portfolio. Although NAV facilities are provided by both banks and nonbank lenders, banks have rapidly expanded their presence in this market in recent years.

⁴ Dividend recapitalizations are transactions in which a portfolio company raises additional debt and distributes the proceeds to its shareholders as a special dividend, rather than using the borrowed funds for operating or investment purposes.

⁵ The fixed charge coverage ratio measures a borrower's ability to meet mandatory cash obligations—including cash interest, scheduled principal repayments, lease payments, and other fixed charges—from operating cash flow, thereby providing a more comprehensive assessment of debt-service capacity and default risk.

higher debt-to-EBITDA ratios of median borrowers across industries (Figure 2, panel 2). This trend is especially notable in software and consumer service industries.

The leverage profile of the vulnerable tail of borrowers further underscores their elevated risk exposure. On the basis of the S&P Global Ratings data set, borrowers with credit estimates “ccc+” and below—representing around 15 percent of all borrowers—carry median leverage of roughly 13 times debt to EBITDA, leaving virtually no margin for adverse developments. Such capital structures require several years of strong EBITDA growth and favorable financing conditions to become sustainable; otherwise, default is increasingly likely. This vulnerability extends well beyond the weakest borrowers. The typical DL borrower—generally associated with a “b-” credit score—is leveraged at about 7 times debt to EBITDA⁶ and higher. Although manageable under moderate downturns, such leverage leaves limited capacity to absorb a severe or prolonged macroeconomic shock.

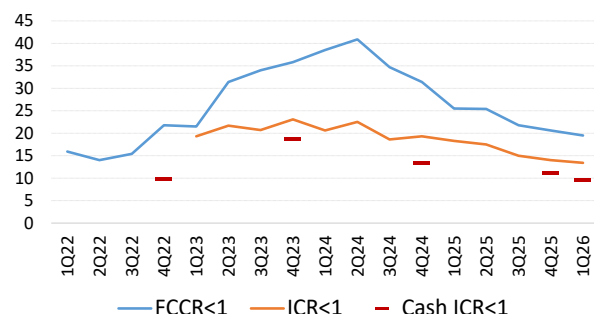
Persistently negative free operating cash flow gradually erodes liquidity buffers, reducing borrowers’ resilience to earnings shocks and funding disruptions. These buffers are critical in determining both the timing and the severity of financial distress; when they are depleted, firms have less time to recover, increasing the likelihood and severity of defaults (see Ferreira, Martell, and Yakovlev 2026).

Figure 1.3.2. A Vulnerable Tail of Direct Lending Borrowers

A significant share of borrowers remains unable to service debt from internally generated operating cash flow.

1. Share of Borrowers with Coverage Ratios below 1

(Percent)



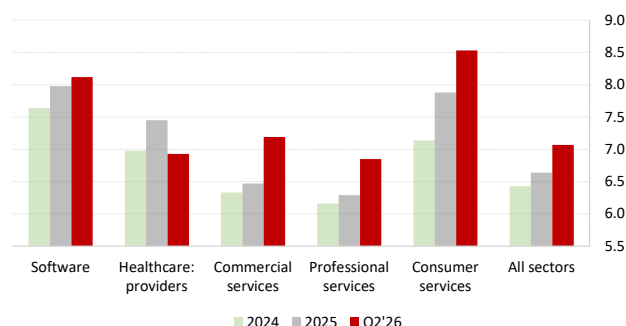
Sources: Lincoln International; and S&P Global Ratings.

Note: Cash ICR is based on the cash-paid part of loan coupons. FCCR = fixed charge coverage ratio; ICR = interest coverage ratio.

Leverage among direct lending borrowers has increased across most sectors.

2. Median Leverage of Borrowers across Industries

(Debt-to-EBITDA ratio)



Sources: S&P Global Ratings; and IMF staff calculations.

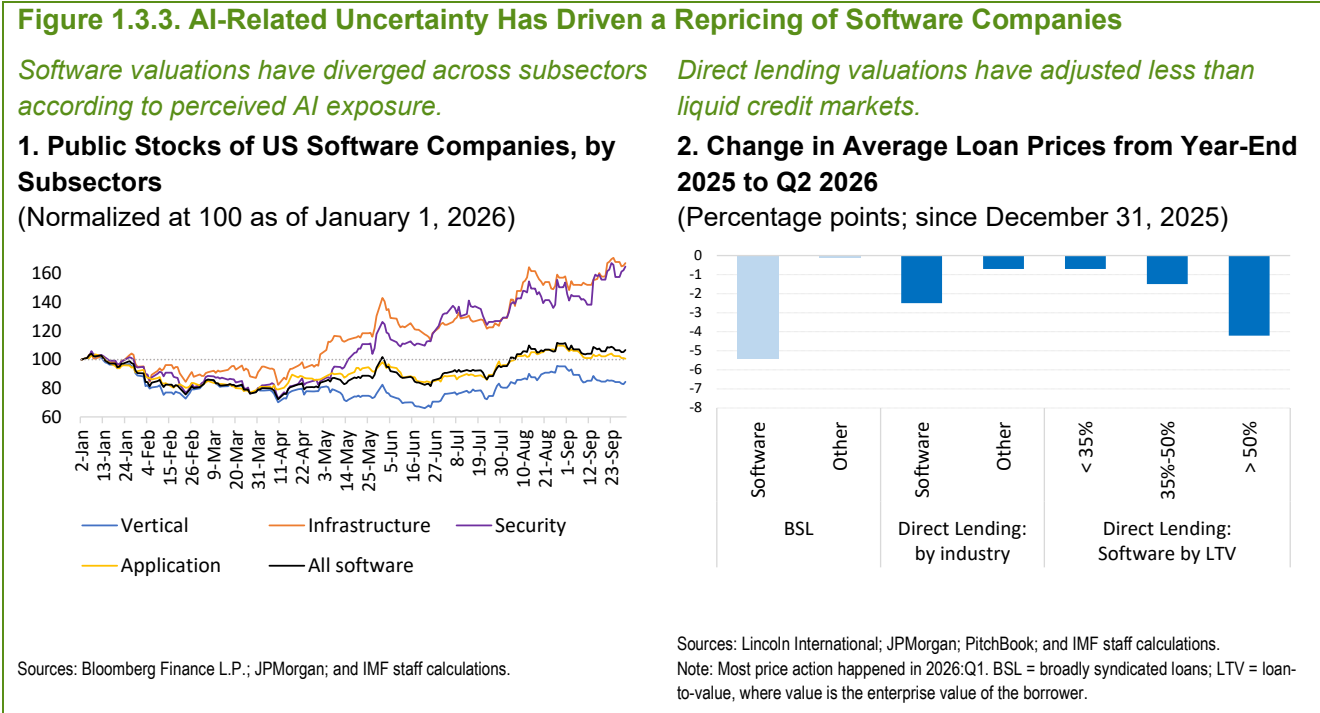
Note: EBITDA = earnings before interest, taxes, depreciation, and amortization. The figure shows the median leverage in the S&P Global Ratings’ set of reviewed direct lending borrowers and the agency’s definition of adjusted EBITDA.

Software Borrowers

Although the above structural issues are present in multiple industries, the software sector faces an additional risk from potential AI-driven disruption. On the basis of reported fundamentals and realized credit outcomes, software borrowers have remained among the stronger-performing segments of the direct lending market. Market perceptions of AI-related disruption risk have evolved considerably during 2026. Public software equities declined broadly earlier in the year but have recovered substantially since May, with many software segments posting gains and discounts remaining relatively moderate, even among segments viewed as more exposed to AI disruption (Figure 1.3.3, panel 1). At the same time, concerns about AI-related disruption contributed to uncertainty surrounding private credit exposures to software and were among the factors associated with elevated redemptions from semiliquid private credit vehicles during the first half of 2026.

⁶ Leverage is based on S&P Global Ratings’ sample of DL borrowers and the agency’s definition of adjusted EBITDA.

Software credit repricing has been most pronounced in public markets. While traded broadly syndicated loans of software borrowers declined sharply in the first quarter of 2026, DL software loan valuations have adjusted more moderately (Figure 1.3.3, panel 2). Within direct lending, valuation declines were concentrated among higher-leverage borrowers.



Liquidity Risks in Direct Lending Funds

DL funds are exposed to multiple sources of liquidity risk. The wave of redemptions from semiliquid funds since late 2025 has highlighted how concerns about deteriorating credit quality and procyclical investor behavior can generate significant liquidity demands (April 2026 *Global Financial Stability Report*). Two additional sources of risk are also important. First, on borrowers’ contingent demand for liquidity, DL funds may be required to fund undrawn commitments, including revolving credit facilities and delayed-draw term loans extended to DL borrowers. Second, on sources of liquidity, DL funds’ borrowing capacity under asset-based lending (ABL) facilities can contract sharply as collateral quality deteriorates, creating liquidity pressures at the fund level. Together, these dynamics can create funding gaps precisely when liquidity is most needed. This section focuses on these two sources of vulnerability.

Borrowers’ Contingent Demand for Liquidity

DL funds often provide borrowers with undrawn credit facilities that can create substantial liquidity pressure during stress. A typical direct lending package consists of a term loan, which represents the majority of financing, together with a delayed draw term loan and a corporate revolver. While the term loan is largely distributed to the borrower at closing, the revolver typically remains mostly undrawn, leaving a substantial portion of the commitment off balance sheet for the lender. Such liquidity commitments are inherently procyclical, as borrowers are most likely to draw them during periods of stress—either to meet genuine liquidity needs or as a precautionary response to heightened uncertainty (a “dash for cash”).

DL funds may face liquidity needs exceeding their available resources during stress, increasing reliance on discretionary sources of support that may be less available in a severe shock. Some funds can rely on dry powder or subscription facilities but for many seasoned funds, the primary source of liquidity is undrawn ABL facilities. However, DL funds’ unfunded commitments to borrowers may exceed their currently available borrowing capacity from undrawn secured credit facilities (for example, from banks) or cash balances. For example, Figure 1.3.4, panel 1, illustrates this using business development company (BDC) balance sheets

adjusted for comparability with non-BDC funds, highlighting that, for some vehicles, commitments exceed available capacity. As discussed in the following section, this gap may widen further during a shock as the borrowing base of ABL facilities deteriorates, potentially prompting DL funds to undertake significant asset sales and other balance sheet adjustments.⁷

Available Liquidity Sources during a Major Shock

The main source of contingent financing to DL funds is ABL facilities. These facilities, typically provided by banks, resemble conventional collateralized lending arrangements: the collateral consists of DL loans, often marked to fair value and subject to valuation haircuts, while the resulting collateral pool is subject to a series of eligibility and concentration limits that determine the final “borrowing base.” The eligibility criteria governing which assets may be included in the borrowing base are often restrictive (see Annex 1.3.1).

An ABL facility that is comfortably overcollateralized in normal times may become undercollateralized (“borrowing base deficiency”) during a severe downturn. During a severe shock, the borrowing base may contract, driven by both the loss of eligibility status of individual assets and declines in collateral valuations.⁸ If not cured, the deficiency typically constitutes an *event of default*⁹ under the facility documentation, suspending further borrowing and requiring an immediate cash injection or additional eligible collateral.

The likelihood of a borrowing base deficiency during a stress event can be significant. In practice, the borrowing base may exceed the drawn amount by only a modest margin and can be well below the total committed amount in the facility. This means that much of the nominal undrawn capacity provided to DL funds can, in practice, be unavailable (Figure 1.3.4, panel 2), and industrywide figures of available ABL capacity are often overstated.¹⁰ If a DL fund has other, unencumbered eligible collateral, it may substitute such assets for ineligible or nonperforming assets to avoid a borrowing base deficiency. During a severe downturn, however, the scope for such collateral substitution is likely to be limited.

Banks, the usual providers of ABL facilities, may, in principle, respond to a borrowing base deficiency with forbearance. Banks may amend the facility to broaden the collateral eligibility criteria. Absent such an amendment, banks must either accelerate the facility or grant forbearance.¹¹ Because the collateral pool typically continues to generate cash interest well in excess of the facility's funding cost, forbearance is often the economically preferred outcome, likely accompanied by restrictions on the DL fund's activities.

However, coordination challenges may prevent this outcome as material amendments and forbearance generally require majority lender consent. Because many large ABL facilities are syndicated among a geographically diverse group of domestic and international banks, reaching an agreement may prove challenging during periods of stress, particularly if some international lenders seek to reduce cross-border exposures to a risky asset class. If the required threshold is not met, the administrative agent must accelerate the facility. Following acceleration, the focus of engagement with DL borrowers shifts from providing

⁷ At the same time, corporate DL borrowers' ability to substitute away from DL financing may be limited, as their size, leverage, or risk profile may constrain access to alternative sources of credit, including broadly syndicated loans, high-yield bonds, and traditional bank lending.

⁸ Given the inherently high leverage of DL borrowers, the eligibility criteria can be breached relatively easily during a severe downturn. For example, leverage on an underlying loan may exceed the applicable eligibility threshold, the proportion of payment-in-kind interest in a loan's coupon may rise above the permitted limit, or the loan may migrate to nonaccrual or otherwise nonperforming status.

⁹ Importantly, an event of default is not a payment default. The cash interest generated by the performing part of the collateral pool would typically remain well in excess of the interest expense on the ABL facility. This reflects the substantial spread differential between the two assets: the underlying direct lending portfolio generally earns credit spreads of approximately 450 basis points or more, whereas ABL facilities are typically funded at spreads of 150–200 basis points or more.

¹⁰ Industrywide estimates often overstate available ABL capacity by approximating it as the difference between total commitments and drawn amounts, ignoring situations illustrated in Figure 1.3.4, panel 2. The bias is further amplified by combining ABL and subscription facilities in the same calculation, even though subscription facilities often have different utilization rates because they serve a fundamentally different purpose than ABL facilities.

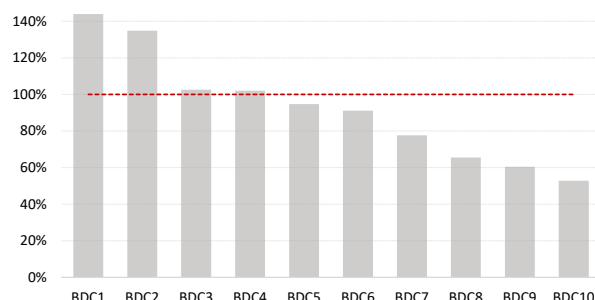
¹¹ To accelerate the facility is to declare an event of default, make all outstanding borrowings immediately due and payable, and, if necessary, enforce remedies against the asset-backed collateral (for example, seize, foreclose on, or liquidate the pledged collateral). To grant forbearance is to temporarily refrain from exercising default remedies, allowing the borrower additional time to cure the default or renegotiate terms while leaving the asset-backed collateral pledged but not enforcing against it.

countercyclical support during stress to maximizing immediate recoveries from collateral for ABL lenders. As a result, the bilateral, patient-capital model that characterizes direct lending may be disrupted, as support for stressed borrowers may be curtailed.

Figure 1.3.4. Borrower Drawdowns May Exceed Available Contingent Funding

The commitments of direct lending funds and BDCs to borrowers may exceed their available liquidity buffers.

1. Liquidity Commitments Extended to Borrowers
(Percent of available liquidity buffers)

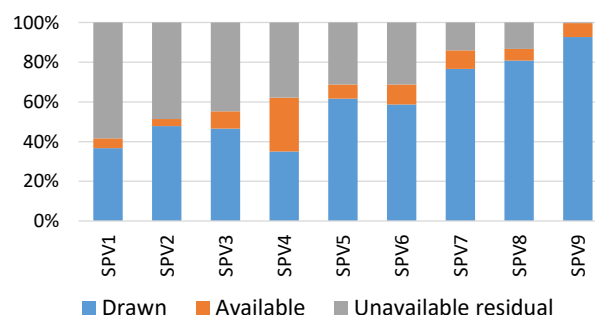


Sources: Company disclosures; and IMF staff calculations.

Note: Firms were selected on the basis of their size (largest BDCs) and availability of information. Available liquidity buffers are calculated as cash balances and available undrawn secured facilities minus short-term unsecured debt. BDC = business development company.

Available borrowing capacity is often lower than undrawn commitments suggest.

2. Breakdown of Committed Amounts in ABL Facilities to Bankruptcy-Remote SPVs of a Select BDC
(Percent)



Sources: Company disclosures; and IMF staff calculations.

Note: Includes bankruptcy-remote special purpose vehicles (SPVs) established as subsidiaries of a large business development company (BDC), to which the BDC transfers loan assets that serve as collateral for the asset-based lending (ABL) facilities.

Conclusion and Policy Recommendations

A key vulnerability in the direct lending ecosystem lies in the interaction between credit risk and liquidity risk. Highly leveraged borrowers are most likely to demand liquidity support during periods of stress, while the contingent funding arrangements DL funds rely upon may become less available as collateral quality deteriorates. This interaction can amplify funding pressures across the financing chain, undermining the patient-capital model that has traditionally distinguished private credit from more procyclical forms of lending. At the same time, the rapid growth of fund finance, semiliquid vehicles, and cross-sector linkages has transformed private asset vehicles into more complex and interconnected intermediaries, increasing the potential for shocks to propagate across banks and nonbank financial institutions.

To better assess and contain these vulnerabilities, authorities should consider the following:

- Strengthen monitoring across the entire financing chain, from portfolio companies and special-purpose vehicles to funds, banks, and end investors.
- Close data gaps on leverage, contingent liquidity commitments, and cross-sectoral and cross-border exposures.
- Develop stress-testing and surveillance frameworks that capture how shocks may propagate through private asset markets and their links to the broader financial system.
- Use existing supervisory and regulatory tools to address excessive exposures where private credit vulnerabilities pose material risks to banks, insurers, and other regulated institutions. If private credit continues to expand and becomes systemically important, authorities may need to consider a more intrusive supervisory and regulatory framework (April 2024 *Global Financial Stability Report*).

Annex 1.3.1. Asset-Based Lending Facilities in Direct Lending¹²

An asset-based lending (ABL) facility is a secured credit facility, typically provided by banks as a revolving facility¹³ to a direct lending fund and collateralized by a defined pool of the fund's loan assets. The amount available to borrow is determined by a contractual borrowing base,¹⁴ which is calculated by applying eligibility criteria, concentration limits, valuation haircuts, and advance rates to the pledged collateral. As the composition, performance, or valuation of the underlying loan portfolio changes, the borrowing base adjusts dynamically, causing borrowing capacity to expand or contract over time. Unlike subscription facilities, which are secured primarily by investors' uncalled capital commitments and are intended to bridge capital calls, ABL facilities are secured by the fund's invested assets and are primarily used to provide portfolio-level leverage and liquidity, support new loan originations, and manage cash flows throughout the life of the fund.

ABL facilities typically restrict eligible collateral to performing, mostly cash-paying, first-lien loans that satisfy leverage (generally below 6x debt/EBITDA), jurisdiction, currency, maturity, and concentration limits. Loans with excessive payment-in-kind interest, or those that become nonaccrual, defaulted, distressed, or otherwise impaired, are generally excluded from the borrowing base. Concentration limits cover borrower, industry, sponsor, lien position, geography, or other portfolio characteristics (see example in Table 1.3.1). Eligible collateral is then assigned advance rates¹⁵ that vary with the underlying credit quality and structural characteristics of the assets.

Table 1.3.1: Sample Concentration Limits for the Collateral in an Asset-Based Lending Facility

Concentration limit	Description of the limit
Single issuer concentration limit	Exposure to a single issuer contributes to the borrowing base in full until it reaches 6 percent of the borrowing base. Any additional exposure between 6 percent and 12 percent contributes at only 50 percent, while exposure above 12 percent contributes nothing to the borrowing base.
Single industry concentration limit	Exposure to any one industry can represent up to 25 percent of the borrowing base (30 percent for one designated industry). Any excess does not count toward the borrowing base.
Non-Core Investments limit	Non-Core (i.e., riskier or lower quality) investments can represent up to 20 percent of the borrowing base. Any excess does not count toward the borrowing base.
Limit on combined exposure to Junior and Non-Core investments	The combined exposure to Junior and Non-Core investments can represent up to 30 percent of the borrowing base. Any excess does not count toward the borrowing base.

Source: IMF staff.

¹² See Dombrovskaya and Yakovlev (2026) for additional details.

¹³ The use of ABL facilities structured as term loans is also growing.

¹⁴ Borrowing Base = $\sum (\text{Fair Value} \times \text{Advance Rate} \times \text{Eligibility}) - \text{Concentration Deductions} - \text{Other Reserves}$

¹⁵ Sample advance rates for the collateral in an ABL facility, by coupon payment-in-kind (PIK) status (No PIK / Moderate PIK) are first-lien loans, 75%/55%; second-lien loans, 65%/55%; high-yield bonds, 60%/50%; and mezzanine investments, 55%/45%.

References

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