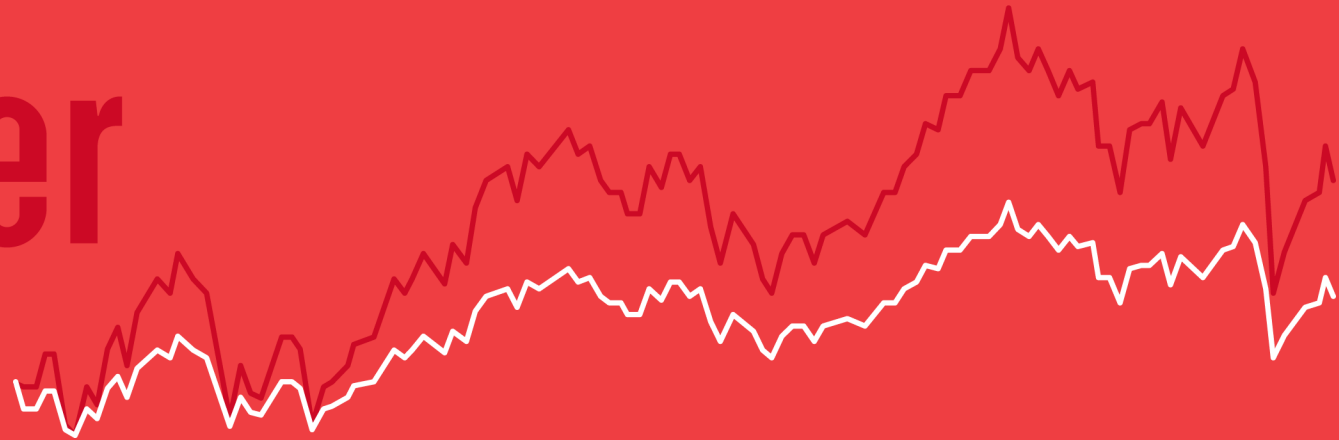




Silver



How Private Is Your Private Portfolio?

Examining semiliquid funds' portfolio characteristics and risks



Gold



Bronze



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Key Takeaways

- While often sold as highly differentiated portfolios, private-asset-focused semiliquid funds typically have as much portfolio overlap as small-cap public equity or bank-loan funds.
- Due to private investment vehicles' and collateralized loan obligations' lack of transparency, there is probably even more overlap, since some semiliquid funds primarily use such vehicles to invest in private markets.
- Semiliquid fund fees become a key differentiator in their long-run results when they commonly share underlying holdings.
- Industry concentration within semiliquid funds is higher than in public markets by some measures. For example, the top five industry group exposures in semiliquid funds account for about 55% of total assets, compared with just over 40% in the S&P 500.
- Cash management is critical to success in semiliquid funds. Too much cash creates a meaningful drag on performance, while too little can risk a liquidity crisis.
- The average private equity semiliquid fund holds nearly 15% of the portfolio in cash or cash equivalents, while the typical direct lending fund holds about half that.
- Software exposure in private credit has drawn a lot of attention. Looking at the 500 largest holdings across funds, about 27% of invested assets are in software companies. That's far higher than the S&P 500's 6% and broadly in line with the roughly 25% weight in the Morningstar LSTA US Leveraged Loan 100 Index.
- True software exposure is likely even higher. Combining multiple classification systems and data sources suggests that software exposure is closer to a third of all assets.
- Private credit portfolios typically have weighted average maturities of four to five years, though relatively few loans are set to mature by 2028. Natural loan payoffs reduce the effective life of the loans, though such payoffs may occur less frequently than usual in the software space.
- Private equity funds often rely on private funds and co-investment vehicles in their portfolios, making it hard to see the underlying economic exposure. Still, they own many of the same funds, which means many of them are exposed to the same underlying businesses.
- Semiliquid funds offer some exposure to well-known unicorns like SpaceX, OpenAI, or Anthropic, but so do mutual funds and ETFs. Most private equity funds are focused on buyout strategies and do not allocate much in venture capital markets.

Portfolio Similarities

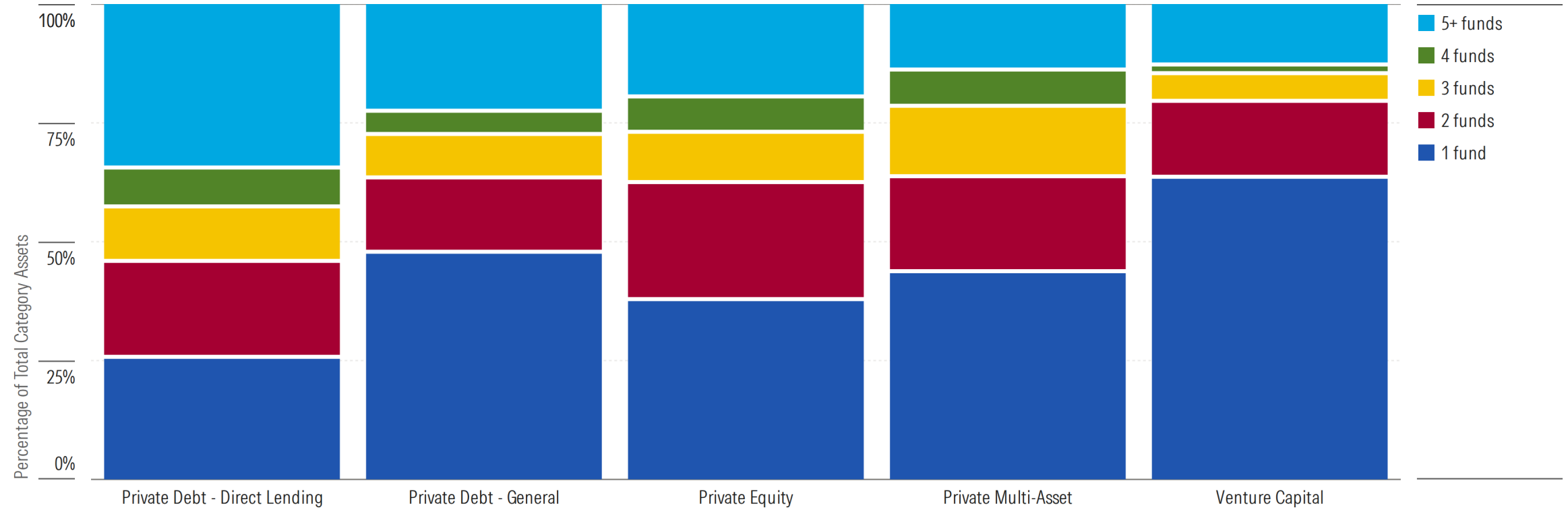
How different are semiliquid portfolios from one another?

Portfolio Exclusivity Is Rare

Private-asset managers often boast of their unique “origination channels,” or pipelines of borrowers and deals, but many of these funds own the same underlying holdings. Over a third of the direct lending Morningstar Category’s assets sit in companies held by five or more unique funds. This estimate is conservative, as it only represents traceable exposure and excludes pooled vehicles and co-investment vehicles in which the underlying issuers couldn't be determined. When portfolios start to mirror one another, fees become differentiators.

Percentage of Category Assets by Unique Number of Fund Holders

Direct lending funds tend to own many more of the same issuers than other categories



Source: Morningstar Direct, PitchBook, public filings. Data as of April 21, 2026. Overlap based on the underlying issuer or fund.

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Portfolio Overlap Among Individual Private Credit Funds Is Relatively Limited

While many funds lend to the same companies overall, any two individual funds generally have modest overlap. On average, a private credit fund shares about 20% of its borrowers with a typical peer. Even so, the overlap data reveals important differences. Blackstone's peer portfolios, for example, hold Blackstone's borrowers (Column 1) more often than Blackstone holds its peers' borrowers (Row 1). This suggests Blackstone (and others with the same dynamic) are key originators for the broader market.

Two-Way Issuer Overlap Among 10 Largest Semiliquid Direct Lending Funds

For example, about 33% of Blue Owl Credit Income sits in issuers also held in Blackstone Private Credit, but those same issuers represent about 25% of Blackstone's assets.

Fund	1	2	3	4	5	6	7	8	9	10
1. Blackstone Private Credit	100.0	25.5	14.3	21.8	9.2	13.4	15.8	6.1	13.2	18.7
2. Blue Owl Credit Income Corp	33.0	100.0	15.3	26.3	12.2	22.2	24.0	11.8	13.8	53.5
3. Cliffwater Corporate Lending	13.8	6.8	100.0	11.6	9.6	6.5	13.1	9.1	12.0	5.7
4. HPS Corporate Lending	28.3	23.3	21.4	100.0	10.9	23.7	14.7	8.9	13.8	17.0
5. Apollo Debt Solutions BDC	13.7	9.5	18.9	11.2	100.0	10.2	8.2	5.7	17.3	7.6
6. Ares Strategic Income	30.3	21.2	7.0	20.6	12.2	100.0	23.2	9.7	39.4	13.4
7. Golub Capital Private Credit	31.1	21.4	16.7	14.0	8.7	27.7	100.0	6.3	20.6	16.5
8. Oaktree Strategic Credit	23.6	21.4	18.5	23.1	12.2	22.6	13.0	100.0	15.8	17.9
9. CION Ares Diversified Credit	16.2	9.5	10.5	10.4	11.2	29.0	10.4	6.0	100.0	6.8
10. Blue Owl Technology Income Corp	45.5	89.9	19.2	29.5	15.6	29.0	29.2	16.4	19.2	100.0

Overlap Is Even Lower Among Individual Private Equity Funds, Though Harder to Track

Most semiliquid private equity semiliquid funds are fund-of-funds that invest in private equity funds or co-investment vehicles. The underlying company exposures, therefore, are harder to track, though it is possible to track the private vehicle overlap. In general, there is less overlap among private equity portfolios, but the funds still operate in a market where brokers dominate deal flow, especially for those that rely heavily on secondaries.

Two-Way Issuer Overlap Among 10 Largest Semiliquid Private Equity Funds

Estimates likely understate overlap as equity funds tend to hold more opaque private vehicles where entity matching is less certain.

Fund	1	2	3	4	5	6	7	8	9	10
1. Partners Group Private Eq Master LLC	100.0	3.8	7.4	5.5	5.4	4.0	8.3	3.7	3.7	2.2
2. Cascade Private Capital	11.2	100.0	9.1	10.8	12.1	6.6	9.7	11.9	9.0	9.7
3. Ares Private Markets	23.2	12.6	100.0	16.5	15.9	4.8	28.0	18.9	10.4	6.3
4. Hamilton Lane Private Assets	8.9	8.6	8.2	100.0	15.2	3.5	5.5	7.7	4.1	4.0
5. Carlyle AlInvest Private Markets	20.6	13.9	21.6	21.8	100.0	13.3	24.4	27.8	18.5	16.1
6. NB Private Markets Access LLC	25.0	18.5	19.4	20.6	22.3	100.0	26.8	18.7	18.7	19.6
7. Pomona Investment	31.2	12.2	32.0	14.0	14.3	9.9	100.0	13.6	12.6	7.7
8. Franklin Lexington Private Markets	31.6	19.5	30.4	24.6	26.5	16.5	30.2	100.0	22.1	17.2
9. FS MVP Private Markets	15.0	15.9	17.4	17.4	18.4	11.2	20.5	14.8	100.0	13.6
10. Jpmorgan Private Markets	28.7	33.9	28.1	28.0	32.0	25.1	25.2	28.9	27.6	100.0

Source: Morningstar Direct, author's calculations. Data as of April 21, 2026. Overlap represents the percentage of a portfolio in the same issuers or funds as the comparison portfolio. Cash and cash equivalents are included in overlap calculations if included in schedule of investments.

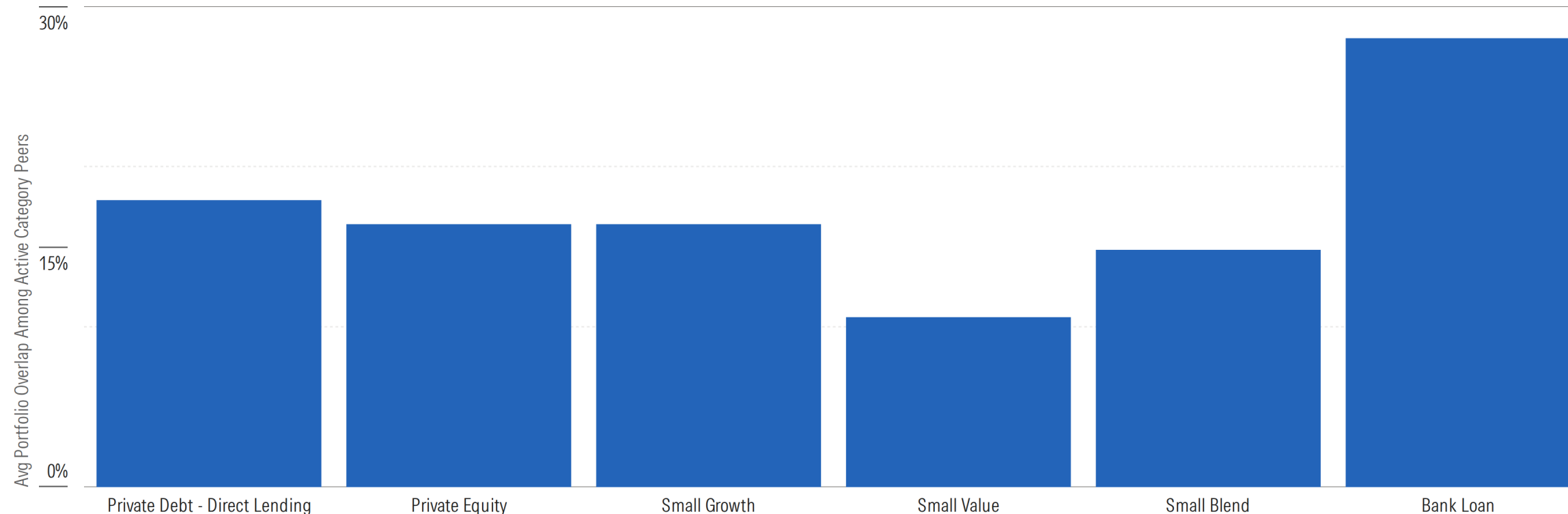
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Yet, These Overlap Levels Are Similar to Public Peer Groups

Private semiliquid portfolios tend to differ from one another about as much as comparable public strategies, such as small-cap equity funds and, to a lesser extent, bank-loan funds. That's notable because the available data likely understates the true overlap, given limited holdings disclosure. These portfolios are not commodities like broad public securities indexes. But they also aren't entirely distinct. Their differentiation resembles what investors see in the less-liquid corners of public markets.

Average Portfolio Overlap Between Category Peers

Differentiation levels among private portfolios are similar to less-liquid public asset categories



Source: Morningstar Direct, author's calculations. Data as of April 21, 2026. Overlap represents the percentage of a portfolio in the same issuers or funds as the comparison portfolio. Public categories include actively managed funds only and exclude systematic strategies. Private categories include the top 10 largest funds only to capture funds at a mature scale.

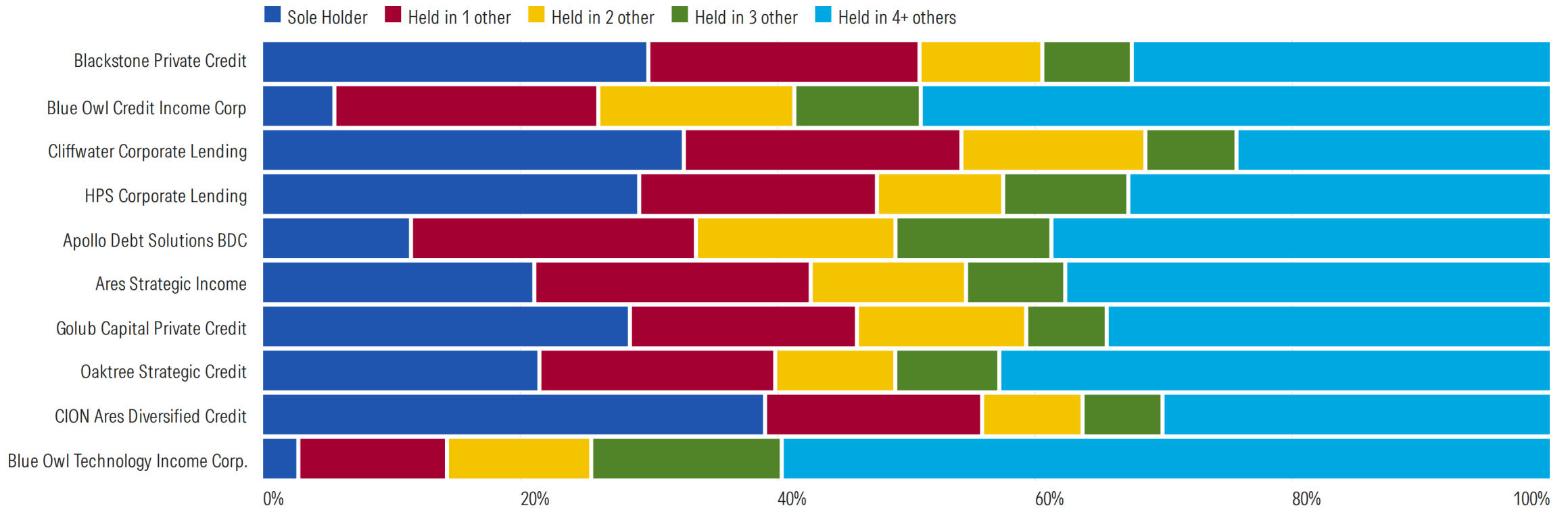
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Most Semiliquid Private Credit Fund Issuers Show Up in Multiple Portfolios.

Private credit funds often own only a portion of a loan rather than the entire deal. Being the sole or lead lender can signal strong sourcing capabilities and comes with benefits, such as better pricing and more say over loan terms. In theory, those advantages should benefit investors. That said, the data below is skewed when multiple funds from the same firm participate in the same loan, or when exposure comes through CLOs or private funds rather than directly holding individual loans.

Percentage of Overall Portfolio Held by Semiliquid Peers

Sole ownership can be an indicator of key origination advantages



Source: Morningstar Direct. Data as of April 21, 2026. Peer set based on funds within all private semiliquid categories.

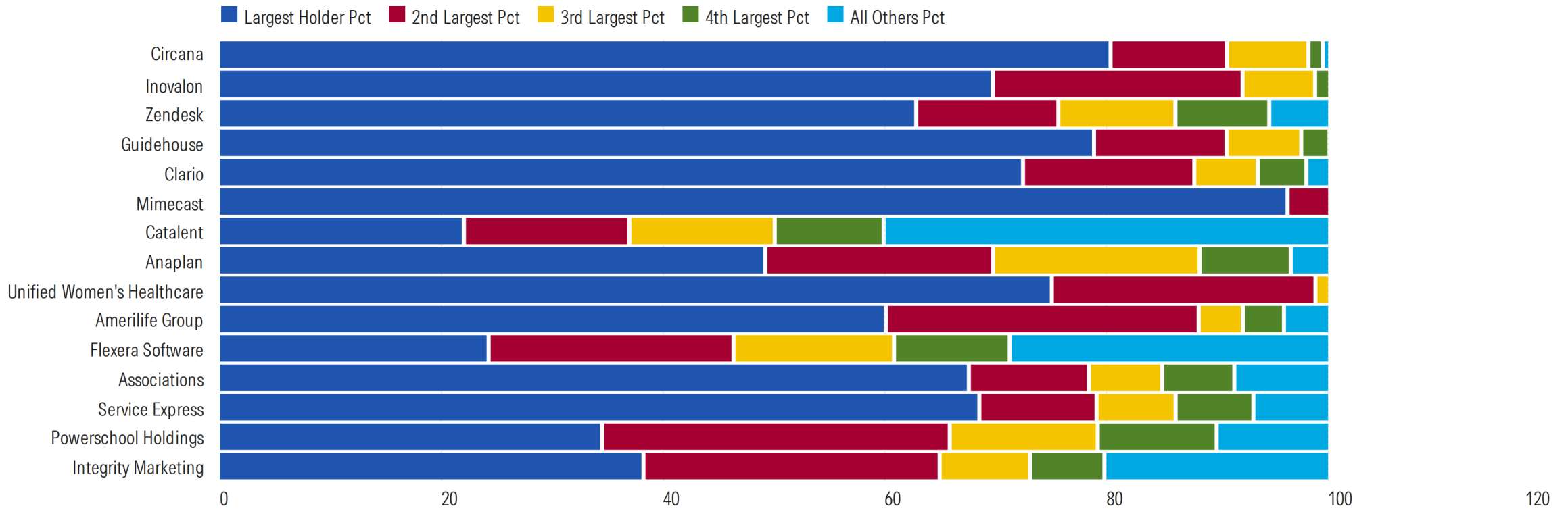
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Private Credit Loans Are Syndicated But Not as Broadly as Bank Loans

Broadly syndicated loans are originated by banks with the explicit intention to break them up and sell pieces to many investors. Private credit direct lending can work in a similar fashion, but the lead lender usually keeps most of the loan and shares it with a much smaller group of investors. Still, on a dollar-weighted basis, the typical borrower appears in about 3.5 direct lending portfolios, showing that fully unique loans are relatively rare.

15 Largest Direct Lending Issuers by Fund Ownership Concentration

Originators typically hold the majority



Source: Morningstar Direct, PitchBook, public filings. Data as of April 21, 2026. Data is based on the identified underlying issuer.

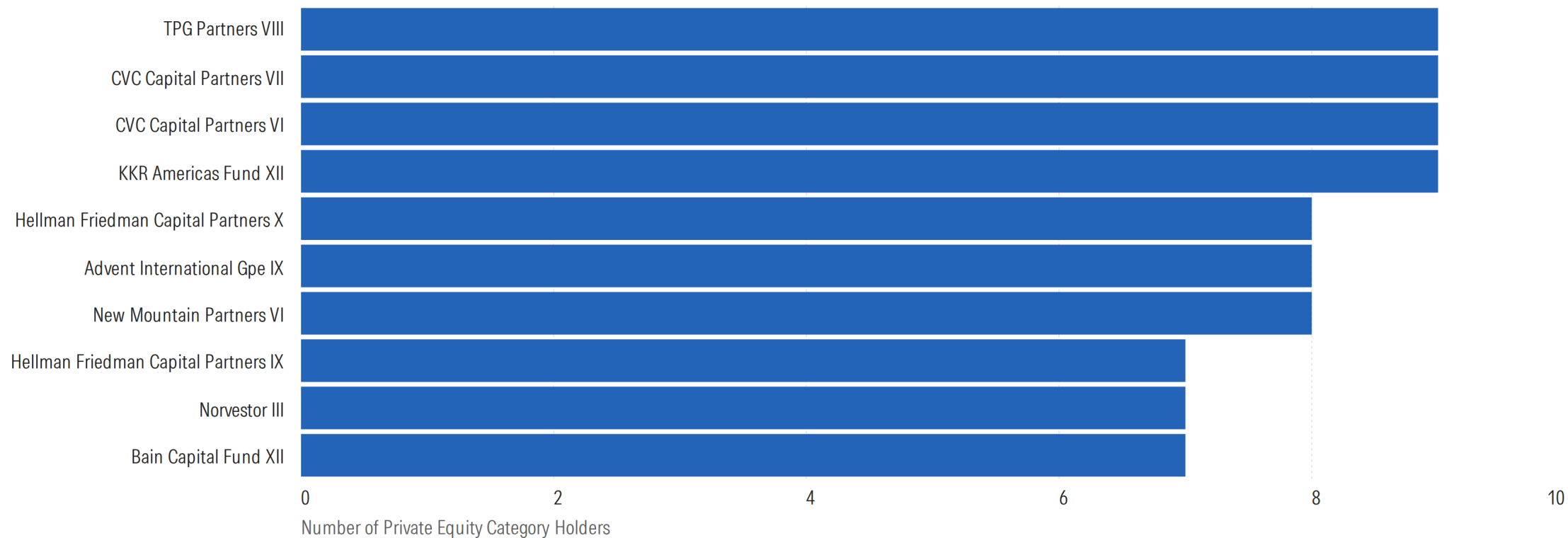
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Private Equity Funds' Often Hold Many of the Same Underlying Funds

Many semiliquid private equity strategies are fund of funds that primarily own other private equity funds. These strategies, particularly those focused on secondaries, typically rely on brokers to source investments. As a result, it is common for the same underlying private equity funds to appear in many semiliquid portfolios. Portfolio data includes roughly three dozen or so unique category funds, meaning roughly a quarter of category constituents own the four most popular underlying private funds.

Most Popular Semiliquid Private Equity Holdings

Fund-of-fund strategies, especially those focused on secondaries, often hold many of the same underlying funds



Public Fund Parallels

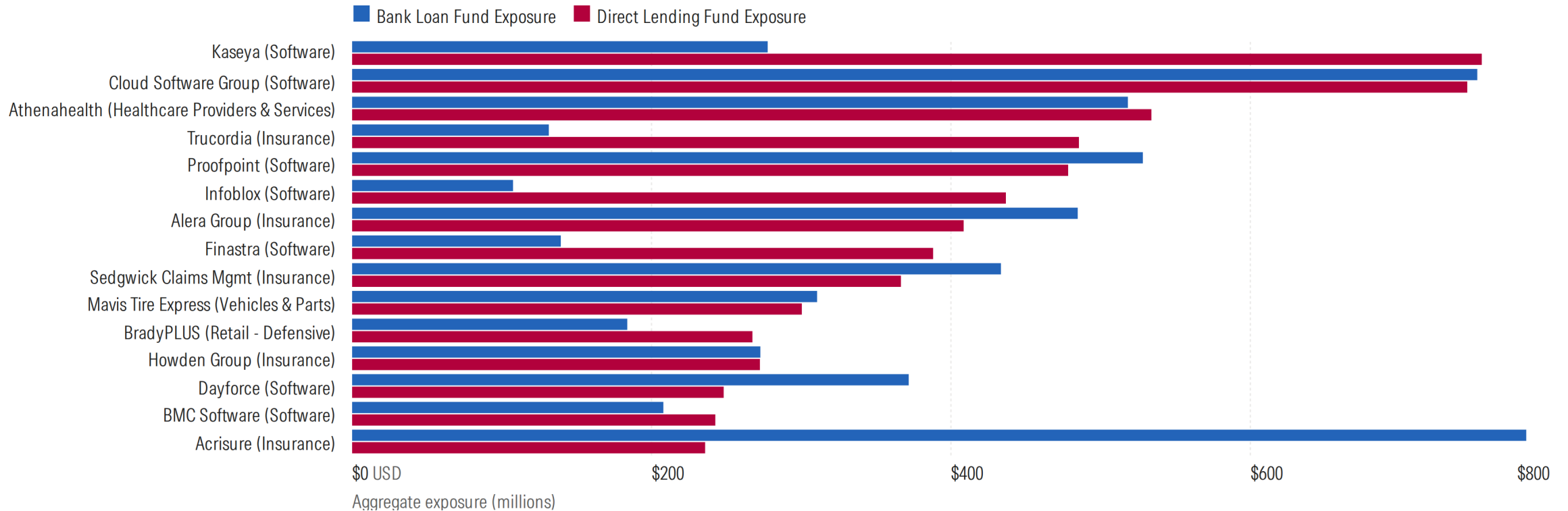
Private credit funds and bank-loan funds are close cousins

Semiliquid Private Credit Funds and Bank-Loan Funds Own Many of the Same Issuers

At least 15% of semiliquid direct lending assets are in companies that also show up in bank-loan funds. But those shared holdings account for a large portion—about 80% on a dollar-weighted basis—of what bank-loan funds own. Many companies borrow in both markets, so this overlap doesn't necessarily mean semiliquid portfolios hold more liquid, broadly syndicated loans. Still, investors may want to limit this exposure, since they can get similar issuer exposure much more cheaply through mutual funds or exchange-traded funds.

Largest Common Issuers in Both Bank-Loan and Semiliquid Private Credit Funds

It is not uncommon for companies to tap both the bank loan and private credit markets for different financing solutions

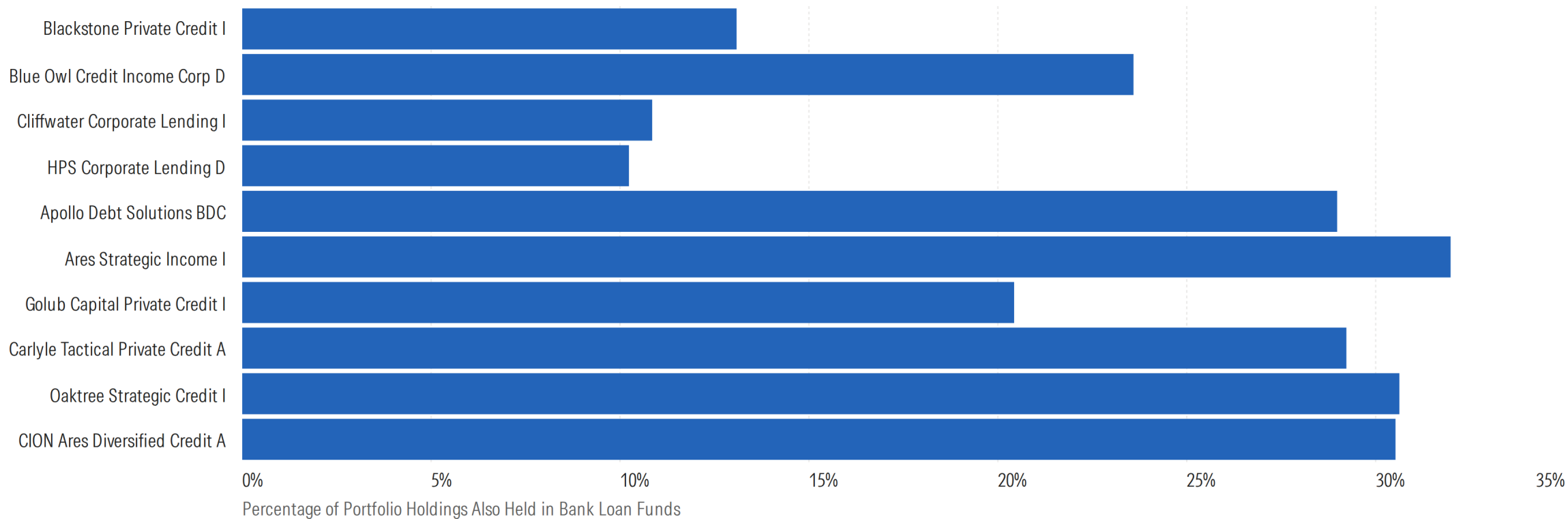


Overlap With Bank-Loan Funds Can Vary Meaningfully by Semiliquid Fund

There can be meaningful overlap between bank-loan funds and private credit funds. That doesn't mean private credit portfolios are heavily invested in bank loans or that they are especially liquid. In many cases, most of an issuer's debt is still held by private credit funds, with only one bank-loan fund owning the same borrower. Some managers do hold bank loans for liquidity, though. And the degree of overlap can help investors think more critically about whether the higher fees charged by private credit funds are justified.

Approximate Percentage of Private Credit Fund Assets That Are Held in at least One Bank-Loan Fund

High overlap does not necessarily imply high bank loan allocations

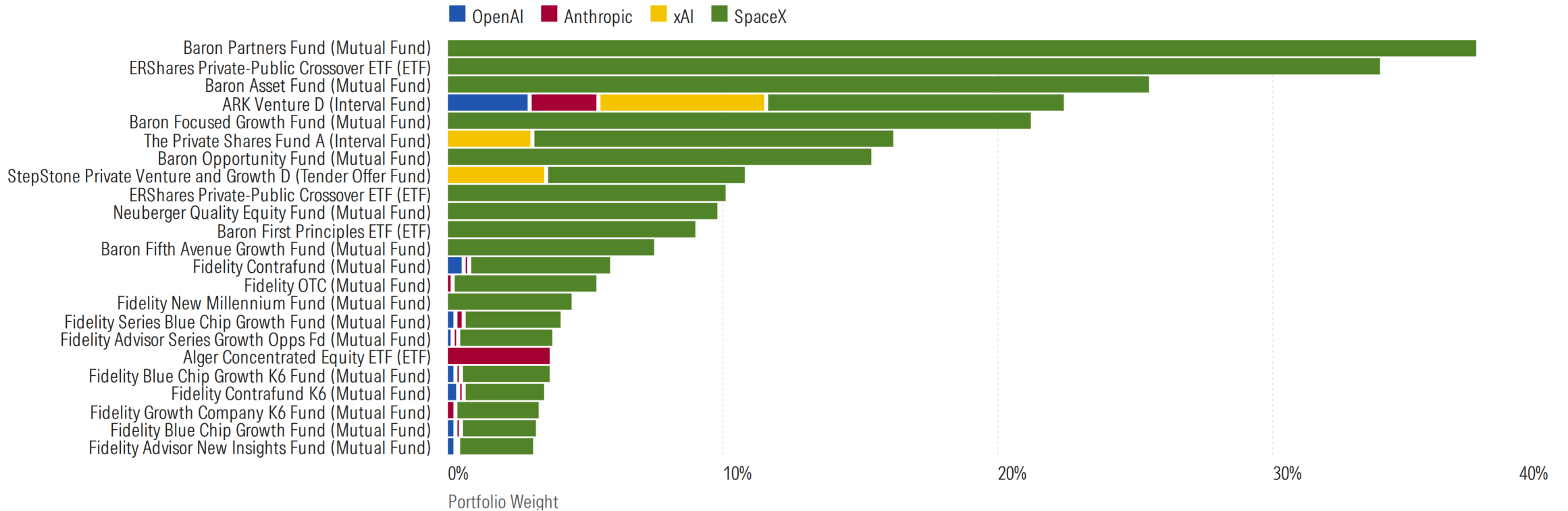


Venture Capital Is More Distinct, But You Can Invest in Top Private Companies Elsewhere

Semiliquid venture capital funds tend to have more unique portfolios, though there are fewer than 10 of them. Mega-unicorns like SpaceX, OpenAI, and Anthropic dominate headlines about the asset class and are some of the venture capital category's largest holdings, at least in terms of funds with direct ownership. Yet, you don't need a semiliquid fund to own big-name private companies; some mutual funds and ETFs also own big helpings of them, especially SpaceX.

The Many Ways to Access the Mega-Uncorns

While semiliquid venture capital funds offer a route, more liquid options also exist



Source: Morningstar Direct. Data as of the last reported portfolio as of April 16, 2026. Some firms do not report private holdings to Morningstar and thus are not included. Note: ERShares accesses SpaceX via an SPV and does not hold the shares directly. xAI stakes reflect funds' ownership whose latest portfolio dates prior to the company's merger with SpaceX.

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Software Risks

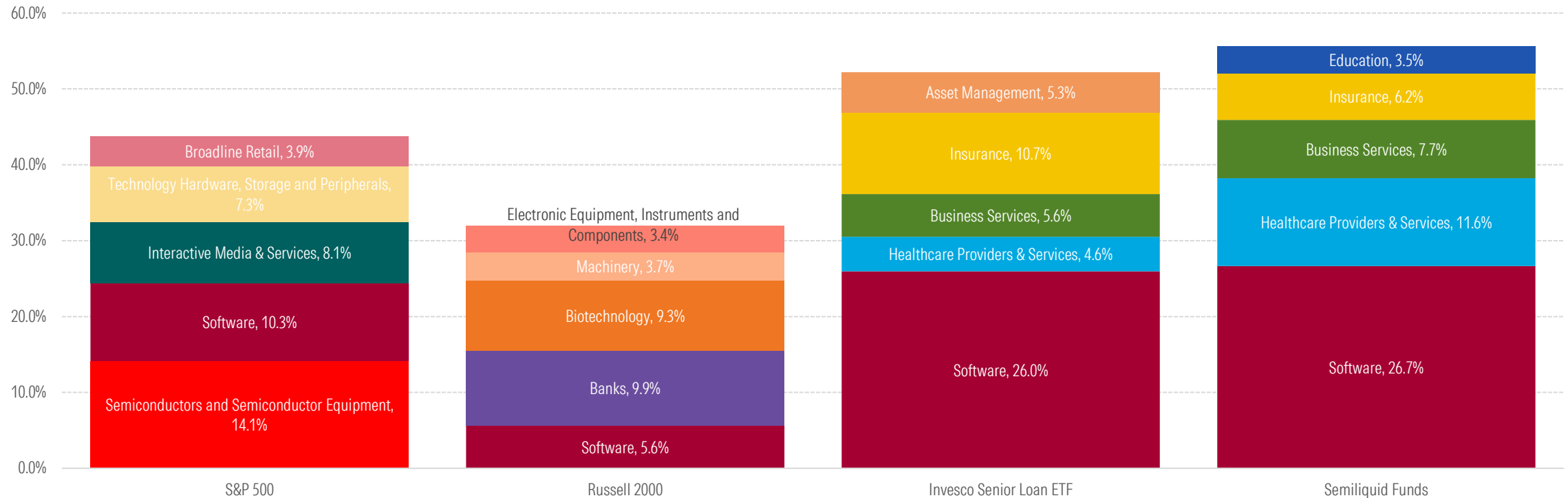
Semiliquid funds invest more heavily in the industry than public markets

Private Market Funds Are More Concentrated by Industry Than Public Market Funds

Asset managers often sell semiliquid funds as diversifiers. A modest helping of private equity or private credit, by definition, can add different and potentially uncorrelated sources of return to a portfolio of mostly publicly traded stocks and bonds. But they can also introduce risks. Semiliquid and bank-loan funds like the Invesco Senior Loan ETF (which is based on the Morningstar LSTA US Leveraged Loan 100 Index), for instance, are both more concentrated in a handful of industries than broad equity indexes.

Portfolio Concentration in Top 5 Industries

Private market-focused semiliquid funds tend to have higher industry concentration levels than public options

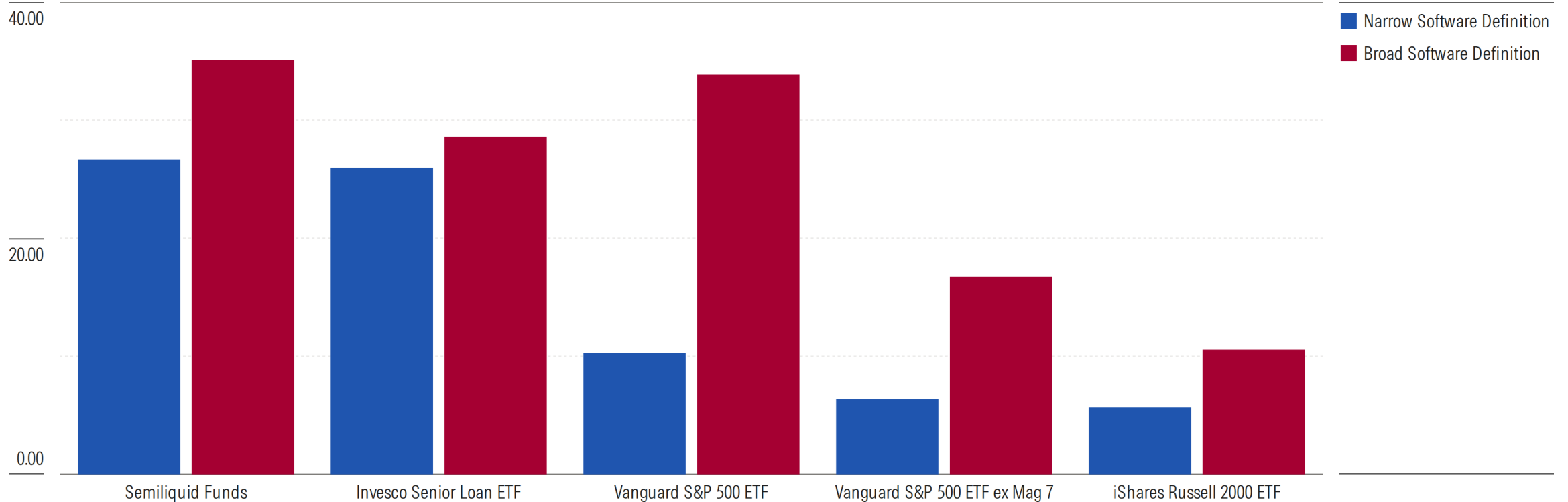


Software Exposure Is High in Semiliquid Portfolios—But What Counts as a Software Company?

Semiliquid funds are highly exposed to software. Just how much depends on how software is defined. Is a company that develops software for hospitals a software company or a healthcare company? Blunt industry classification systems can miss important nuances. Much of the S&P 500's "broad" software exposure, for instance, comes from companies like Apple or Nvidia, which develop software primarily to support their core hardware products, but which are not the sort of software-as-a-service businesses under the perceived imminent artificial intelligence threat.

Private Market-Focused Semiliquid Funds Have High Software Exposure

Though it matters on how you define software

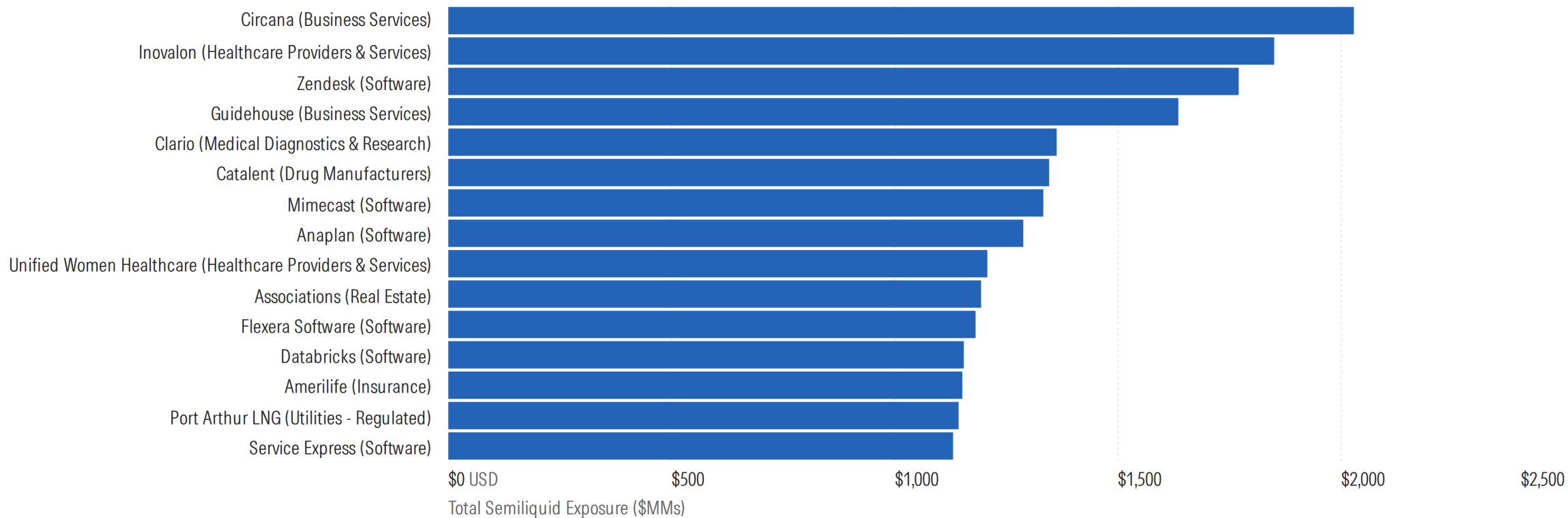


Semiliquid Funds' Have Significant Software Exposure

Semiliquid funds' software exposure has drawn a lot of attention due to concerns that AI could disrupt SaaS businesses. Some of the largest holdings in these funds are software companies or firms that build software for specific industries, such as Inovalon, a healthcare company that is essentially a data, analytics, and software business.

Semiliquid Funds' Largest Single-Company Exposures Are Concentrated in Software Companies

Many of the companies not classified as software are essentially software businesses



Cash and Liquidity

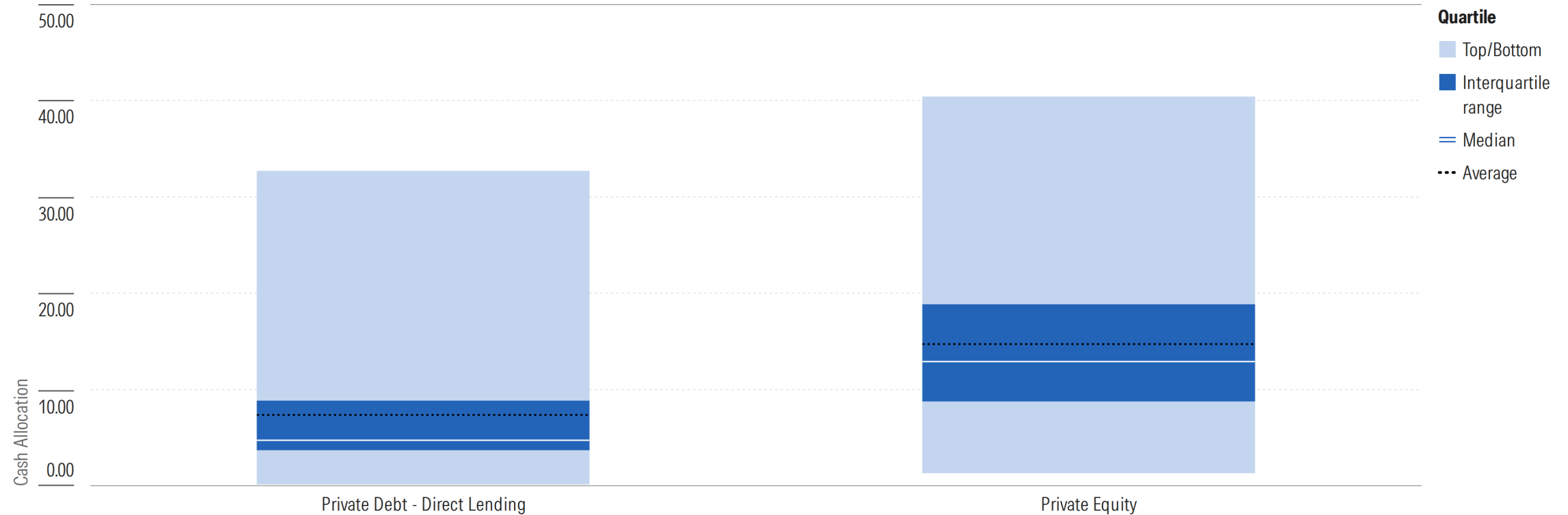
With redemptions rising, where can liquidity come from?

Private Equity Funds Carry Much More Cash Than Private Credit Funds

Semiliquid managers must walk a tightrope when managing their liquidity. If they hold too little cash or easy-to-sell assets, they could struggle to handle consistently oversubscribed redemption offers. Keeping too much in more liquid assets, however, can drag on returns, effectively lifting their return hurdle even higher to clear easily accessed public equity returns. Investors don't want to pay high fees to have their money sit in cash, and managers must balance deploying cash quickly versus deploying it well.

Private Equity Funds Hold Almost 15% in Cash, on Average, Nearly Double the Allocation of Private Credit Funds

Due to uncertain timing of cash flows, the more conservative approach is warranted, though it can drag returns



Source: Morningstar Direct, SEC filings. Cash levels based on latest reported 10K or 10Q for BDCs and latest annual or semiannual report for tender offer and interval funds. Cash balances exclude outliers over three standard deviations from category average, which are generally freshly launched funds.

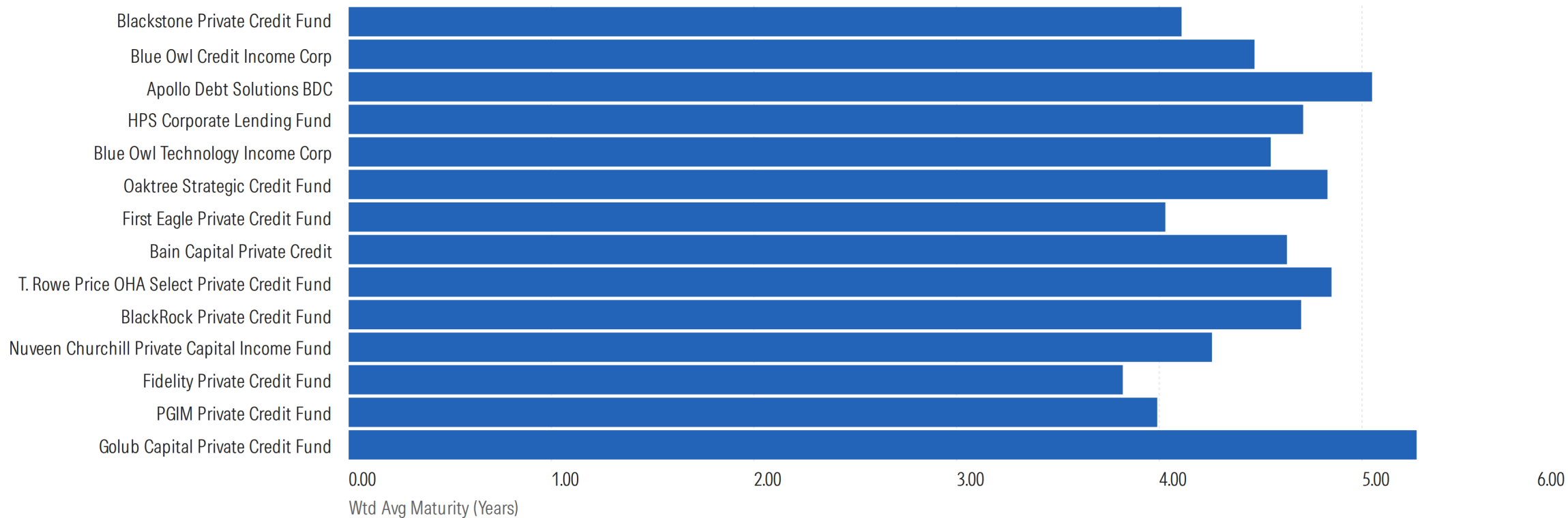
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Weighted Average Maturities Give a Glimpse Into Organic Liquidity

Private credit portfolios generate natural liquidity. As loans mature or get paid off early—often because a company is sold or refinances—they return cash to the fund. In practice, loans usually pay back sooner than their stated maturity dates. With average maturities of four to five years, portfolios should naturally produce meaningful cash over time. But timing is key. Managers want to avoid sitting on too much idle cash, so they may feel pressure to reinvest quickly rather than hold it in case investors ask for their money back later.

Unlisted BDC-Weighted Average Maturity

Most unlisted BDCs see weighted average maturities between 4 and 5 years, implying 20-25% annual liquidity

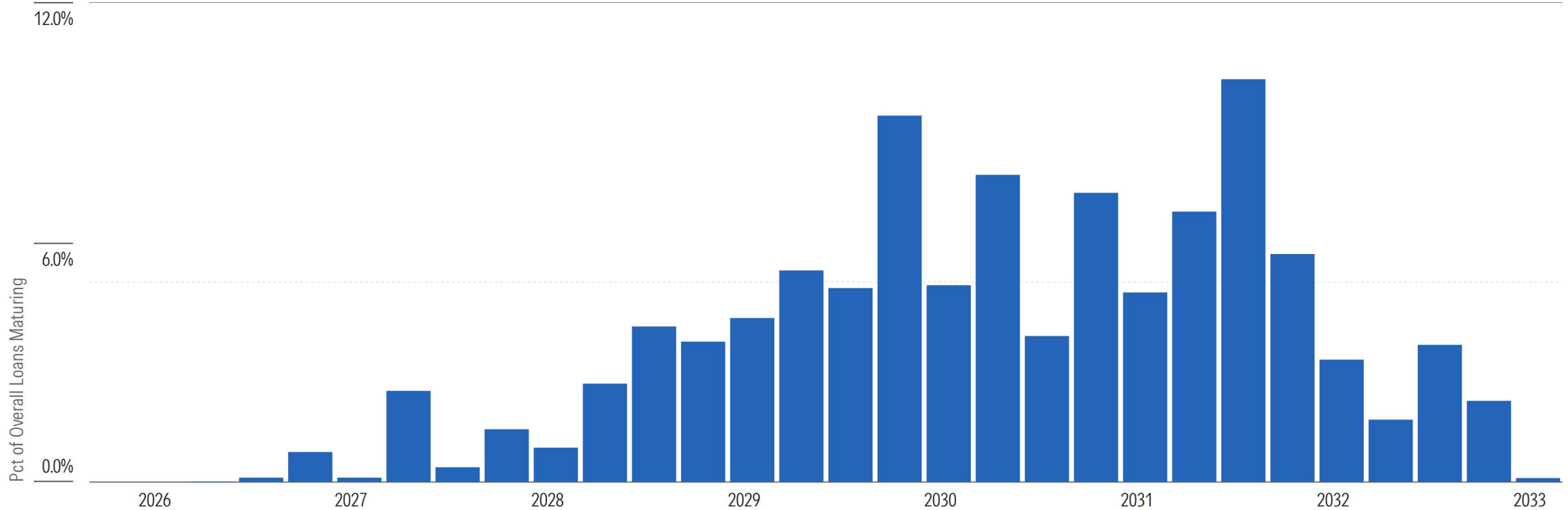


When Are the Loans Actually Coming Due?

Most loans in unlisted BDCs don't mature until after 2027. That isn't a problem by itself, since loans often pay off early. But in a stressed scenario—where repayments slow, mergers and acquisitions and IPO activity remain muted, and investors keep asking for their money back—this maturity profile could strain liquidity. Large inflows over short periods can also create challenges. Managers may feel pressure to put cash to work quickly, which can lead to uneven loan maturities down the road that may not line up with future redemptions.

Unlisted BDCs' Aggregate Nonsoftware Loan Maturity Profile

Few loans come due before 2028, though loan payoffs typically result in shorter effective lives of the loans

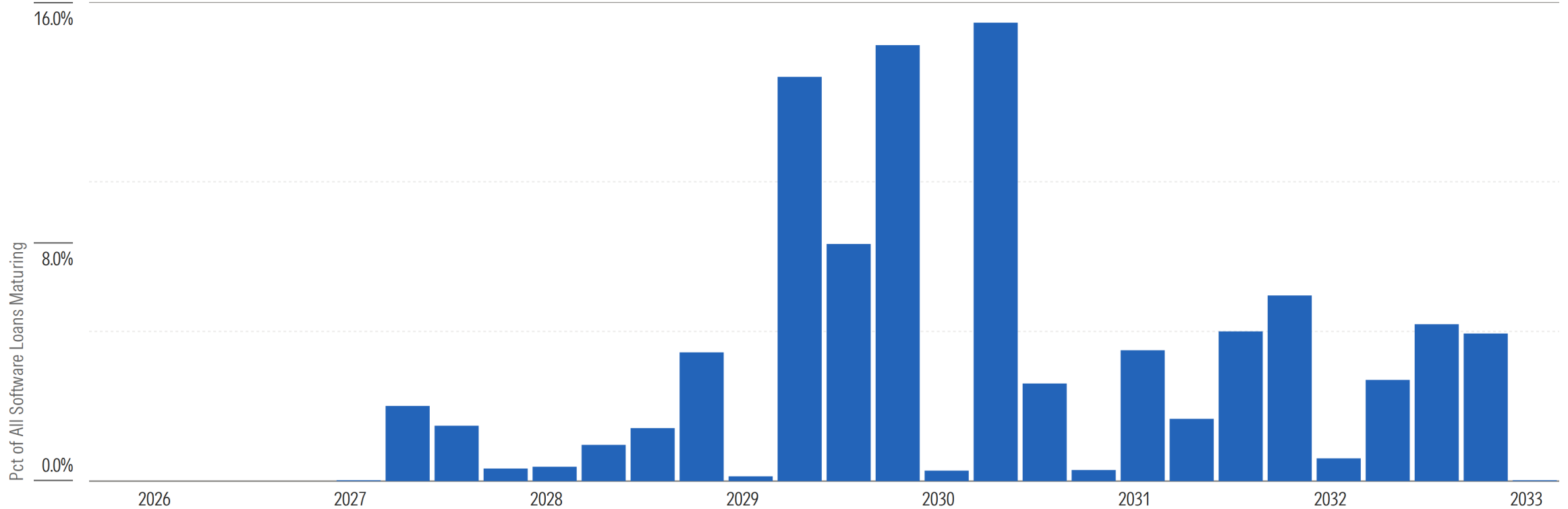


What About the Software Loans?

Software loans, in particular, may be at risk of seeing lower early payoffs than their historic norms, given the current uncertainty of the businesses due to AI disruption. For these loans, the realized life of the loan may actually come close to the maturity dates, meaning the contractual length of the software licenses is all that more important. For funds with heavy software exposure, continued elevated redemptions could create liquidity challenges.

Unlisted BDCs' Software Loan Maturity Profile

The majority of software loans are set to mature in between 2029 and 2030.



Appendix

Data and Methodology

- Data includes all semiliquid funds in the following categories: venture capital, private equity, private debt – direct lending, private debt – general, and private multi-asset. Funds from the bank-loan category are also included to provide comparisons to a more liquid set of competing funds.
- Data is derived from funds with holdings data reported in Morningstar Direct and represents the latest known portfolio for each fund.
- Due to the nature of private investing, there are no common identifiers like CUSIPs or ISINs with which to match underlying holdings. Thus, holdings matching is largely done via name matching.
- This report focuses on issuer identification and not specific securities. That is, the goal is to surface underlying company exposures regardless of whether it is via a revolver, a term loan, or an equity stake, for example.
- To identify underlying issuers, nonessential data, like specific security markers and generic corporate terms, among other items, were stripped from holdings' names to get to the root issuer. Fund holdings are stripped down to sponsor, fund, and vintage-specific details.
- Still, name stripping can be insufficient as semiliquid funds often invest in underlying businesses via different legal entities like co-investment vehicles. Where possible, co-investment vehicles were matched to underlying businesses via publicly available information, including SEC filings, fund company websites, press releases, and credit rating actions, among others.
- The figures in this report are estimates based on available data. There is a strong reason to believe that the findings understate the portfolio overlap, as many co-investments, for instance, were not successfully matched to an underlying company. Additionally, it is possible that some false matches were made due to redundant naming conventions.
- On top of that, many semiliquid funds own pooled vehicles that may have overlapping exposure to companies in other portfolios, but without knowing what those vehicles own, it is difficult to know the exact overlap. Pooled and structured vehicles were separately identified, though some may have been missed.
- Industry exposures based on GICS Industry or GECS Industry Group classifications and sourced from PitchBook and Morningstar Direct.
- Asset figures are presented on a gross basis.

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