



Some Thoughts on Private Markets

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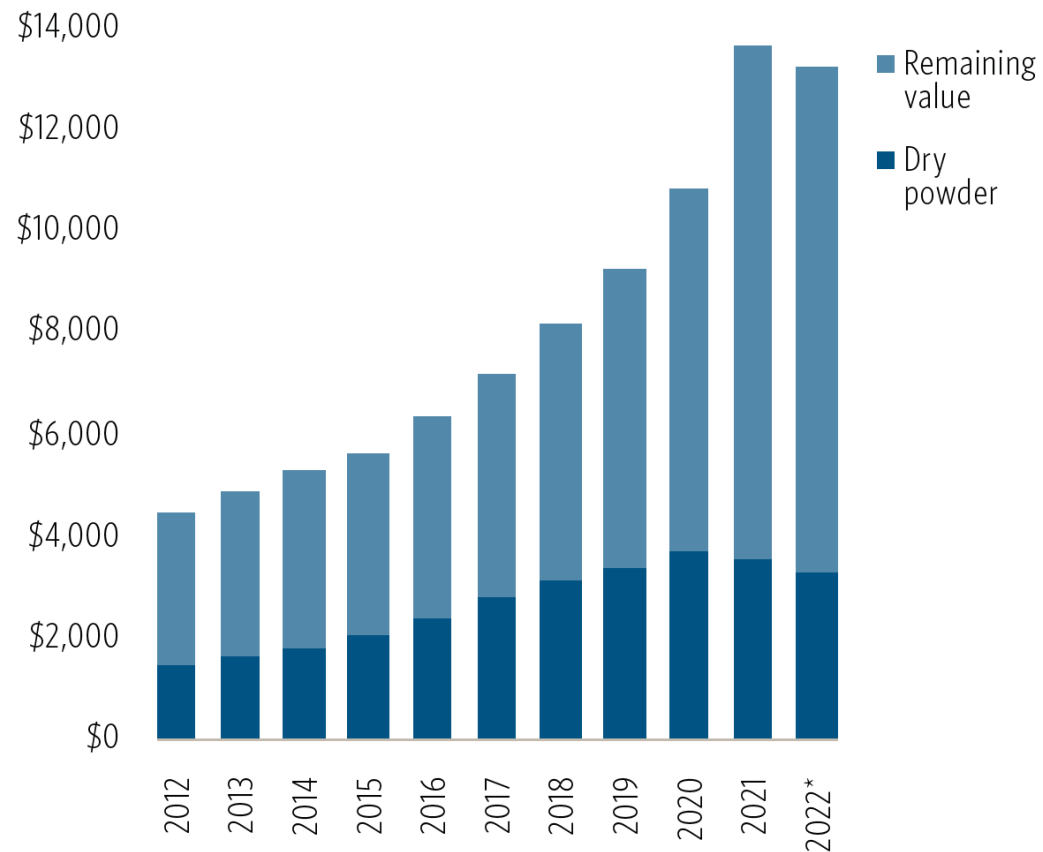
Presentation to BIS Pension Fund Workshop on Private Markets

Overview

- How have private capital and private credit funds grown?
- Why have private capital and private credit funds grown? Will it continue?
 - Why have banks pulled back and private credit funds stepped in?
- What do we know about private credit funds / direct lenders?
 - What types of firms are the main borrowers?
 - » Why do they borrow from direct lenders instead of banks?
 - Who are the main investors in private credit funds?
- What are the systemic risks of direct lenders relative to banks and CLOs?
 - Should regulators be concerned?

How Has PC Grown?

Private capital AUM (\$B)



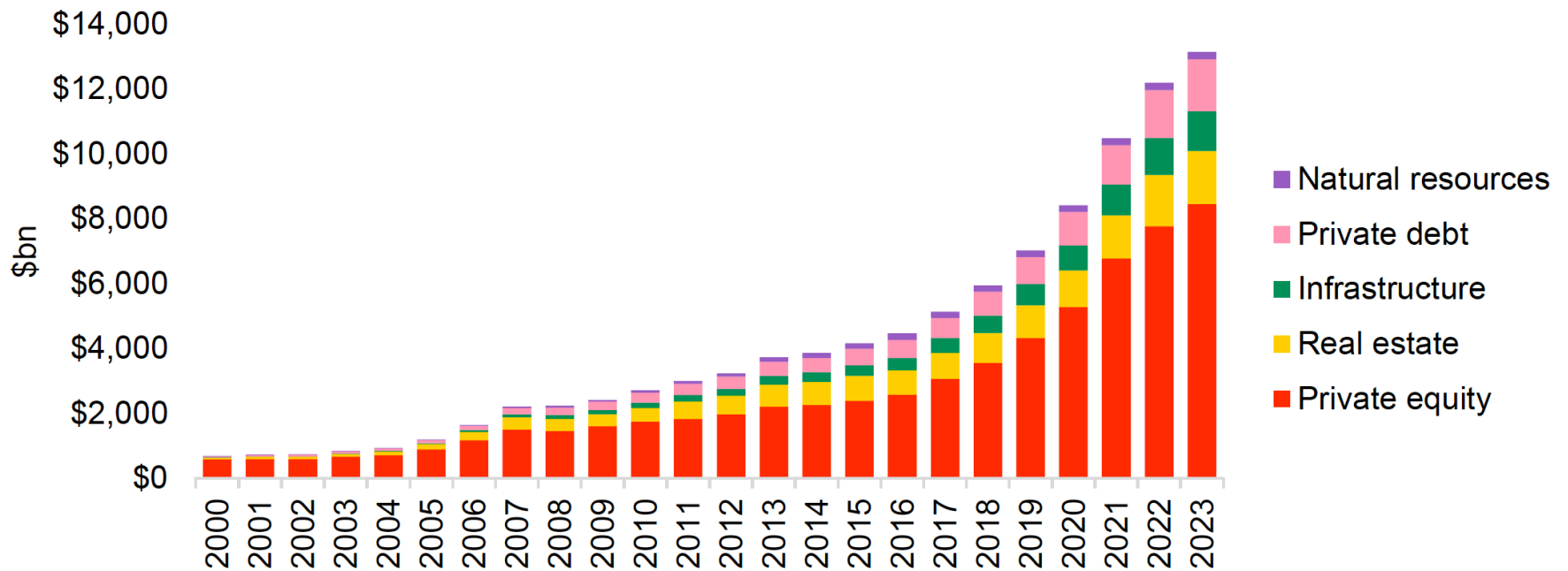
Source: PitchBook • Geography: Global

*As of December 31, 2022

Steven N. Kaplan

How Has PC Grown?

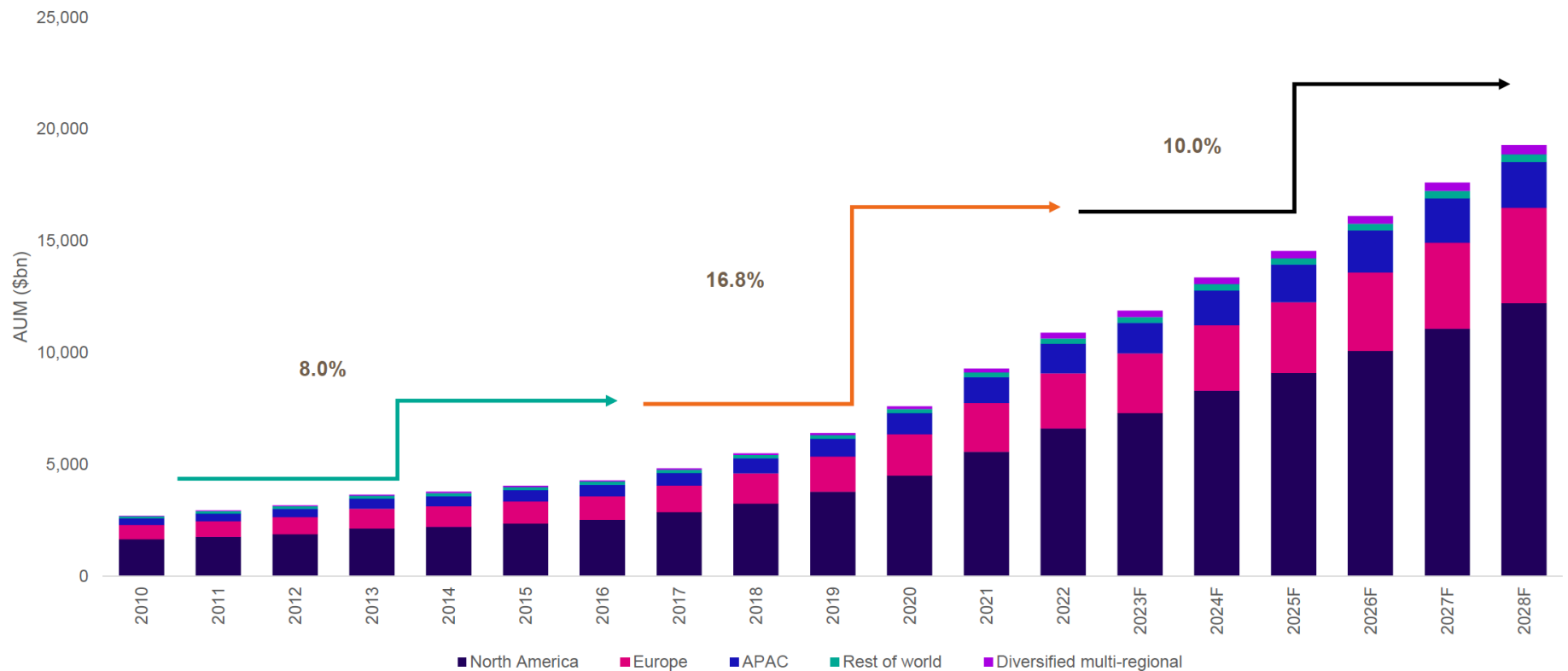
Assets under management (unrealized value and dry powder) across alternative asset classes



Source: BlackRock, Preqin. As of each calendar year-end. 2023 is as of March 2023 (most recent available). To avoid double counting of available capital and unrealized value, fund of funds and secondaries are excluded.

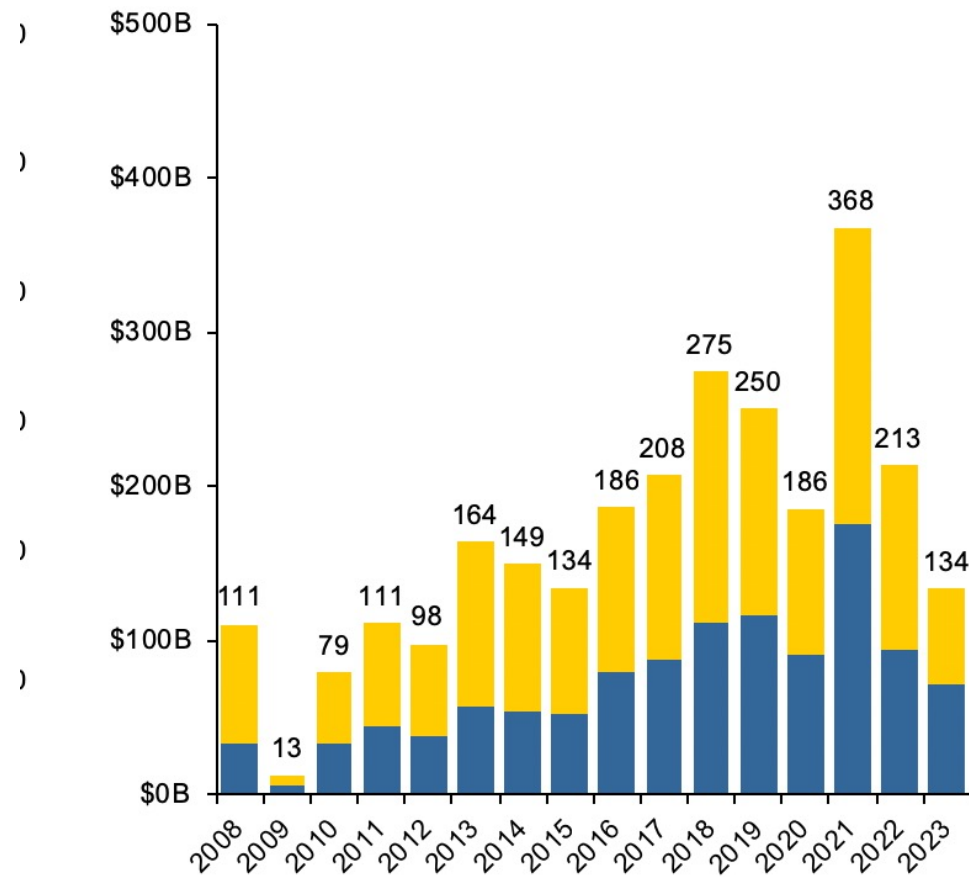
How Has PC Grown?

Private capital forecast by Prequin to grow to \$19.3tn, led by North America



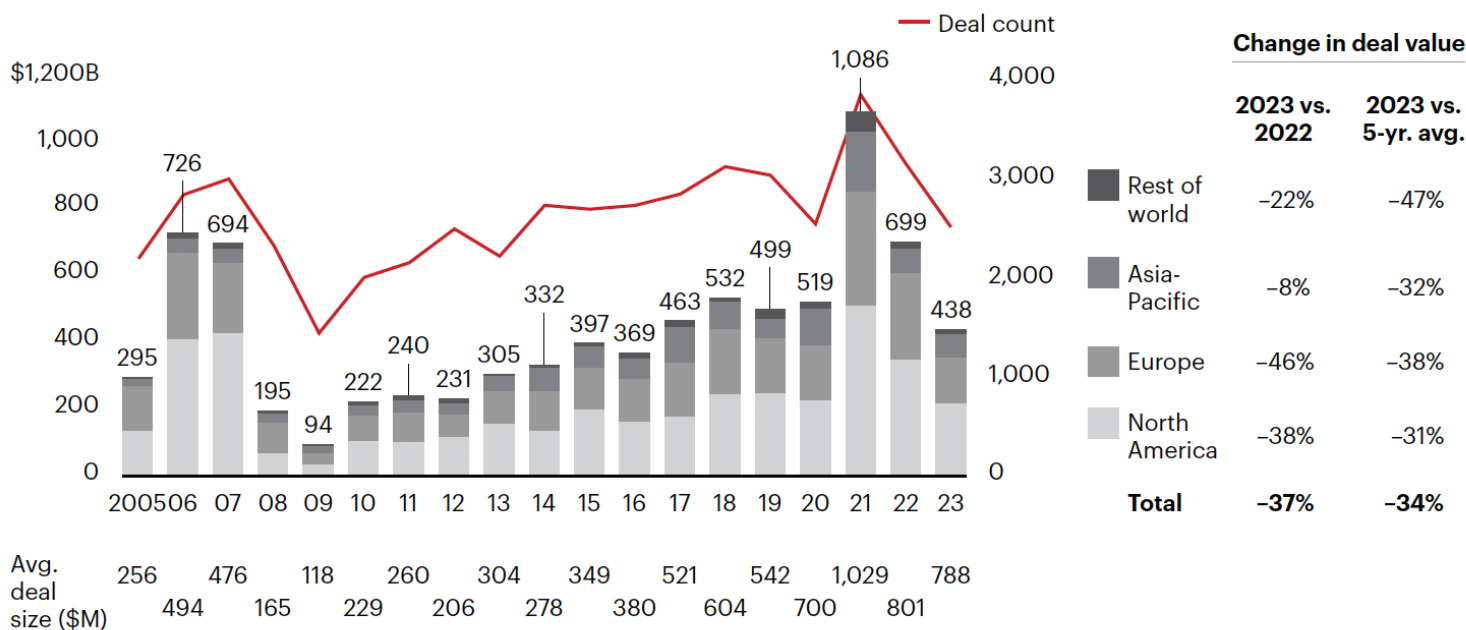
US LBO Volume (LCD)

Annually



Global LBO Volume

Global buyout deal value, by region



Notes: Excludes add-ons; excludes loan-to-own transactions and acquisitions of bankrupt assets; based on announcement date; includes announced deals that are completed or pending, with data subject to change; geography based on target's location; average deal size calculated using deals with disclosed value only
 Source: Dealogic

Bain (2024)

Where does private debt / direct lending fit?

- Direct lenders – largest and fastest growing part of asset class.
 - Most typically senior debt / unitranche in buyout deals.
- CLOs.
 - Invest in syndicated leveraged loans.
- Mezzanine.
- Distressed.

Definition of Private Debt / Private Credit

- Not traditional bonds. Not traditional bank debt.
- Private refers to instrument, not borrower.
 - Public firms can use private debt. But private firms use private debt more.
- What does it include?
 - Private debt (PD) funds:
 - » Direct lending (DL), mezzanine, distressed debt.
 - Collateralized loan obligations, CLOs (syndicated leveraged loans).
- Our focus:
 - Direct lenders (which include U.S. BDCs).
- Direct Lending = Bilateral loan negotiation without bank intermediation.
 - Low syndication and secondary market trading.
- Top PD funds:
 - Antares, Apollo, Barings, Blackstone, Carlyle, Golub, New Mountain.

Where does private debt / direct lending fit?

Table A: Key attributes by lender type

	Private Debt Funds	Commercial Banks	CLOs	Finance Companies
Company size	Mostly middle-market	All	Mostly large-cap, some middle-market	Mostly SME
Loan characteristics				
Syndication	Sometimes, but not frequent	Frequent	Always	N/A (likely not frequent)
Loan type	Term loan / Revolver	Term loan / Revolver	Term loan	Revolver
Cash flow-based vs asset-based	Mostly cash flow-based	Cash flow- and asset-based	Mostly cash flow-based	Mostly asset-based (Gopal and Schnabl, 2022)
Covenants	Maintenance & incurrence	Maintenance & incurrence	Typically only incurrence, i.e. "Cov-lite"	N/A
Origination / liquidity	Mostly self-originated & held to maturity	Self-originated & sold off to institutional investors	Bought through primary market syndication or secondary market trades	N/A (likely mostly self-originated)
Typical use of leverage (debt to total capital)	< 50%	> 90% (FSB, 2021)	> 90% (Kundu, 2022)	80-90% (FSB, 2020)
Source of financing	Most equity, some bank debt	Mostly deposits and other short-term debt	Long-term bonds, tranching by seniority	Mostly long-term debt, some commercial paper (Gopal and Schnabl, 2022)

Sources:

FSB (2020). Global Monitoring Report on Non-Bank Financial Intermediation. Link: <https://www.fsb.org/wp-content/uploads/P161220.pdf>

FSB (2021). Leverage in the Financial Sector. Link: <https://www.federalreserve.gov/publications/may-2021-leverage-in-the-financial-sector.htm>

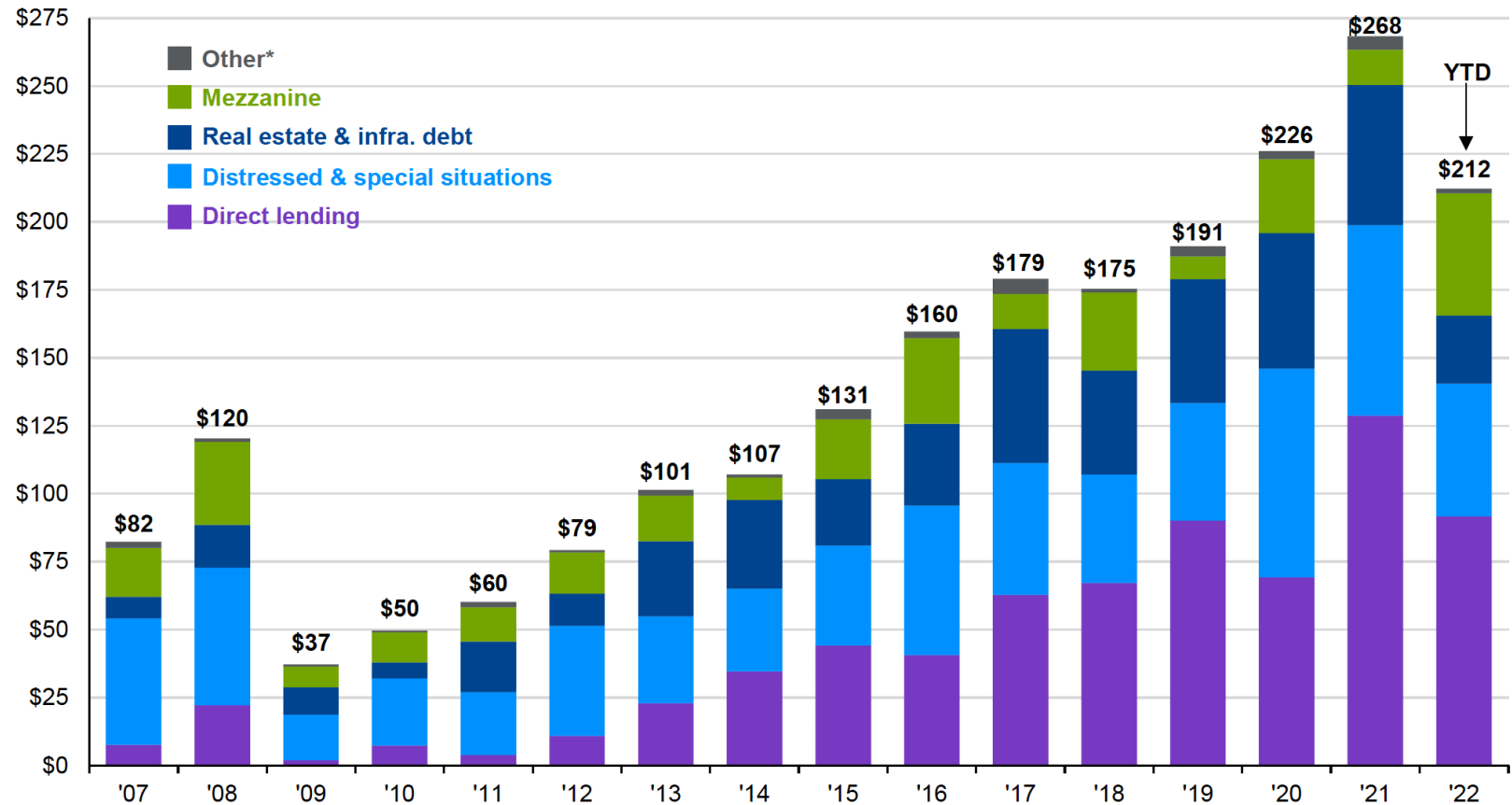
Gopal, M. and P. Schnabl (2022), Jang (2020), Kundu (2022).

Private debt fundraising

GTA U.S. 47

Private debt fundraising by type

USD billions



Sources: Preqin, J.P. Morgan Asset Management. *Other includes venture debt and fund of funds. 2022 fundraising figures are year-to-date and based on availability as of November 2022.

Data is based on availability as of November 30, 2022.

Figure 1: Investment into Private Credit over Time

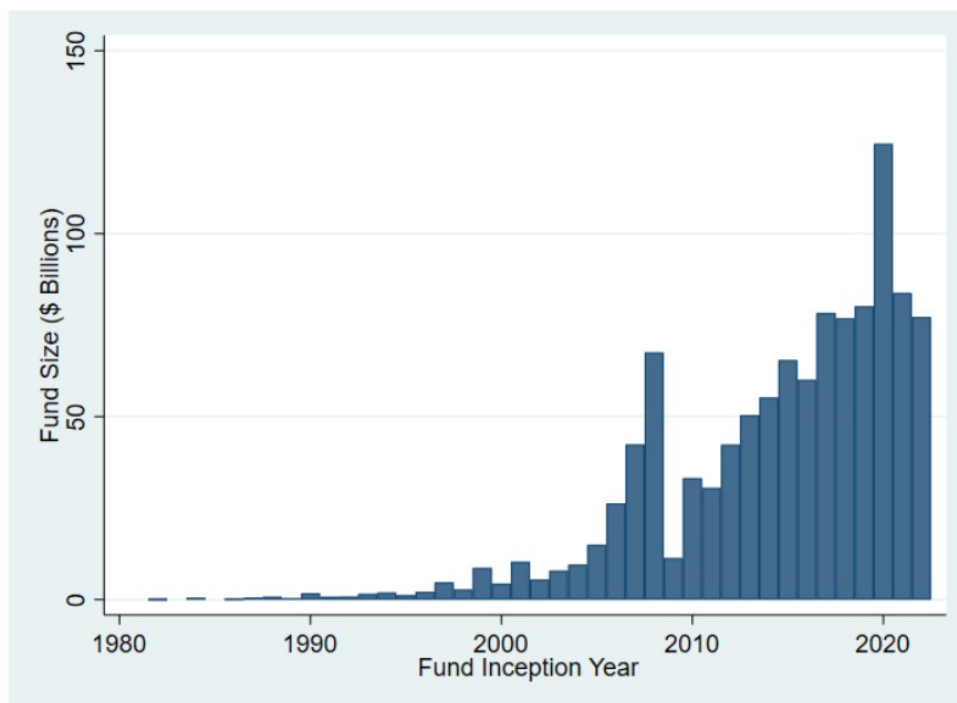
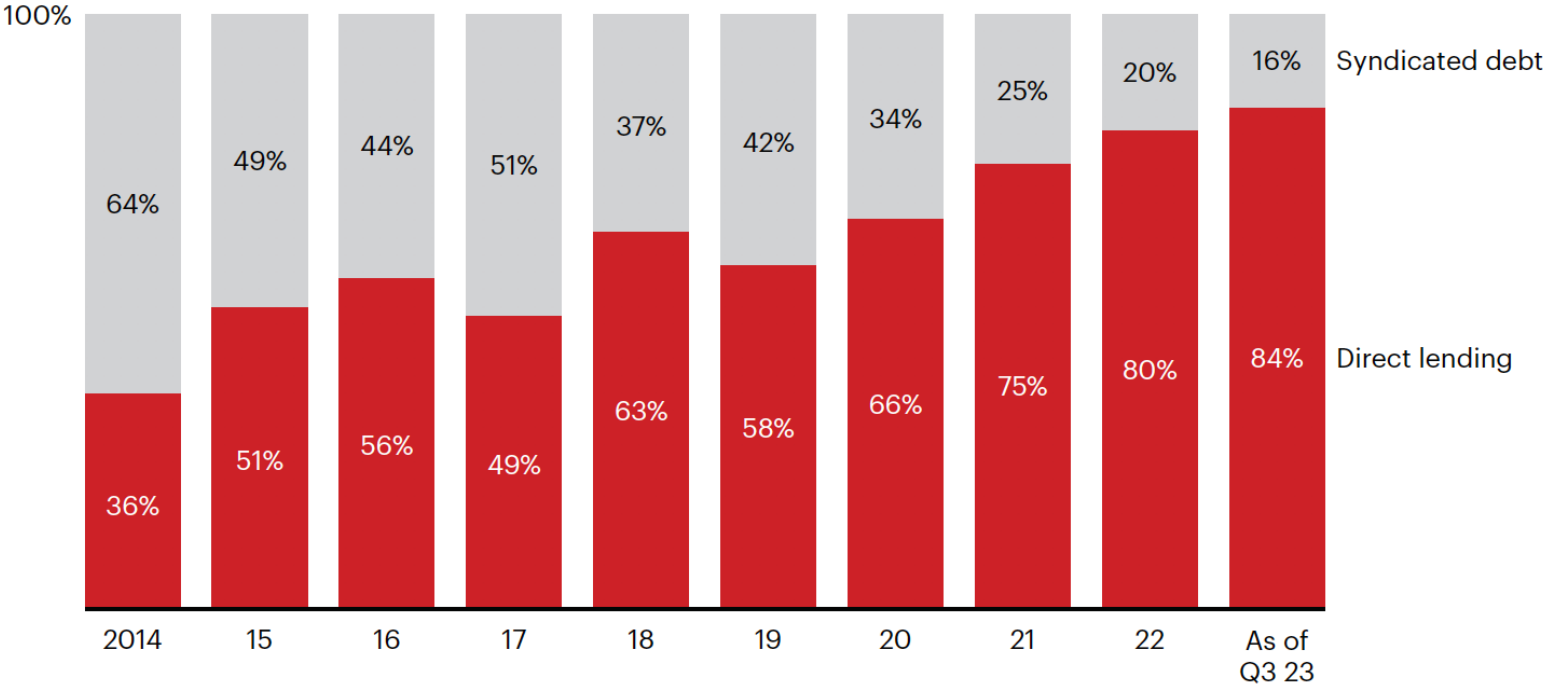


Figure 1 plots the total fund size of the entire sample of credit funds in the Burgiss sample by vintage year in which the fund was created. Source: Burgiss-MSCI

Erel et al. (2024)

Figure 10: With banks pulling back, private lenders continued to expand their share of financing middle-market deals

Share of US middle-market LBO loan issuance, by debt type



Notes: Middle market includes issuers with revenues less than \$500 million and total loan package less than \$500 million; direct lending includes nonsyndicated facilities, including club lending
 Source: LSEG LPC

Bain (2024)

How have private credit funds grown?

- Also see:
 - [The Fed - Private Credit: Characteristics and Risks \(federalreserve.gov\)](https://www.federalreserve.gov)
 - » By Fang Cai and Sharjil Haque



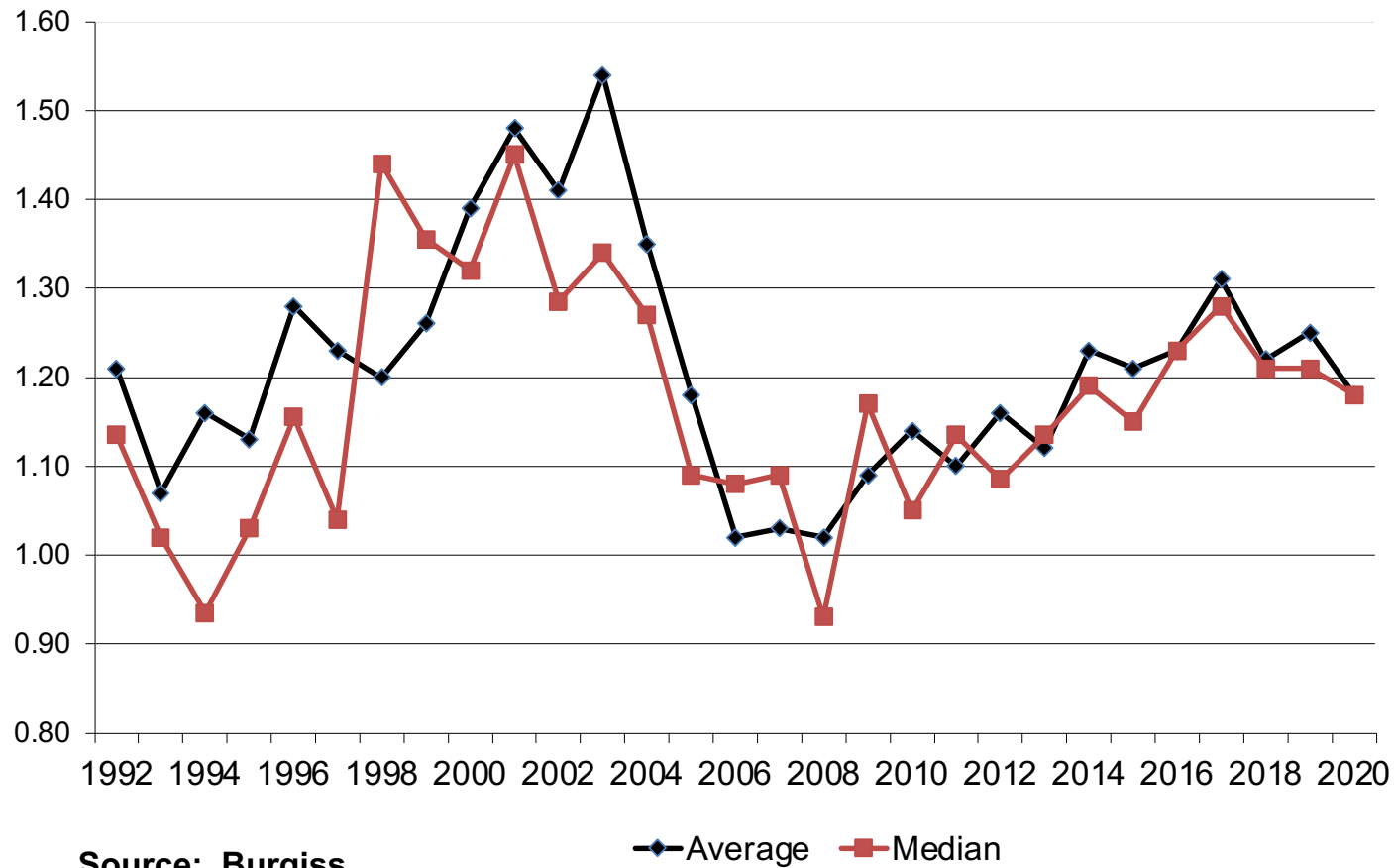
Why have private capital funds grown?

- Performance?
- Regulation?

How is Performance Measured?

- Kaplan and Schoar (2005) introduced PME.
 - = market-adjusted multiple.
 - PME = Public Market Equivalent.
 - » $\frac{\sum(\text{S\&P 500 discounted value of cash outflows})_t}{\sum(\text{S\&P 500 discounted value paid in capital})_t}$
 - » Compares fund to investment in S&P (including dividends).
 - » If $\text{PME} > 1$, then LPs did better than S&P 500.

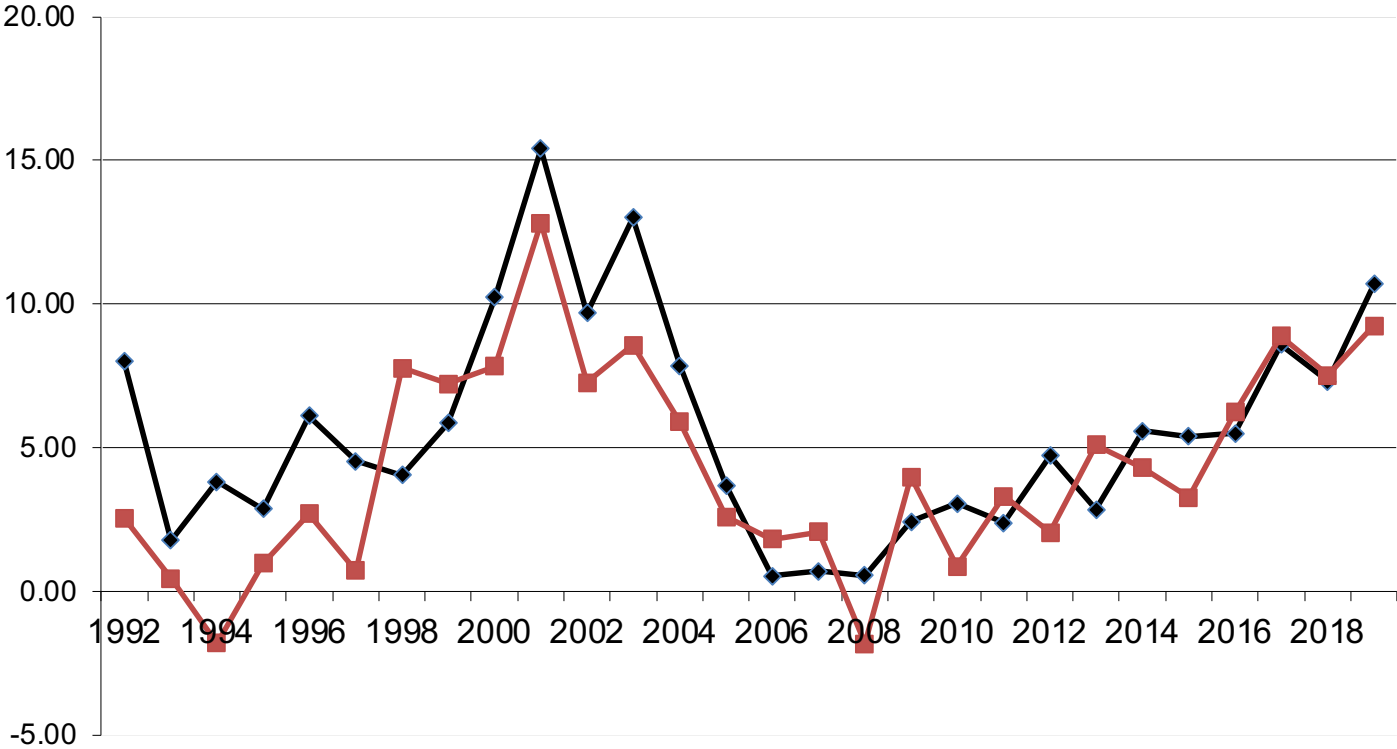
U.S. Buyout PME by Vintage Year, 1992 - 2020 Pooled Ave. and Median as of 2023 Q3



Source: Burgiss

◆ Average ■ Median

U.S. Buyout Direct Alphas by Vintage Year, 1992 - 2019
Pooled Ave. and Median as of 2023 Q3

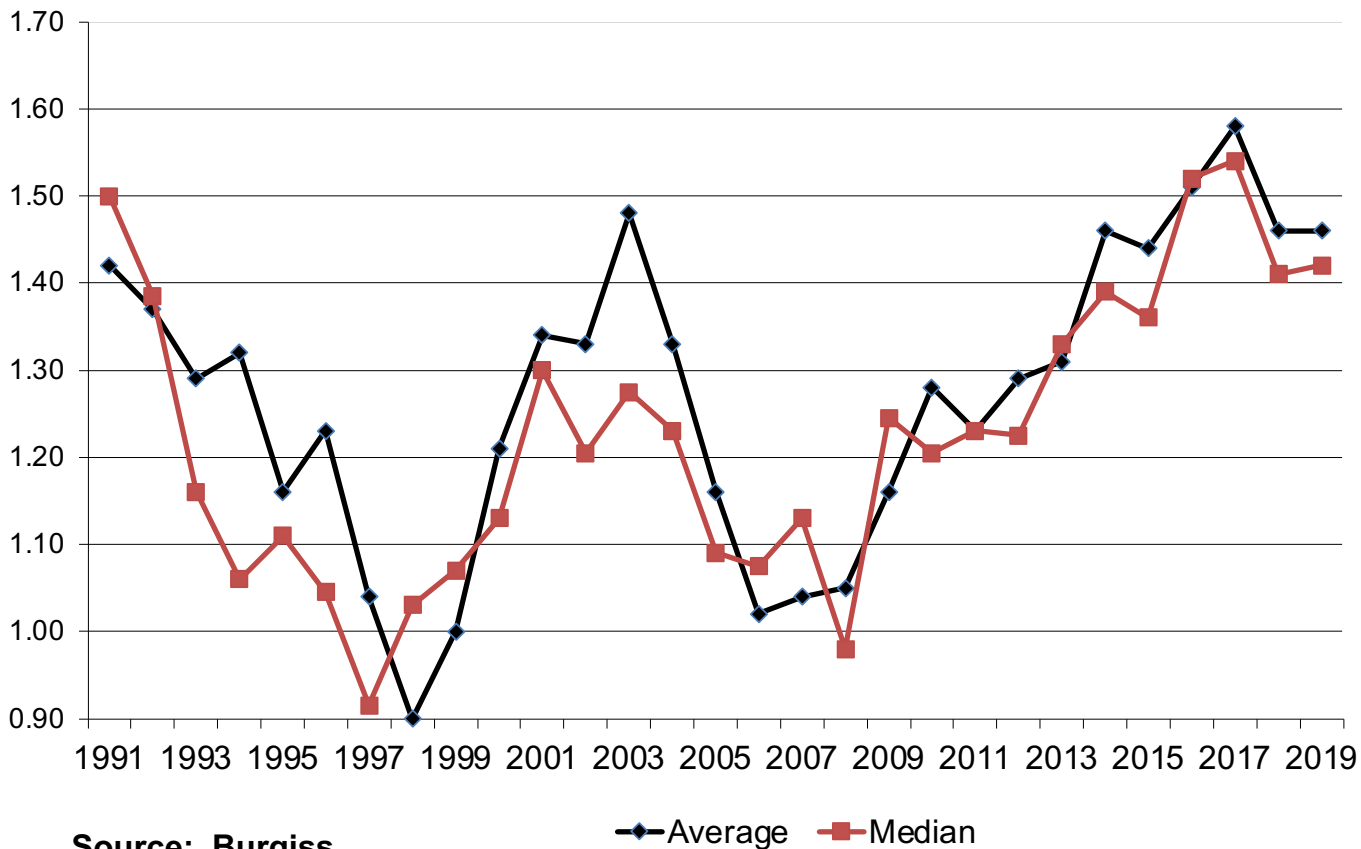


Source: Burgiss

◆ Average ■ Median

Even better relative to the Russell 2000.

U.S. Buyout PME by Vintage Year, 1991 - 2019
Pooled Ave. and Median as Pooled Ave. as of 2023 Q3
Russell 2000



Source: Burgiss

◆ Average ■ Median

- **For last 30 years, buyout funds have outperformed the S&P 500 net of fees in every vintage year.**
 - **Also true for European buyout vs. MSCI World Index.**

- What about naysayers? Phalippou and recent FT article?
 - They are simply wrong.
 - Buyout has outperformed public markets net of fees.
 - » Does not mean will happen going forward.

Is it appropriate to assume a beta of 1 for buyout funds?

- The performance does not appear to be explained by leverage / risk.
 - Betas measure how funds vary with overall stock market.
 - Korteweg and Nagel (2022) estimate buyout fund betas using cash flows and find them to be less than or equal to 1.0.
 - Brown et al. (2022), “The market beta of an average buyout (venture) fund is around 1.0 (1.4).”

Performance of Private Debt Funds

- Erel et al. (2024).
 - Private debt funds (not just direct lending funds).
 - Vintages through 2015.
 - Significant excess returns compared to similarly rated bonds.
 - » Likely attractive to investors.
 - Positive, albeit not significant excess returns using GPME with equity and debt components.
- Suhonen (2023) finds that BDC (direct lending funds) NAVs have positive alpha relative to leveraged loan index.
- Munday et al (2018) find that direct lending funds have outperformed leveraged loans and HY bonds.



Why have private capital funds grown?

- Performance?
- Regulation?

Why have private capital funds grown?

- Private equity has increased markedly.
 - Companies and executives find it less attractive to be public and more attractive to be privately-owned.
 - » Sarbanes Oxley, SEC disclosure, quarterly reporting.
 - » ISS / Compensation.
 - PE firms also provide operational help.

Why have private debt / direct lending funds grown?

- Banks discouraged from corporate lending, particularly leveraged loans. Erel and Inozemstov (2024)
 - Increase in regulatory capital requirements.
 - » Tighter capital requirements (Dodd-Frank and Basel III) made it costlier for banks to hold loans with low / no rating.
 - More loan syndication by banks.
 - More lending by CLOs, mutual funds, hedge funds, insurance cos, finance cos, etc. (Irani et al 2021; Chernenko et al 2022; Gopal Schnabl 2022).
 - Regulatory guidelines.
 - » Tighter lending standards (2013 Leveraged Lending Guidance) discouraged bank lending at $EBITDA < 0$ or $Debt / EBITDA > 6$.
 - » Such firms less likely to borrow from OCC-supervised banks.
 - Post-GFC stress tests.

Why have private debt / direct lending funds grown?

Timing and Flexibility

■ Timing

- CLOs / syndicated loans have timing issues.
 - » Banks have to hold loans for some period until CLOs buy them.
 - » Creates timing risk.
 - » See Bruche et al (2020, RFS) who analyze the bank pipeline risk in syndicated loans.
 - » Big problem in 2022.
 - Banks took big losses on Twitter, Citrix, Nielsen, etc.
- Direct lenders do not have timing issues.

■ Flexibility

- Direct lenders better than banks and CLOs in dealing with defaults.
 - » Block et al. (2024) and Jang (2024).

Will growth continue?

- Forces have not changed.
 - Banks disadvantaged.
 - » Discouraged from holding risk.
 - » Less flexible.
 - » Basel III endgame proposal?
 - CLOs disadvantaged.
- Unless regulation of direct lenders increases.

What do we know about private credit funds / direct lenders?

A Survey of Private Debt Funds

Joern Block
Young Soo Jang
Steven N. Kaplan
Anna Schulze

RCFS (2024)

What do we know about private credit funds / direct lenders?

- Surveyed 38 US and 153 European PD funds in Summer 2021.
 - Predominantly Direct Lending Funds (DLFs).
 - Combined AuM of at least \$136B and €180B.
 - » Roughly 1/3 of private debt market at time.
- We asked the GPs:
 - How do they source, select and evaluate deals?
 - » How do they differ from bank financing / CLOs?
 - How do they monitor deals in which they invest?

Summary of Results

- PD investors provide primarily cash flow-based loans.
- Believe they finance companies and provide leverage banks would not.
- Target unlevered returns that appear high relative to their risk.
- Use leverage in their funds, but appreciably less than banks and CLOs.
- Use and negotiate for both financial and incurrence covenants to monitor.
- Believe the presence of PE sponsors helps them lend more and craft more effective covenants.

Survey Summary Data

- Leverage of funds average 40%.
 - Significantly lower than banks. 80% to 90%.
 - Significantly lower than CLOs. 90%.

Pre-Investment: Sourcing, Selecting and Evaluating

- PE sponsorship makes up 78% (42%) of US (European) PD deal flow.
- Due diligence:
 - Hours spent (US): 100 hours spent per deal.
 - » Similar to VCs. (Gompers et al, 2020)
 - Outsourcing to third party: 32% of US and 58% of European.
- Investment criteria:
 - US:
 - » Stable cash flow most important by a wide margin.
 - Europe:
 - » Mgmt. team and competitive position as important as cash flow

Target Returns & Use of Leverage

PD firm characteristics	Europe		US	
	Mean	Median	Mean	Median
Levered IRR	9.55	9.5	11.18	11.5
Unlevered IRR	8.7	7.5	8.16	7.5
Fund level Debt to Total Capital	0.11	0	0.40	0.25

- Interest rates at time of survey:
 - German 5-year: -0.7%; US 5-year 0.8%; US BB bond: 3.2%.
- Substantial premium, even unlevered – 9.4% for Europe / 7.4% for US
 - Exceed traditional equity risk premium of 6%
 - With senior debt risk.
 - Why so high?
 - Some advantage?
 - Not in equilibrium?
- Consistent with Erel et al. (2024) who find positive gross alphas.

Other Characteristics

- Investors in funds.
 - Pension funds and insurance companies.

- Portcos
 - Diverse set of industries.
 - Mid-cap in size – revenue of \$289 M (US) and €170 M (Europe).

- Loans
 - Primarily senior debt / term loans.
 - US primarily leveraged buyout loans.
 - Europe spread evenly among buyouts, expansion and capital expenditure financing.
 - 5-year maturities.

Private Debt versus Bank Financing

- What % of portcos would not get bank financing?
 - Roughly 50%.
 - Why?

Panel A: Fraction of portfolio companies not able to get bank financing without private debt

Percentage of portfolio companies that would be able to get bank financing	Europe		U.S.	
	N	%	N	%
0%	10	6.5%	4	11.8%
1 - 20%	23	15.0%	7	20.6%
21 - 40%	25	16.3%	6	17.6%
41 - 60%	26	17.0%	5	14.7%
61 - 80%	26	17.0%	8	23.5%
81 - 99%	27	17.6%	7	20.6%
100%	16	10.5%	0	0.0%
Number of respondents	153		34	

Supply-side: Why would banks not finance companies reliant on PD?

Answer choices	Europe		US	
	% of respondents	% of responses	% of respondents	% of responses
Tangibility: Firm has low amount of tangible assets as quality collateral	55.2%	22.2%	53.3%	19.8%
Profitability: Cash flow is too low or unstable	30.1%	12.1%	26.7%	9.9%
Size: Firm size is too small for bank syndication	52.4%	21.1%	70.0%	25.9%
Verifiability: Due diligence is messy due to less clean financials or a lack of sophisticated internal systems	45.5%	18.3%	50.0%	18.5%
Specialization: Firms operating in niche sectors	37.8%	15.2%	23.3%	8.6%
Other/s	28.0%	11.2%	46.7%	17.3%

DLs believe they are better at evaluating or managing cash flow risk than banks.

Demand-side: Why do firms choose private debt over bank debt?

Answer choices	Europe		US	
	% of respondents	% of responses	% of respondents	% of responses
Certainty and speed of execution (vs long / uncertain bank syndication process)	83.0%	23.8%	91.2%	23.1%
Stable relationship with lender's expectation to hold to maturity (vs bank originate-and-distribute model)	34.6%	9.9%	64.7%	16.4%
More flexible covenant structure	52.9%	15.2%	76.5%	19.4%
Diversification of financing sources	39.9%	11.4%	23.5%	6.0%
Longer investment horizon than banks are willing to support	39.2%	11.2%	26.5%	6.7%
Higher leverage than banks are willing to support	54.2%	15.5%	82.4%	20.9%
Did not approach banks due to fear of rejection	6.5%	1.9%	8.8%	2.2%
Bank loan application was rejected	28.8%	8.2%	5.9%	1.5%
Other/s	9.8%	2.8%	14.7%	3.7%

Commitment, leverage, covenant flexibility appear to be most important.

Suggest that PD serves firms that banks avoid because of size, lack of transparency, lack of commitment and lack of tangible assets.

Post-Investment Monitoring Covenants and Renegotiation

- Overall, PD funds primarily use cash flow-based covenants.
 - largely cash flow-based lenders.
 - appear to be more cash flow-based than banks who tend to limit cash flow-based lending to larger firms.
- PD funds resemble banks in their role of monitoring borrowers' distress using covenants and trying to resolve distress through out-of-court renegotiation instead of directly resorting to a bankruptcy court.

Direct Lending Funds Appear More Efficient in Resolving Distress

- Jang (2024) studies a large sample of direct lending funds.
 - More flexibly renegotiated COVID distress than banks.
 - » Twice as much equity injection by PE sponsors.
 - » Less exit from loans.
 - Previous PE sponsor relationships predict more credit supply during COVID.

Implications

- DL is both different from / similar to bank loans and syndicated loans.
- Banks
 - Like banks, DL funds make loans and monitor using covenants.
 - Different from banks, DL funds:
 - » make cash flow-based loans to smaller companies;
 - » provide more leverage than banks to those companies;
 - » charge higher interest rates;
 - » appear to monitor more often;
 - » tend not to make asset-based loans.
 - » use less leverage in their funds;

Implications

- DL is both different from / similar to bank loans and syndicated loans.
- CLOS
 - Like CLOs:
 - » make cash flow-based loans;
 - » rely on PE sponsors;
 - » use negative covenants.
 - Different from CLOs:
 - » lend to smaller companies;
 - » use financial covenants (and are more monitoring intensive);
 - » use less leverage in their funds.

Systemic Risk: Direct Lenders vs. Banks and CLOs

- Banks
 - 15% Equity / 85% Liabilities.
 - Duration mismatch.
 - Loan decisionmakers do not have high powered equity incentives.
- CLOs (Cordell et al. 2022):
 - 11% Equity / 89% Debt (from banks and insurance companies).
 - High powered incentives: management fee and incentive fee.
 - Can actively trade loans.
- Direct lenders:
 - 40% - 50% Equity (LPs) / 50% - 60% Debt (from banks).
 - Long-term partnerships (10 years). Duration matched.
 - » Hard for LPs to withdraw money once capital called / invested.
 - Buy and hold investors in loans.
 - High powered incentives: Management fee (1.5%) and carry (15%).

Systemic Risk: Direct Lenders vs. Banks and CLOs

- Assume there are 20 LBOs funded with 50% debt and 50% equity.
 - Then, there is an awful shock that leads 10 of them to default.
 - » This would be historically poor results.
 - Let's say those defaulted loans are valued at 50% of par.
- Bank funded LBOs.
 - Banks would be on the hook for the 10 defaulted deals.
 - » They would lose 25% of loan value. ($\frac{1}{2} -50\% + \frac{1}{2} 0\%$).
 - Could hurt / put a dent in bank capital that is only 15% of capital.
 - » Systemic risk?
 - Giannetti and Meisenzahl (2021) find that in downturns, banks and CLOs sell underperforming syndicated loans, hampering renegotiation and lowering ratings.

Systemic Risk: Direct Lenders vs. Banks and CLOs

- Assume there are 20 LBOs that are funded with 50% debt and 50% equity.
 - Then, there is an awful shock that leads 10 of them to default.
 - » This would be historically poor results.
 - Let's say those defaulted loans are valued at 50% of par.
- CLO funded LBOs.
 - CLOs would lose 25% of loan value. ($\frac{1}{2} -50\% + \frac{1}{2} 0\%$).
 - Would be a large dent in 11% equity capital.
 - Bank lenders to CLOs would be adversely affected.
 - Might try to sell loans.
 - Systemic risk?
 - » Giannetti and Meisenzahl (2021).
 - » Kundu (2023) finds fire-sale risks in CLOs after a negative shock.

Systemic Risk: Direct Lenders vs. Banks and CLOs

- Assume there are 20 LBOs that are funded with 50% debt and 50% equity.
 - Then, there is an awful shock that leads 10 of them to default.
 - » This would be historically poor results.
 - Let's say those defaulted loans are valued at 50% of par.
- Direct lending funded LBOs.
 - 25% loss in value borne entirely by non-bank investors (LPs and GPs) in fund.
 - » LPs cannot withdraw funds.
 - Fund level debt from banks would be unaffected.
 - Less likely to trade loans.
 - Little systemic risk.

Systemic Risk: Direct Lenders vs. Banks and CLOs

- Furthermore:
 - Direct lenders appear more effective than banks and CLOs in dealing with distress / defaults.
 - » Jang (2024).
 - Direct lenders have more strongly aligned incentives than banks to make right decisions.
 - Direct lenders have lower incentives to take poor risks than CLOs.
- **Positive that lending has moved and continues to move from banks and CLOs to direct lenders.**
 - **Would be hesitant to put unnecessary regulation on direct lenders.**

Summary

- How have private capital and private credit funds grown? **A lot**
- Why have private capital and private credit funds grown? Will it continue?
 - Why have banks pulled back and private credit funds have stepped in?
 - » **Greater regulation.**
- What do we know about private credit funds / direct lenders?
 - What types of firms are the main borrowers?
 - Why do they borrow from direct lenders instead of banks?
 - » **More leverage, more flexibility.**
 - Who are the main investors in private credit funds?
 - » **Pension funds and insurance companies.**
- What are the systemic risks of direct lenders relative to banks and CLOs?
 - Should regulators be concerned?
 - **Systemic risk is lower at direct lenders than at banks and CLOs.**

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