

QUANT RESEARCH

US Market Insights

A QUANTITATIVE PERSPECTIVE ON US PRIVATE MARKETS







Introduction

In early 2025, market sentiment is broadly positive, fueled by optimism following the November US elections and improving economic conditions. Investors are hopeful that a revival in dealmaking and exit activity, coupled with robust economic growth, will create a favorable backdrop for them. The Federal Reserve's (the Fed's) initiation of a rate-cutting cycle has provided relief, helping ease market concerns. However, tempered expectations for further cuts and lingering uncertainties about the materialization of a Goldilocks environment for private dealmaking leave questions unanswered.

Over the past few years, asset owners have faced a distribution drought across numerous private capital strategies, squeezing fund returns and leaving many LPs overexposed to private markets relative to their targets. However, dealmaking in private equity and venture capital began to gain momentum in the latter half of 2024, raising hopes that a wave of exits would follow. This would provide much-needed relief for investors and potentially reignite the fundraising flywheel.

The leveraged loan market has regained momentum, while private debt funds hold a substantial amount of dry powder. Intense competition has driven credit spreads to historic lows, leaving investors with narrower margins for error. However, elevated base rates have provided a strong tailwind, supporting overall total returns despite the tighter spreads.

Meanwhile, the real estate market has been among the hardest hit by the higher-rate environment, but property prices may have hit their trough. However, vacancy rates for office properties have continued to climb, while the multifamily sector has also faced challenges as new supply has come online. In infrastructure, there has been a sizable push to provide the picks and shovels to the AI theme exciting investors. This has led to growing ranks of digital infrastructure and energy transition players with capital to deploy.

We cover these trends and more in the latest edition of US Market Insights, our biannual bird's-eye view of private markets.

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Key takeaways

- Amid improving inflation, a stable labor market, and strong GDP growth, the Fed maintained benchmark rates at its first meeting of 2025, signaling a more cautious approach to future cuts. A prolonged higher-for-longer rate environment could continue to keep a lid on deal and exit volumes (page 10).
- Over the past decade, risk premiums across asset classes have shrunk, prompting investors to move into private markets. Recently, higher interest rates have lifted the lower-risk end of the efficient frontier, creating a flatter overall curve on which the benefits of diversification may be diminished (pages 26 and 27).
- Private market funds have faced a dismal distribution climate, with cash returns to LPs lagging significantly. Limited exits of portfolio companies have pushed NAVs for recent PE and VC vintages beyond historical norms (pages 30 and 32).
- The PE deal and exit environments remain below long-term trends, though exits more so as of late. Buyout portfolios continue to age with median holding times extending to decade-plus highs (pages 38 and 40).
- Secondaries have provided a solution to the exit drought, with global transaction volumes hitting \$160 billion in 2024 (page 41).
- In VC, AI & ML stands out as the only vertical experiencing growth in deal activity, accentuating its dominance in an otherwise sluggish market (pages 47 and 48).

- VC firms have tempered their expectations of raising a new fund, according to our
 <u>H2 2024 VC Tech Survey</u>. The number of active investors in the VC ecosystem has
 fallen since 2021, with new entrants hitting a decade-plus low (<u>pages 52</u> and <u>53</u>).
- As equities reached fresh highs in 2024, credit spreads tightened to new lows. Compensation for credit risk has declined across the board. While future returns from credit improvements may be muted, private debt still offers a total return profile that can elicit investor interest (pages 61 and 62).
- Despite the higher-rate environment, dividend recaps surged in 2024, as companies and sponsors digested the higher cost of capital and sought to return cash to investors (pages 65 and 66).
- Office properties remain at the center of the conversation for commercial real estate investors. While public office REITs showed strong performance over the past year, it was largely a rebound from a low point at the end of 2023. Despite these gains, delinquency and vacancy rates continue to rise, underscoring ongoing structural challenges that have also hit the multifamily sector (pages 77 and 78).
- Investors in real assets have funneled more and more capital into the digital infrastructure and energy transition themes over the past decade. Since 2014, specialist managers have raised \$44 billion for digital infrastructure and \$223 billion for energy transition (pages 89 and 91).



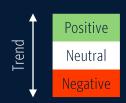
Macro landscape



Our "Macro environment dashboard" highlights broad economic and financial market trends. The current landscape features strong GDP growth, resilient job creation, a twisting yield curve, and robust public market performance.

Figure 1 Macro environment dashboard

		Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
	Real GDP growth (annualized)	6.4%	3.5%	7.4%	-1.0%	0.3%	2.7%	3.4%	2.8%	2.4%	4.4%	3.2%	1.6%	3.0%	3.1%	2.3%
SS	CPI (3-month annualized)	9.0%	4.8%	10.5%	10.0%	10.8%	1.8%	3.4%	4.0%	3.0%	4.4%	1.9%	4.6%	1.1%	2.1%	3.9%
ıomic	Core CPI (3-month annualized)	9.3%	3.1%	8.1%	5.5%	7.0%	6.0%	4.3%	5.0%	4.2%	3.1%	3.3%	4.5%	2.1%	3.1%	3.3%
Macroeconomics	Job creation	2.1%	2.8%	3.1%	2.4%	1.5%	1.9%	1.1%	1.7%	1.6%	1.3%	1.3%	1.5%	0.9%	1.2%	1.3%
Ласгс	Unemployment rate	5.9%	4.7%	3.9%	3.7%	3.6%	3.5%	3.5%	3.5%	3.6%	3.8%	3.8%	3.9%	4.1%	4.1%	4.1%
V	Consumer sentiment	85.5	72.8	70.6	59.4	50.0	58.6	59.8	62.0	64.2	67.8	63.8	79.0	77.2	66.4	70.5
	Business confidence	99.7	98.4	98.0	97.2	96.3	96.7	97.1	97.4	97.6	97.8	98.2	99.1	98.0	98.1	98.6
	Federal funds rate	0.1%	0.1%	0.1%	0.2%	1.2%	2.6%	4.1%	4.7%	5.1%	5.3%	5.3%	5.3%	5.3%	5.1%	4.5%
Yields	US 10-year Treasury	1.5%	1.5%	1.5%	2.3%	3.0%	3.8%	3.9%	3.5%	3.8%	4.6%	3.9%	4.2%	4.4%	3.8%	4.6%
Yie	US 2-year Treasury	0.3%	0.3%	0.7%	2.3%	2.9%	4.2%	4.4%	4.1%	4.9%	5.0%	4.2%	4.6%	4.7%	3.7%	4.3%
	High Yield OAS	3.04	3.15	3.10	3.43	5.87	5.43	4.81	4.58	4.05	4.03	3.39	3.15	3.21	3.03	2.92
	S&P 500	8.5%	0.6%	11.0%	-4.6%	-16.1%	-4.9%	7.6%	7.5%	8.7%	-3.3%	11.7%	10.6%	4.3%	5.9%	7.2%
SI	Russell 2000	4.3%	-4.4%	2.1%	-7.5%	-17.2%	-2.2%	6.2%	2.7%	5.2%	-5.1%	14.0%	5.2%	-3.3%	9.3%	10.1%
eturi	Nasdaq Composite	9.7%	-0.2%	8.4%	-8.9%	-22.3%	-3.9%	-0.8%	17.0%	13.1%	-3.9%	13.8%	9.3%	8.5%	2.8%	8.7%
Index returns	Morningstar/LSTA US Leveraged Loans	1.5%	1.1%	0.7%	-0.1%	-4.5%	1.3%	2.6%	3.2%	3.1%	3.5%	2.9%	2.5%	1.9%	2.0%	2.4%
	Nareit All Equity REITs	12.0%	0.2%	16.2%	-5.3%	-14.7%	-10.8%	4.1%	1.7%	1.2%	-8.3%	18.0%	-1.3%	-0.9%	16.8%	3.0%
	Morningstar Infrastructure Index	5.6%	-2.0%	8.2%	0.9%	-10.0%	-8.4%	10.4%	1.9%	1.9%	-6.9%	10.9%	2.4%	-0.1%	12.4%	0.8%



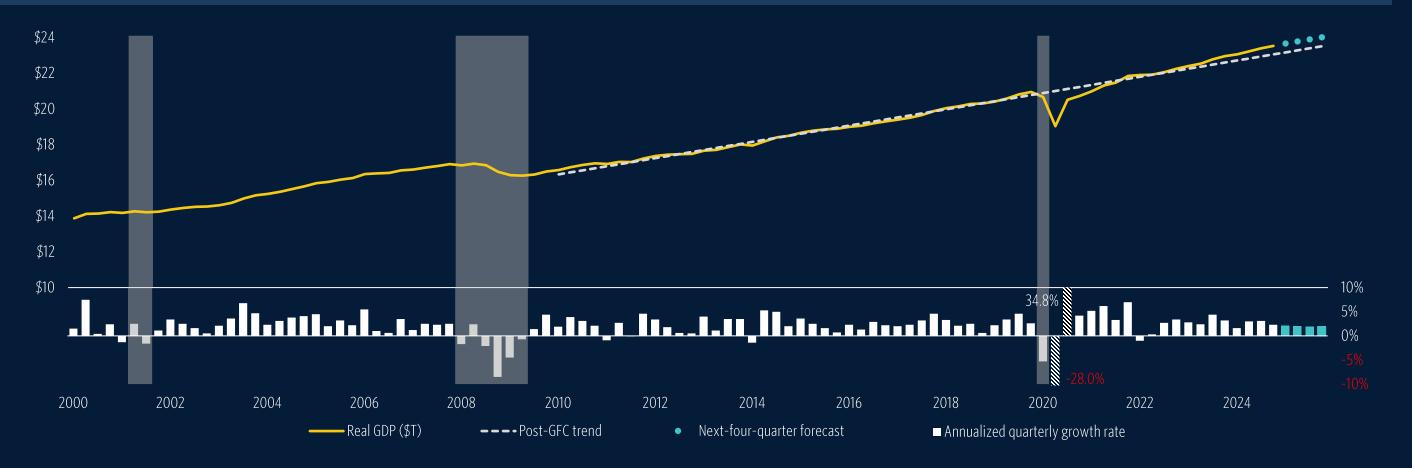
Sources: <u>Bureau of Economic Analysis</u>, <u>Bureau of Labor Statistics</u>, <u>Federal Reserve</u>, <u>ICE Data Indexes</u>, <u>OECD</u>, <u>University of Michigan</u>, Morningstar, PitchBook | LCD • Geography: US • As of December 31, 2024

Note: Color shading reflects the relative Z-score over the past 10 years.



Real GDP proved healthy in 2024, and forecasts for 2025 put the US economy on pace for another year of above-trend growth.

Figure 2 Real GDP growth compared with post-global-financial-crisis (GFC) trend

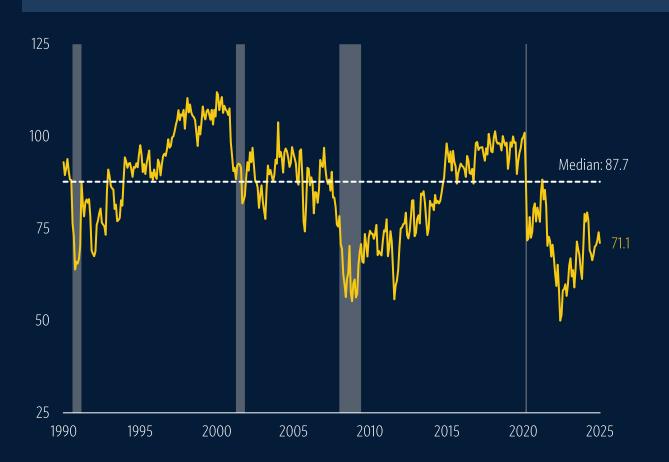


Sources: <u>Bureau of Economic Analysis</u>, <u>WSJ Economic Forecasting Survey</u> • Geography: US • As of December 31, 2024



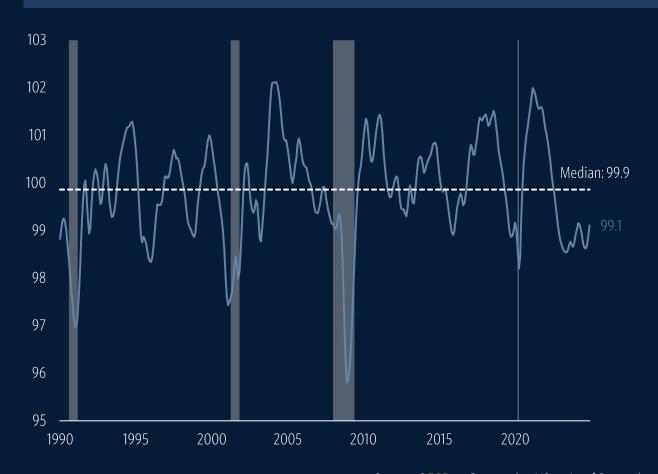
Consumer and business attitudes have stalled below long-term norms on the back of economic and political uncertainty. Inflation remains a top concern for both consumers and businesses...

Figure 3 > University of Michigan Consumer Sentiment Index



Source: University of Michigan • Geography: US • As of January 24, 2025

Figure 4 Business Confidence Index



Source: OECD • Geography: US • As of December 31, 2024



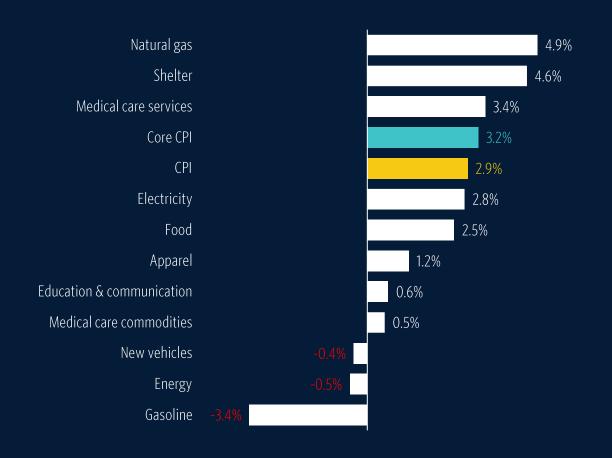
...and has yet to close the gap to the Fed's 2% target, spurring conversations of a higher-for-longer rate environment. Energy costs, housing expenses, and medical care were the primary contributors that kept inflation elevated at the end of 2024.

Figure 5 > Year-over-year change in CPI



Source: Bureau of Labor Statistics • Geography: US • As of December 31, 2024

Figure 6 > CPI one-year change by select categories

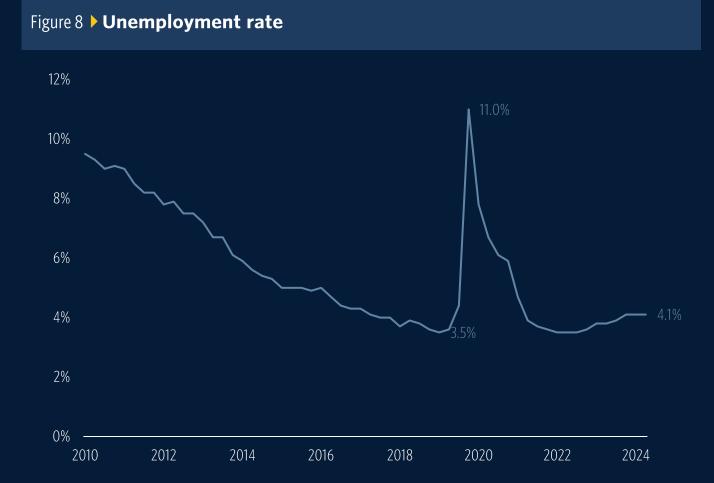


Source: Bureau of Labor Statistics • Geography: US • As of December 31, 2024



December employment data surprised to the upside as job creation handily beat expectations and the unemployment rate ticked down. Labor resilience is seen as an obstacle to future rate cuts...





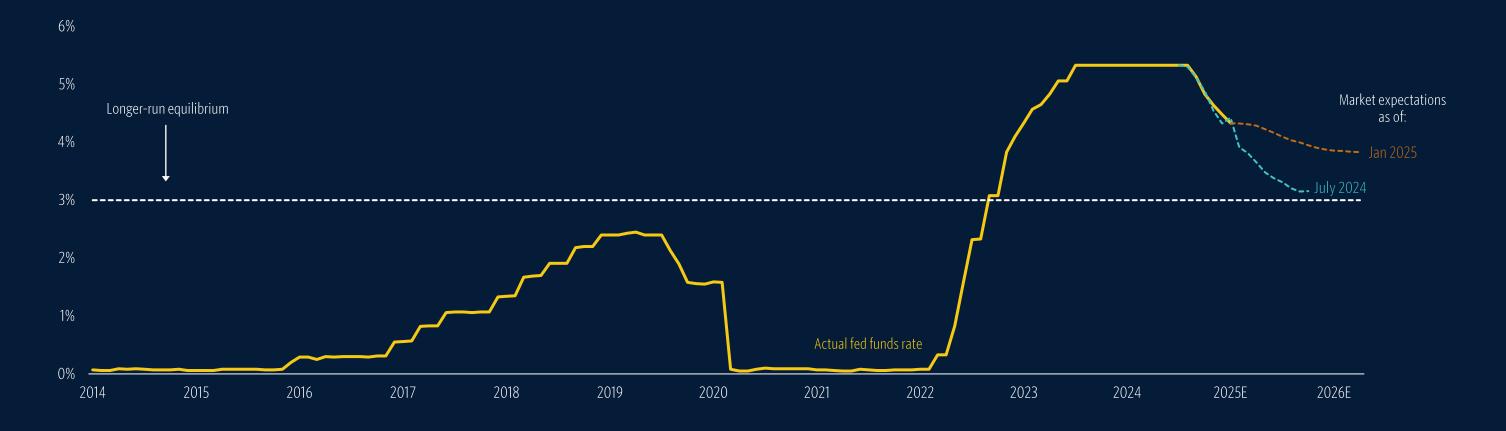
Source: Bureau of Labor Statistics • Geography: US • As of December 31, 2024

Source: <u>Bureau of Labor Statistics</u> • Geography: US • As of December 31, 2024



...and in January 2025, the Fed slowed its pace of cuts by holding policy rates. As a result, expectations for the federal funds rate have reversed and are now markedly higher than expectations in July 2024.

Figure 9 **Federal funds rate with forward market expectations**



Sources: Federal Reserve, CME Group • Geography: US • As of January 31, 2025



With break-even inflation expectations remaining stable over the past couple of years, the recent sell-off in 10-year Treasury bonds has pushed real yields to their highest levels since before the GFC.

Figure 10 > 10-year Treasury real yields versus nominal yields (monthly series)



Source: FRED • Geography: US • As of December 31, 2024



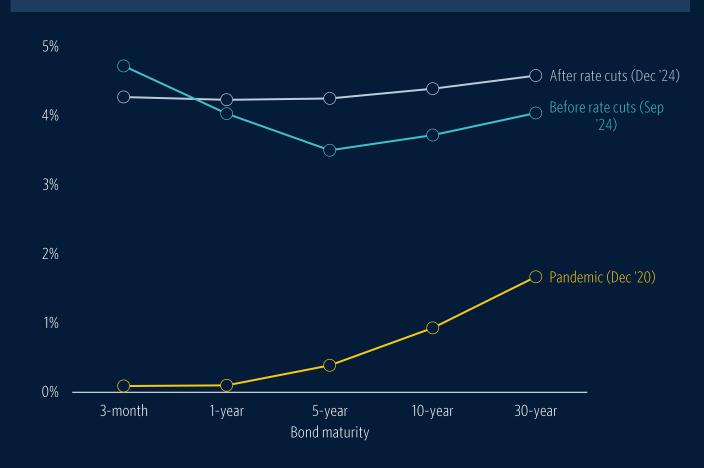
The combination of falling policy rates and rising long-term yields has reduced the yield curve's deep inversion and reflects market expectations for sustained economic growth and inflation.

Figure 11 > Pension plan return assumptions versus 10-year Treasury



Sources: FRED, National Association of State Retirement Administrators • Geography: US • As of December 31, 2024

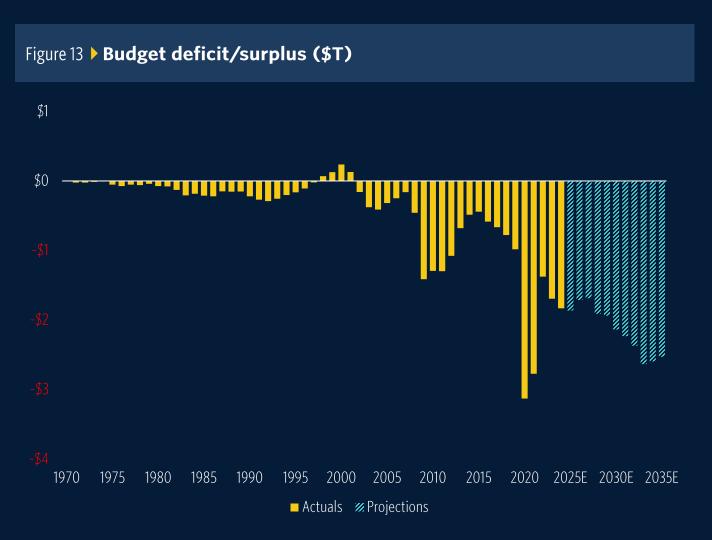
Figure 12 > Treasury market yield curve



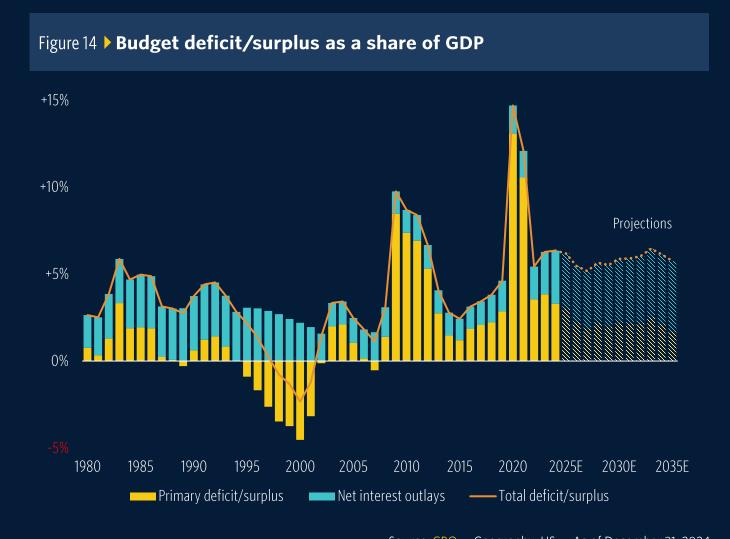
Source: <u>FRED</u> • Geography: US • As of December 31, 2024 Note: Treasury rates are taken from the FRED monthly data series for each bond maturity.



The budget deficit is projected to move toward \$3 trillion, according to the Congressional Budget Office (CBO). With both rates and total debt high, interest payments are expected to account for an increasing portion of the deficit.



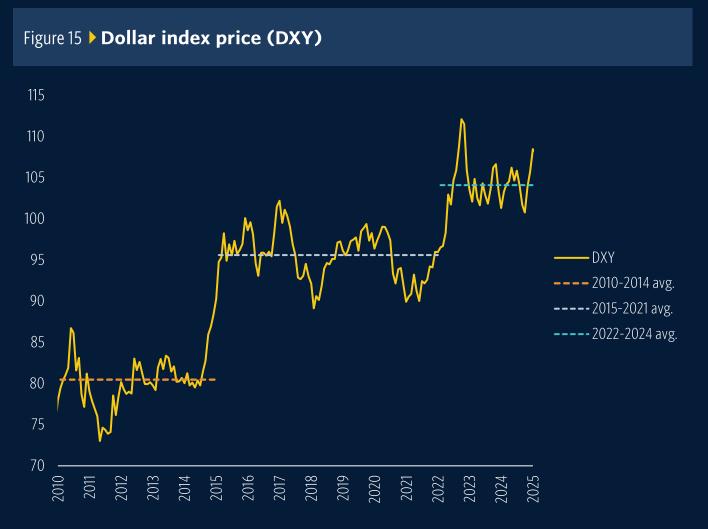




Source: <u>CBO</u> • Geography: US • As of December 31, 2024 Note: 2025 to 2035 are CBO projections.



As the US dollar has grown stronger with relatively higher rate and economic growth expectations, US acquirers have gained share of cross-border deals, in part by taking advantage of enhanced purchasing power abroad.



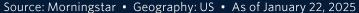


Figure 16 > Share of cross-border M&A deal value by acquirer country 100% 90% 80% 40.7% 54.0% 56.5% 70% 60% 50% 40% 30% 59.3% 46.0% 43.5% 20% 10% 0% 2010-2014 2015-2021 2022-2024 ■ European, Japanese, and Chinese acquisition of US companies ■ US acquisition of European, Japanese, and Chinese companies

Source: PitchBook • Geography: Global • As of December 31, 2024



Asset allocation



Recent rate cuts from the Fed and a presumed business-friendly presidential administration have dealmakers excited about the prospects of a more active market in 2025.

Figure 17 Private markets dashboard

		Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
	Buyout	\$133.6	\$197.2	\$128.4	\$121.7	\$74.1	\$106.1	\$165.8	\$63.7	\$67.3	\$79.1	\$75.7	\$59.1	\$62.2	\$72.2	\$88.6
	PE growth	\$12.7	\$24.1	\$24.2	\$23.9	\$16.4	\$15.1	\$9.8	\$13.1	\$9.9	\$16.3	\$12.4	\$15.1	\$22.2	\$27.4	\$13.0
	Leveraged loans	\$196.3	\$203.7	\$173.5	\$167.5	\$130.0	\$78.1	\$67.8	\$71.9	\$79.5	\$103.6	\$73.8	\$173.6	\$193.9	\$165.1	\$126.7
(\$B)	PE exits via IPOs	\$92.3	\$76.8	\$26.2	\$0.2	\$2.2	\$0.0	\$0.0	\$0.9	\$3.5	\$2.0	\$1.8	\$1.5	\$15.3	\$8.7	\$15.5
Deal value (\$B)	PE exits via M&A	\$32.5	\$77.0	\$72.6	\$30.3	\$25.8	\$33.4	\$23.3	\$24.0	\$18.1	\$21.0	\$28.5	\$20.1	\$40.1	\$34.5	\$30.9
Deal	Early-stage VC	\$21.7	\$21.4	\$28.4	\$23.5	\$20.3	\$14.6	\$11.8	\$10.9	\$11.6	\$9.3	\$9.5	\$11.4	\$19.2	\$12.6	\$12.6
	Late-stage VC	\$37.2	\$43.8	\$43.2	\$34.0	\$29.3	\$16.7	\$13.9	\$23.1	\$15.5	\$15.7	\$17.2	\$21.1	\$16.1	\$17.2	\$33.9
	VC exits via IPOs	\$181.0	\$114.3	\$125.3	\$3.8	\$0.7	\$0.6	\$1.8	\$1.2	\$3.4	\$20.6	\$0.9	\$13.3	\$14.5	\$1.2	\$12.1
	VC exits via M&A	\$23.8	\$33.4	\$28.8	\$12.0	\$12.8	\$11.2	\$5.0	\$8.2	\$2.9	\$11.1	\$12.5	\$9.7	\$18.7	\$9.7	\$10.5
VC Dealmaking Indicator	Early-Stage Index	33.1	28.0	22.7	20.5	23.9	33.1	48.3	61.7	73.1	81.5	84.7	83.8	78.5	74.3	71.3
VC ealmakin Indicator	Late-Stage Index	33.4	26.6	21.4	20.5	21.9	28.9	41.1	53.8	65.2	75.1	79.7	83.6	86.9	85.4	84.8
De	Venture-Growth Index	31.6	29.6	26.8	26.6	31.1	39.1	49.1	60.4	70.7	78.9	86.5	89.5	86.9	81.1	77.6
rns	Private equity	13.5%	7.8%	6.4%	0.8%	-2.0%	-0.8%	0.9%	3.4%	3.0%	0.9%	2.9%	2.7%	2.4%	3.4%	
retui	Venture capital	14.0%	8.3%	6.1%	-4.0%	-9.6%	-1.9%	-5.4%	-2.6%	0.1%	-3.1%	0.0%	2.6%	-1.4%	1.9%	
ndex	Private credit	7.5%	2.9%	2.3%	3.4%	-1.5%	0.3%	2.3%	2.8%	1.5%	3.9%	2.1%	1.7%	2.9%	2.6%	
ook II	Infrastructure	4.0%	4.1%	6.0%	5.7%	1.2%	2.1%	2.8%	1.1%	1.3%	-0.6%	3.6%	3.9%	1.5%	5.8%	
PitchBook Index returns	Real estate	6.5%	8.7%	7.9%	7.8%	3.7%	-1.3%	-0.8%	-1.4%	-0.1%	-1.5%	-2.8%	-0.2%	-0.2%	2.6%	
Pi	All private capital	12.0%	7.1%	6.0%	1.9%	-1.3%	-0.6%	0.4%	1.7%	2.1%	0.8%	1.6%	2.6%	1.9%	3.0%	



Source: PitchBook | LCD • Geography: US • As of December 31, 2024 Note: Private Capital Index data has preliminary returns through Q3 2024. Color shading reflects the relative Z-score over the past 10 years.



Buyout remained among the top-performing strategies through the first half of 2024, while venture capital continued to lag among the worst performers, struggling to recover since its decline in 2022.

Figure 18 ▶ Pooled IRRs by strategy

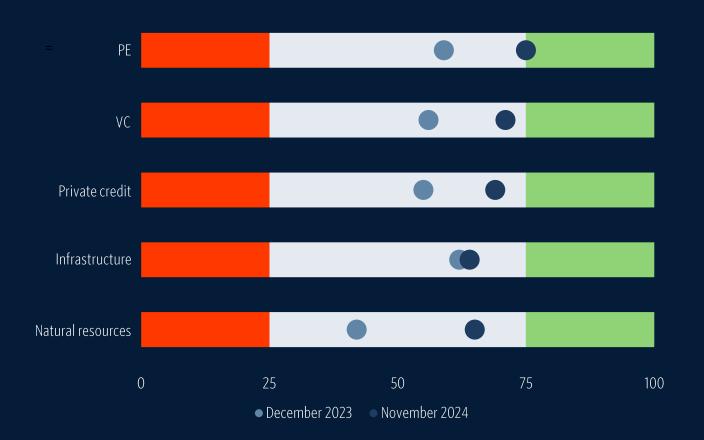
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	15-year horizon IRR
Opportunistic real estate 38.7%	Natural resources -0.3%	Private credit 19.4%	Opportunistic real estate 30.7%	Secondaries 19.3%	18.2%	Buyout megafunds 26.0%	VC 20.9%	Buyout megafunds 18.9%	Middle-market buyout 19.6%	Buyout megafunds 19.4%	VC 19.5%	PE growth 18.4%	VC 43.6%	PE growth 56.0%	Natural resources 26.1%	Buyout megafunds 12.2%	Middle-market buyout 8.0%	Buyout megafunds 17.0%
Secondaries 29.2%	Infrastructure -6.1%	Buyout megafunds 9.6%	Secondaries 23.2%	Opportunistic real estate 18.5%	Opportunistic real estate 17.4%	VC 21.8%	Opportunistic real estate 16.7%	estate 14.5%	Natural resources 15.8%	Middle-market buyout 17.6%	PE growth 19.5%	Middle-market buyout 18.3%	PE growth 35.1%	VC 54.8%	Infrastructure 13.6%	Private credit 10.3%	Infrastructure 7.4%	PE growth 16.5%
Middle-market buyout 28.9%	Secondaries -12.4%	Middle-market buyout 9.4%	Buyout megafunds 22.0%	Natural resources 16.4%	Private credit 14.2%	Value-add real estate 20.3%	Buyout megafunds 16.3%	Value-add real estate 13.5%	All private capital 10.8%	Secondaries 17.2%	FoF 16.4%	VC 16.4%	Buyout megafunds 29.7%	FoF 49.3%	Value-add real estate 11.5%	Middle-market buyout 9.4%	Buyout megafunds 5.7%	Middle-market buyout 16.3%
Infrastructure 28.2%	VC -12.6%	PE growth 6.4%	PE growth 19.7%	Value-add real estate 12.0%	PE growth 14.1%	PE growth 18.4%	Middle-market buyout 15.5%	Middle-market buyout 12.1%	Opportunistic real estate 10.6%	PE growth 16.6%	Middle-market buyout 16.1%	Buyout megafunds 13.9%	FoF 28.3%	Secondaries 45.2%	Opportunistic real estate 8.8%	PE growth 7.2%	Private credit 5.6%	All private capital 13.4%
FoF 20.2%	FoF -13.0%	Natural resources 3.6%	Private credit 19.6%	PE growth 12.0%	All private capital 12.4%	All private capital 17.4%	Value-add real estate 15.5%	VC 12.1%	Private credit 10.5%	All private capital 13.9%	Secondaries 15.0%	Secondaries 13.2%	Middle-market buyout 27.4%	Buyout megafunds 44.5%	Middle-market buyout 6.0%	All private capital 6.0%	All private capital 5.0%	Secondaries 13.3%
All private capital 19.6%	Middle-market buyout -14.4%	All private capital 2.4%	Natural resources 19.0%	Middle-market buyout 11.6%	Secondaries 12.1%	Middle-market buyout 16.7%	PE growth 15.5%	Secondaries 11.7%	Buyout megafunds 9.1%	FoF 12.1%	Value-add real estate 11.5%	FoF 11.8%	All private capital 19.8%	Middle-market buyout 40.4%	Private credit 4.5%	Infrastructure 5.7%	Natural resources 4.2%	VC 12.7%
Buyout megafunds 15.1%	PE growth -17.0%	FoF 2.3%	All private capital 16.8%	VC 11.2%	Middle-market buyout 11.8%	Opportunistic real estate 14.4%	Infrastructure 15.3%	FoF 11.6%	PE growth 8.5%	Value-add real estate 11.3%	All private capital 11.1%	All private capital 11.2%	Secondaries 14.5%	All private capital 39.0%	Secondaries 2.8%	Secondaries 3.6%	FoF 3.7%	FoF 12.4%
Private credit 14.7%	All private capital -19.6%	VC 0.1%	Middle-market buyout 15.7%	FoF 9.9%	Value-add real estate 11.2%	Private credit 13.3%	All private capital 14.7%	PE growth 11.5%	Value-add real estate 8.4%	Private credit 10.9%	Infrastructure 9.0%	Value-add real estate 8.2%	Private credit 5.9%	Opportunistic real estate 31.8%	All private capital 0.6%	FoF 1.3%	Value-add real estate 3.5%	Opportunistic real estate 12.2%
VC 13.5%	Value-add real estate -25.3%	Infrastructure -5.6%	Infrastructure 13.8%	All private capital 9.8%	FoF 7.6%	FoF 12.2%	FoF 14.5%	All private capital 10.1%	Infrastructure 8.4%	Opportunistic real estate 9.4%	Opportunistic real estate 8.1%	Private credit 7.9%	Infrastructure 5.8%	Natural resources 30.3%	Buyout megafunds -4.5%	Natural resources -3.9%	PE growth 2.3%	Private credit 10.9%
Natural resources 12.2%	Buyout megafunds -27.7%	Secondaries -6.7%	VC 11.6%	Buyout megafunds 9.0%	VC 7.3%	Secondaries 7.4%	Private credit 14.0%	Infrastructure 8.0%	FoF 7.5%	VC 9.3%	Buyout megafunds 6.8%	Opportunistic real estate 7.9%	Value-add real estate 5.5%	Value-add real estate 27.0%	PE growth -6.6%	VC -5.2%	Opportunistic real estate 2.3%	Infrastructure 9.0%
PE growth 10.0%	Private credit -27.8%	Value-add real estate -45.0%	FoF 11.3%	Infrastructure 5.6%	Infrastructure 6.1%	Natural resources 7.0%	Secondaries 13.8%	Private credit 2.6%	Secondaries 5.8%	Natural resources 9.0%	Private credit 6.0%	Infrastructure 3.9%	Opportunistic real estate 2.8%	Infrastructure 18.6%	FoF -8.1%	Opportunistic real estate -5.6%	VC 0.5%	Value-add real estate 8.2%
Value-add real estate -3.9%	Opportunistic real estate -36.0%	Opportunistic real estate -48.8%	Value-add real estate -2.8%	Private credit 3.5%	Natural resources 6.1%	Infrastructure 6.5%	Natural resources 0.8%	Natural resources -18.6%	VC -0.2%	Infrastructure 8.8%	Natural resources 4.2%	Natural resources -9.5%	Natural resources -15.6%	Private credit 17.2%	VC -17.2%	Value-add real estate -9.9%	Secondaries -0.2%	Natural resources 5.6%

Source: PitchBook • Geography: US • As of June 30, 2024 Note: Middle-market buyout funds are those between \$100 million and \$5 billion. Buyout megafunds are \$5 billion or larger.



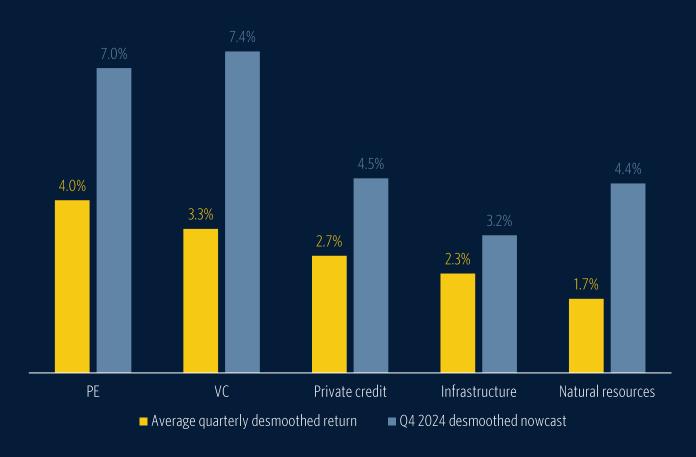
Our Private Capital Return Barometers provide a gauge for the relative attractiveness of the macro environment for private fund returns. The environment has become more favorable since year-end 2023.

Figure 19 PitchBook Private Capital Return Barometers scores



Source: PitchBook • Geography: US • As of November 30, 2024 Note: The color scale represents different return environments: Red indicates a weak environment (below 25), gray represents a neutral environment (between 25 and 75), and green signifies a strong environment (above 75).

Figure 20 ▶ <u>PitchBook Private Capital Return Barometers</u> implied threemonth return

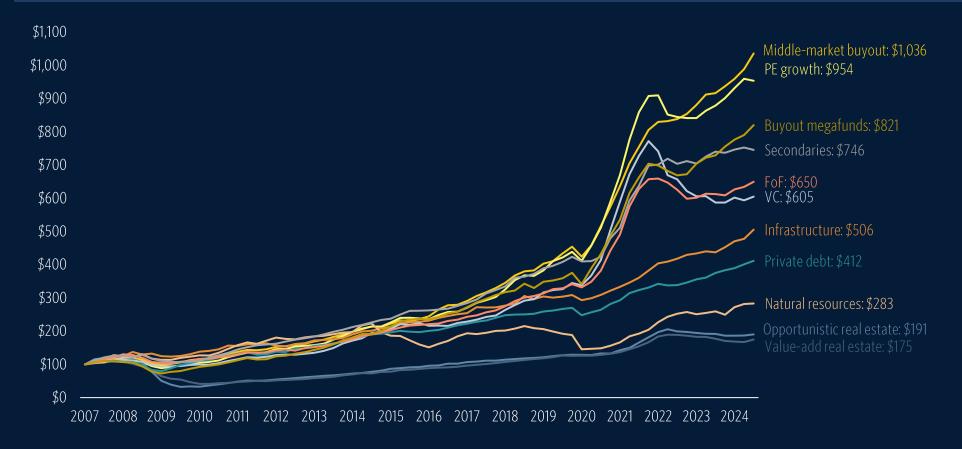


Source: PitchBook • Geography: US • As of November 30, 2024
Note: Average quarterly returns were calculated starting in Q1 2009. The infrastructure average quarterly
return was calculated starting in Q1 2019 due to data availability.



PE strategies are hitting new highs, with middle-market buyout leading the way. VC remains stagnant while income-focused strategies like private debt gain momentum.

Figure 21 > Hypothetical growth of \$100 invested in Q1 2007 by PitchBook Private Capital Index



Source: PitchBook • Geography: US • As of September 30, 2024

Note: Data for Q3 2024 is preliminary.



Private Capital Indexes

Our analysis assumes one could invest quarterly in our universe of funds for which we have cash flows and net asset value (NAV) data available each quarter. It is a hypothetical result if one were able to invest in a "market" portfolio of funds starting, in this case, at the beginning of 2007. We calculate the change in NAV, plus/minus cash flows that occur during each quarter, aggregated across all available funds. This allows us to build a timeweighted return series, which we have represented here as the growth of \$100 invested.

Actual results experienced by investors will vary widely, and the indexes should not be considered investable.



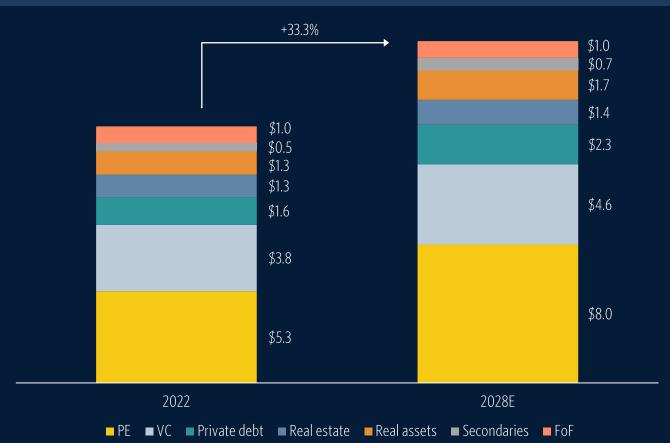
Private capital has expanded rapidly over the past decade. We anticipate that closed-end private market AUM—particularly PE, private debt, and secondaries—will continue to rise over the next five years, but the growth rate will be more moderate.

Figure 22 Private capital closed-end funds AUM (\$T) forecast



Source: PitchBook • Geography: Global • Historical AUM and forecasts generated on April 19, 2024 Note: The 2023-2028 bars represent the base-case forecast. The good case and bad case are inclusive of secondaries and FoFs.

Figure 23 Base-case AUM (\$T) forecast by asset class

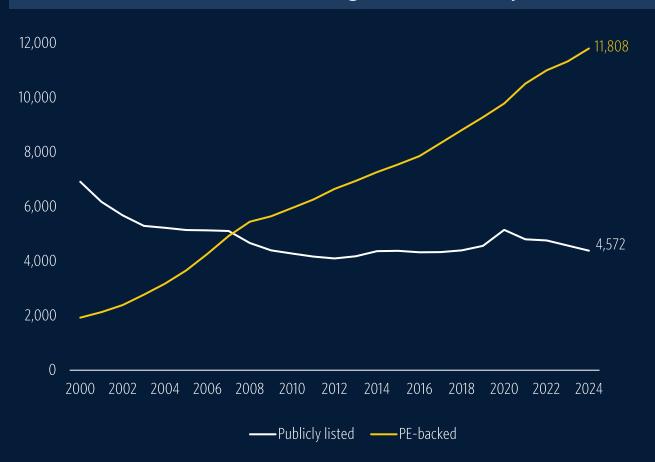


Source: PitchBook • Geography: Global • Historical AUM and forecasts generated on April 19, 2024



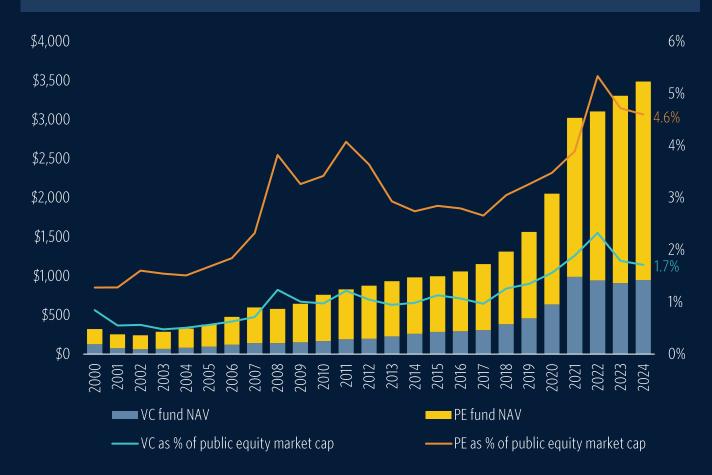
Private companies are growing as a share of the universe of investable companies, but private assets held are still a fraction of public equities. Asset owners are looking to diversify from an increasingly concentrated public investment universe...

Figure 24 Count of PE-backed companies versus domestic firms publicly listed on the New York Stock Exchange and the Nasdaq



Sources: World Bank, Statista, PitchBook, Morningstar • Geography: US • As of December 31, 2024 Note: Publicly listed data from before 2024 is from World Bank and Statista; 2024 data is from Morningstar.

Figure 25 PE and VC fund NAV (\$B) as a share of public equity market cap

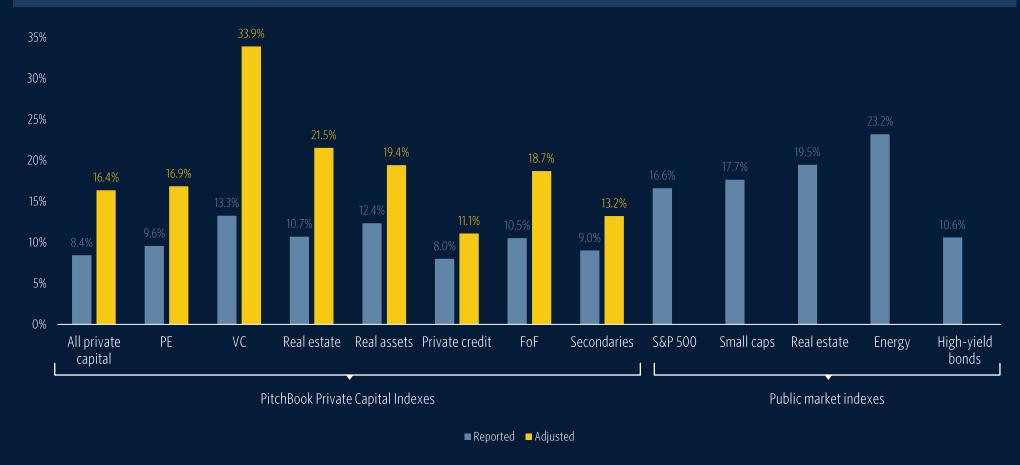


Sources: Siblis Research, PitchBook • Geography: US • As of June 30, 2024



...but allocators should be wary of volatility smoothing. We estimate that private capital funds exhibit significantly higher volatilities than indicated by reported figures.

Figure 26 > Reported and adjusted private market volatility compared with public indexes



Sources: Morningstar, PitchBook • Geography: US • As of September 30, 2024 Note: Public indexes are based on quarter-end total returns. Public indexes aside from the S&P 500 are provided by Morningstar Indexes.



Desmoothing returns

In contrast with public markets, private investments are valued largely according to appraisal-based pricing, which is a method that involves infrequent and typically unaudited approximations.

Appraisal-based pricing can introduce significant downward bias on private investment volatility and correlation measures, which results in artificially higher allocations using mean-variance portfolio optimization.

To account for these smoothed returns and to provide a more accurate depiction of private market volatility, we implement a Geltner autocorrelation desmoothing method. Read more about our methodology in our <u>Analyst Note:</u>
Return Smoothing in Private Markets.



The concentration in public equity indexes has left allocators and their advisors seeking diversification benefits, with private markets playing a key role. Using desmoothed returns, though, we find there is not a free lunch...

Figure 27 ▶ Return correlation matrix using adjusted returns since 2000

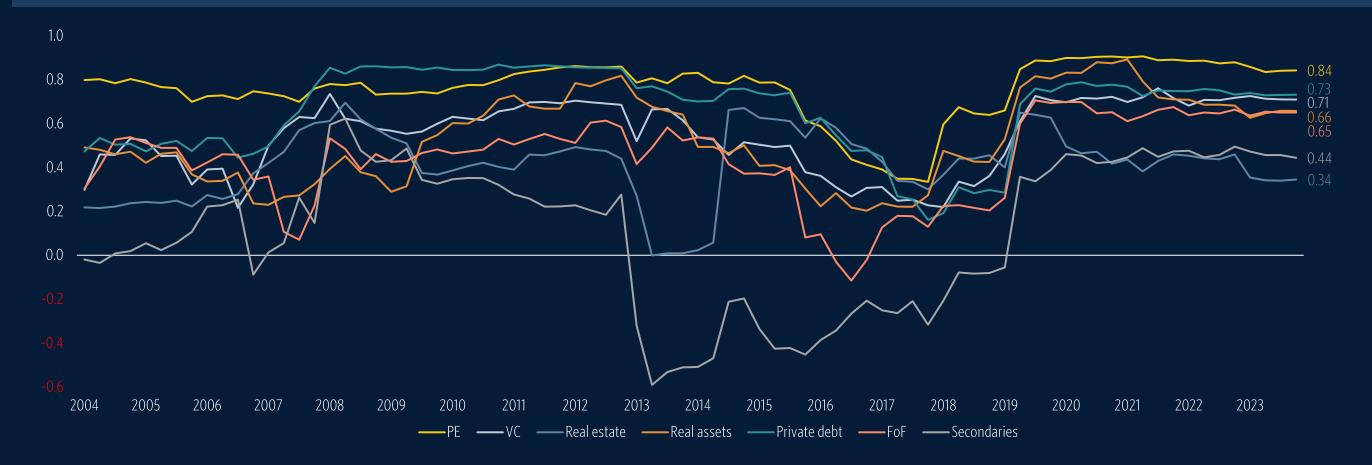
		Pito	chBook Privat	e Capital Inde	xes									
All private capital	PE	VC	Real estate	Real assets	Private debt	FoF	Second- aries	S&P 500	Small caps	Real estate	Energy	High-yield bonds	US Treasuries	
1.00	0.97	0.64	0.58	0.56	0.74	0.62	0.20	0.78	0.79	0.64	0.61	0.68	-0.40	All private capital
	1.00	0.54	0.52	0.51	0.65	0.57	0.18	0.78	0.80	0.63	0.57	0.67	-0.37	PE
		1.00	0.18	0.32	0.44	0.60	0.07	0.48	0.46	0.31	0.28	0.41	-0.33	VC
			1.00	0.31	0.43	0.25	0.17	0.31	0.32	0.34	0.24	0.21	-0.14	Real estate
				1.00	0.38	0.41	0.12	0.40	0.42	0.37	0.53	0.38	-0.26	Real assets
					1.00	0.43	0.23	0.63	0.70	0.65	0.65	0.72	-0.43	Private debt
						1.00	0.41	0.44	0.46	0.35	0.30	0.39	-0.20	FoF
							1.00	0.18	0.18	0.18	0.23	0.07	-0.14	Secondaries
								1.00	0.96	0.77	0.66	0.76	-0.40	S&P 500
									1.00	0.84	0.73	0.82	-0.39	Small caps
										1.00	0.58	0.79	-0.16	Real estate
											1.00	0.61	-0.54	Energy
												1.00	-0.26	High-yield bonds
													1.00	US Treasuries

Sources: Morningstar, PitchBook • Geography: US • As of September 30, 2024



...and from a portfolio-construction standpoint, while return correlations to public equities are a key input to consider, they are not necessarily static. PE has historically been the most correlated to S&P 500 returns.

Figure 28 > Rolling five-year correlation with S&P 500 quarterly returns using adjusted private capital returns

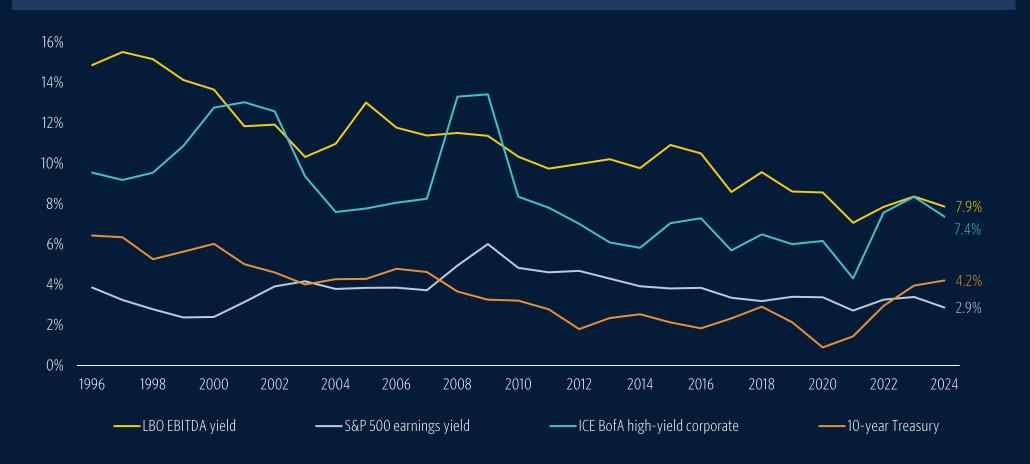


Sources: Morningstar, PitchBook • Geography: US • As of September 30, 2024



The earnings yield for public stocks remains historically low despite the upswing in Treasury and corporate bond rates. Buyout pricing has yet to reset meaningfully too.

Figure 29 Average yields on select asset classes



Sources: PitchBook, FRED, Robert Shiller • Geography: US • As of December 31, 2024



Data definitions

LBO EBITDA yield: The inverse of the average buyout enterprise value (EV)/EBITDA multiple.

S&P 500 earnings yield: The inverse of the trailing 12-month (TTM) price/earnings multiple.

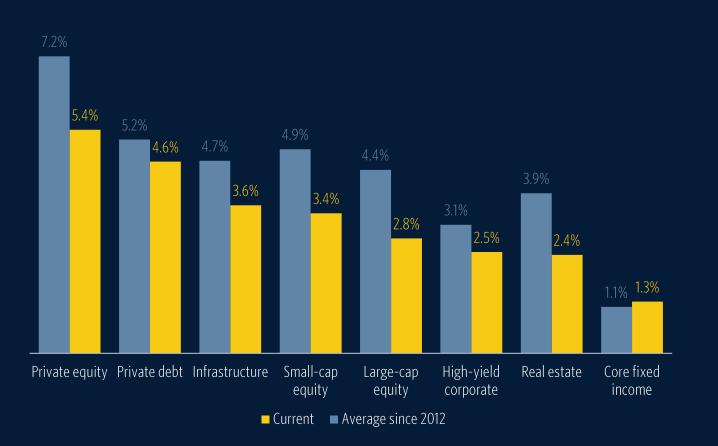
ICE BofA high-yield corporate: The yield on high-yield (below-investment-grade) corporate bonds as published by ICE and Bank of America.

While these yields are not directly comparable, tracking valuations in terms common to the respective asset classes offers a useful exercise for relative pricing analysis.



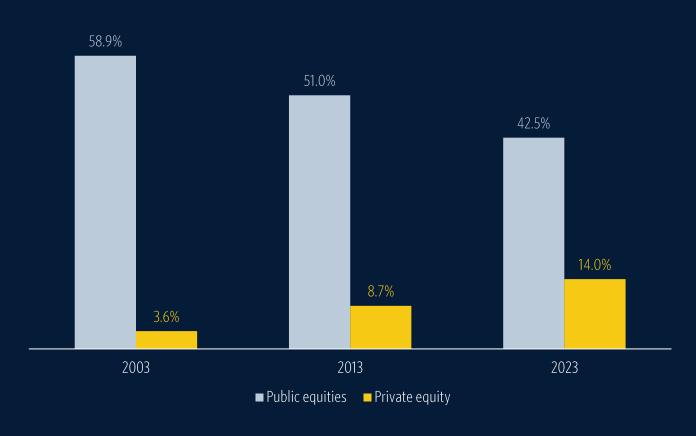
Expected risk premiums across the investment landscape have narrowed over the past decade, forcing allocators to adjust their strategies to sustain performance. This is evident in public pensions, which have shifted from public to private equity.

Figure 30 > 10-year expected risk premiums for select asset classes



Sources: PitchBook, <u>Horizon Actuarial</u> • Geography: US • As of August 2024 *Note: The private debt average is only since 2019 due to data availability.*

Figure 31 Public pension plan allocation to public and private equity

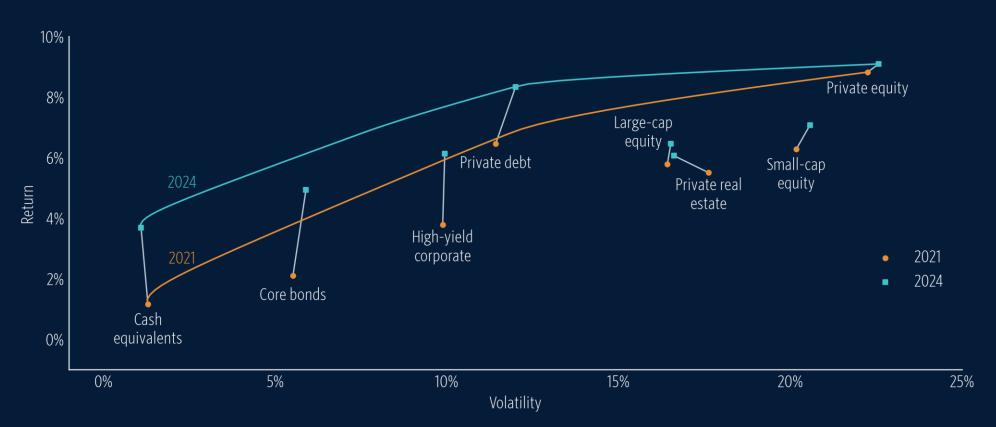


Source: Public Plans Data • Geography: US • As of December 31, 2023



The front end of the efficient frontier shifted higher with rising policy rates, but the current risk is that it may fall if rate cuts come to fruition.

Figure 32 > 10-year expected risk and return for select asset classes with efficient frontiers



Sources: PitchBook, Horizon Actuarial • Geography: US • As of August 2024



Changing expectations

For asset allocators, most of the 2010s were defined by low expected long-term returns across asset classes due to a decade of extremely loose monetary policy in the wake of the GFC. Facing fixed return targets, many allocators were pushed "out on the risk curve." This dynamic hit an extreme after another massive episode of monetary stimuli in 2020 and 2021. Private market strategies were key beneficiaries of low expected returns as money flowed into riskier assets.

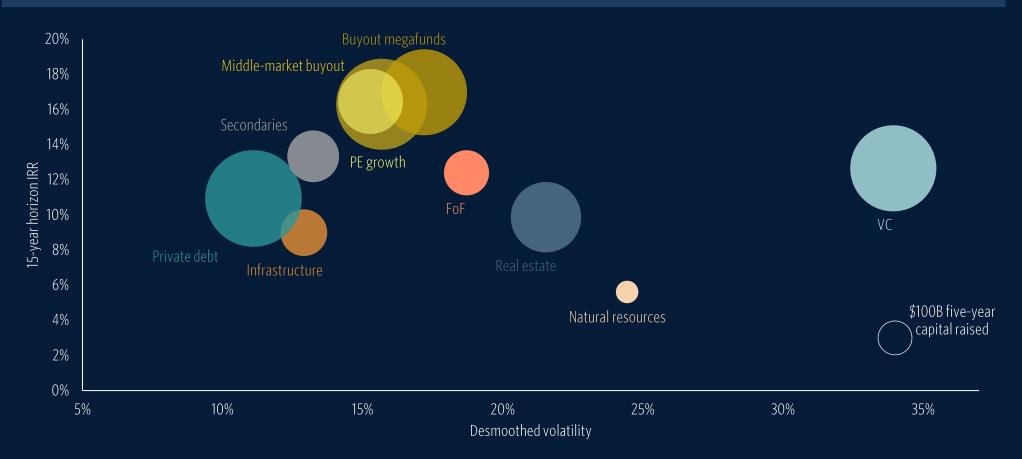
The long-term outlook for returns now looks guite different from the past decade, especially since risk premiums bottomed in 2021. The entire efficient frontier has shifted higher, but much more so on the lower end of the risk spectrum. This will allow allocators to take less risk to meet return targets and, in turn, decrease demand for risky assets such as PE and high-yield debt.

You can read more in our outlook for investors 2025 Allocator Solutions: Private Market Opportunities.



Investors should be compensated for risk, and that has occurred in aggregate across private markets. VC, real estate, and natural resources are possible exceptions...

Figure 33 > 15-year returns by select asset classes versus estimated volatility



Source: PitchBook • Geography: US • As of June 30, 2024

Note: Fundraising data as of December 31, 2024.



LPs vote with their feet

We have seen a substantial pullback from traditional natural resources funds, in particular oil & gas, which has coincided with relatively poor performance over the past 15 years given the risk undertaken by the commodity-linked strategy.

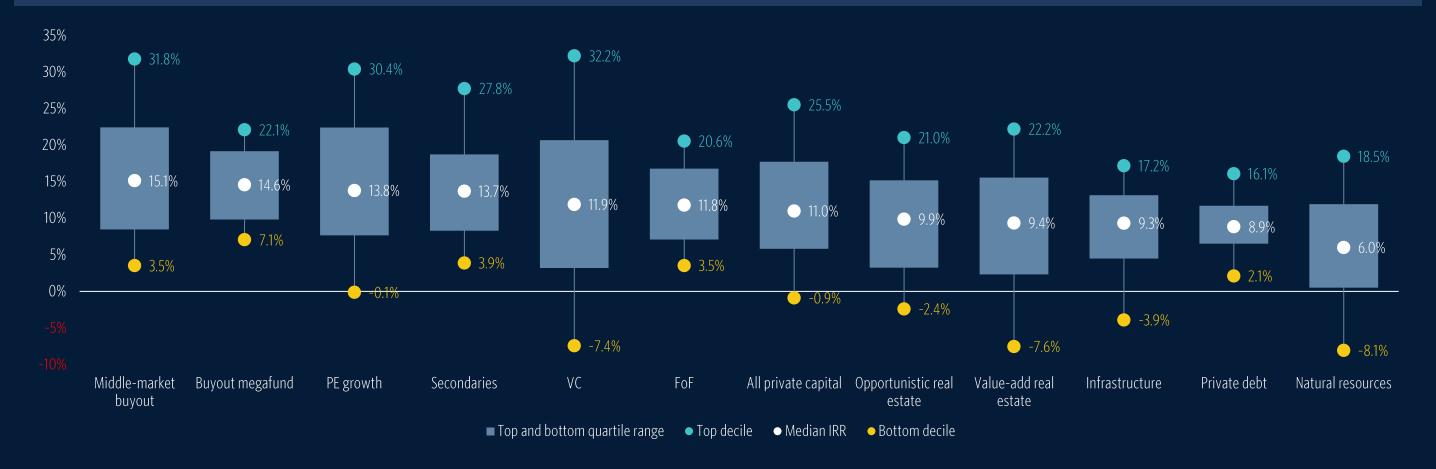
Real estate has also seen a slower pace of new fund commitments lately, given the higher-rate environment and question marks surrounding major areas of the commercial real estate sector.

Venture funds raised a considerable amount of capital in 2020 and 2021, early on in our five-year horizon, but poor performance and low distributions as of late have undoubtedly left more VCs challenged to find LPs willing to write checks.



...however, industry-wide pooled returns hide the wide dispersion that exists across fund manager performance. Individual fund returns vary considerably, and VC, for example, can offer substantial upside. Careful fund selection is crucial.

Figure 34 Private closed-end fund net IRR dispersion by strategy (2002 to 2018 vintages)



Source: PitchBook • Geography: US • As of June 30, 2024



Private markets are in a distribution desert, with returned capital at its lowest proportion of beginning NAV since the GFC, locking NAV in funds and leaving LPs eager for liquidity.

Figure 35 • Rolling 12-month distribution yields by asset class

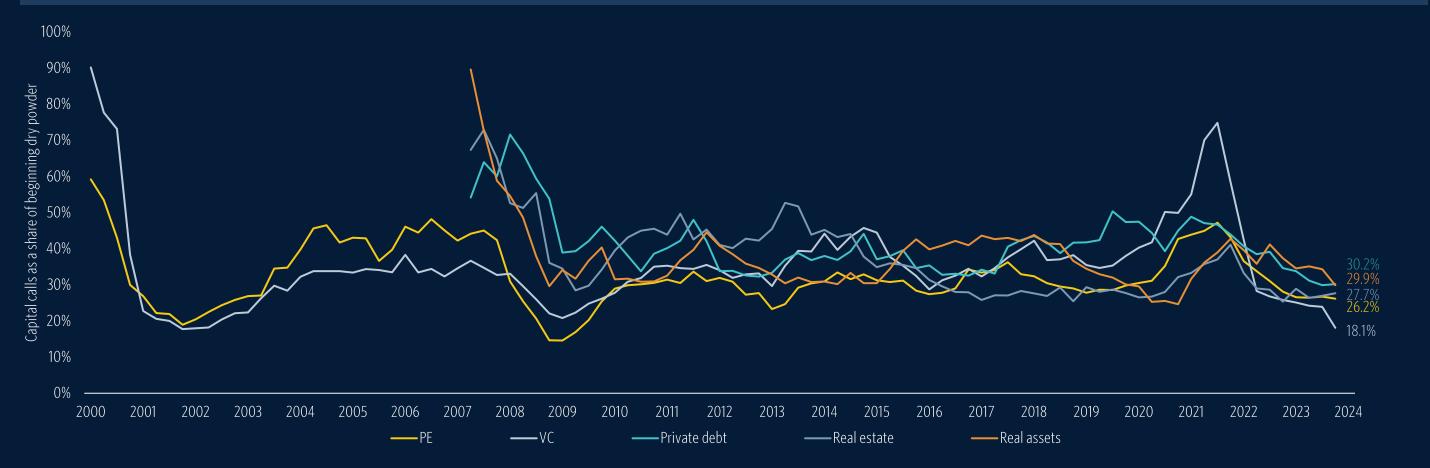


Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Similarly, funds are drawing down capital more slowly, reflecting a challenging deal environment where managers are becoming increasingly selective in their investment deployment.

Figure 36 Rolling 12-month capital call rates by asset class

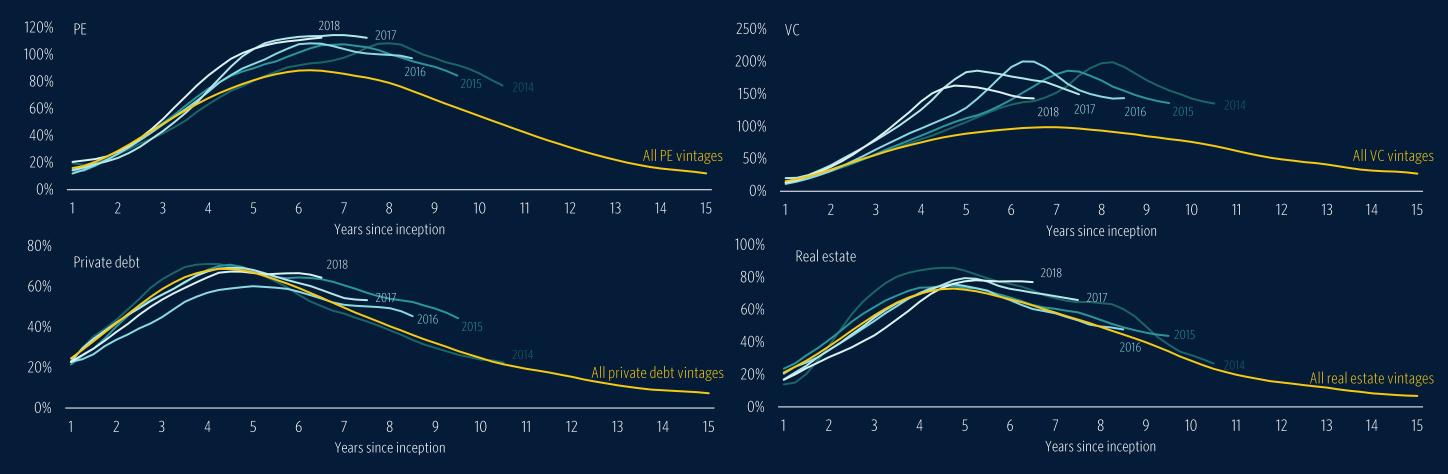


Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Outsized unrealized gains and a troubling distribution environment have led PE and VC NAVs to be higher than expected. Private debt and real estate, which are more reliant on income generation, have not experienced the same disconnect.

Figure 37 > Average NAV as a share of fund commitments by select vintages compared with historical averages

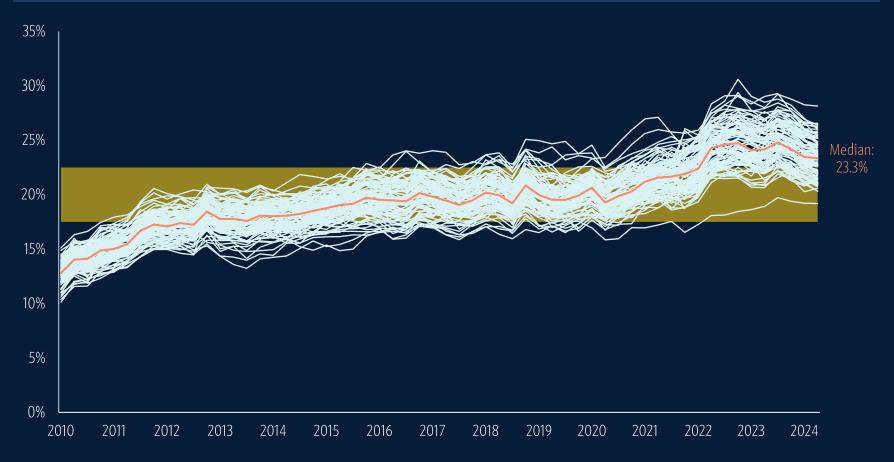


Source: PitchBook • Geography: US • As of June 30, 2024 Note: Average NAV values are smoothed using a four-quarter rolling average.



We revisited our hypothetical allocator simulations to analyze how low distributions have affected PE exposures in a 60/40 portfolio...

Figure 38 PE buyout allocation simulations



Source: PitchBook • Geography: US • As of June 30, 2024



Portfolio simulations

Our simulation of hypothetical allocator portfolios was based on a simple 60/40 framework, with one-third of the equity bucket being PE buyout (20% of the total portfolio value). The 20% PE allocation target has a +/-range of 2.5%.

We used the actual historical returns for the Russell 3000 Index to represent the public equity portion of the portfolio and an aggregate high-yield bond index for the fixed-income portfolio, and included a 1.5% allocation to a Treasury bills index to represent cash. We rebalanced quarterly between the equity and bond buckets.

We generated a commitment pacing schedule using our Portfolio Forecasting tool and ran a random fund selector, picking four funds per vintage year starting in 2004 (we removed most of the ramp period from the chart). We used actual historical NAV paths for each buyout fund and tracked the hypothetical portfolios' allocations to private markets over time.

We found that relatively steady financial markets, coupled with the disciplined commitment plan, translated into more than 90% of simulated portfolios falling within the target PE allocation range for much of the 2010s.

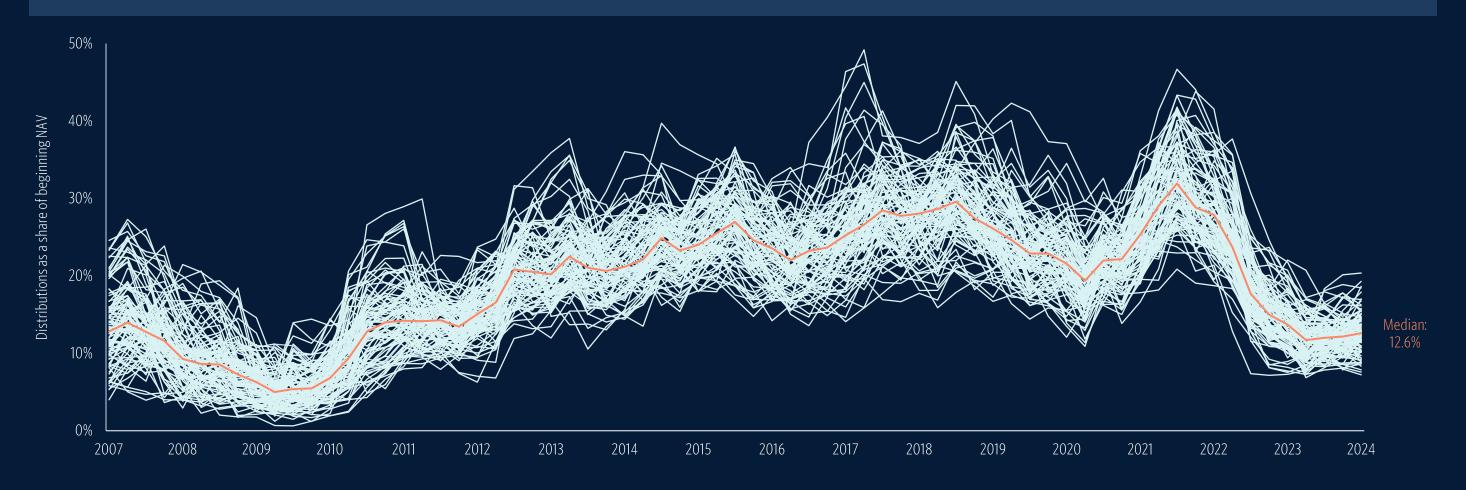
However, the vast majority of the simulated portfolios were overweight in PE starting in 2022 as public markets fell and the denominator effect was strong.

As public markets recovered from the end of 2022 through 2024, slow distribution yields maintained an elevated allocation, which only started coming down as we tracked the simulations through Q2 2024.



...and now include the variation in simulated distribution rates across our hypothetical buyout portfolios. The results show historically low cash returns to LPs even in the best scenarios.

Figure 39 **PE buyout distribution yield simulations**



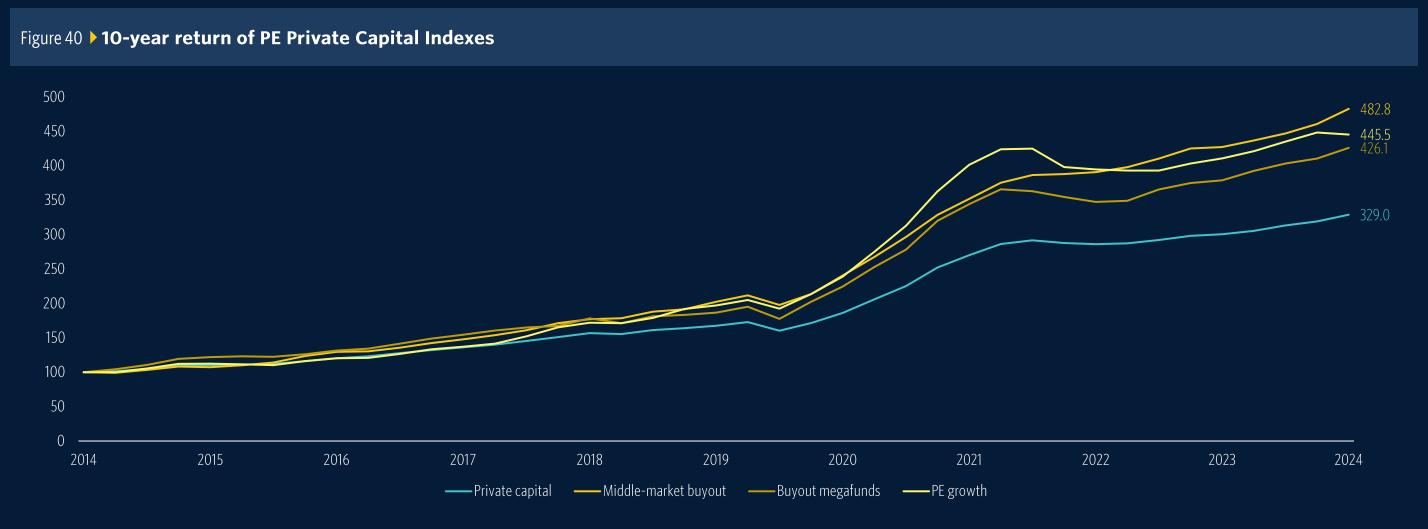
Source: PitchBook • Geography: US • As of June 30, 2024



Private equity



Private equity has shown steady growth. Middle-market buyout stands out for its strong performance, benefiting from the resilience of smaller deals, lower borrowing costs, and improving credit conditions.



Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Overall fundraising for PE pulled back in 2024 following three consecutive record-breaking years. Anemic distributions have capped out budgets for many institutional investors...

Figure 41 > PE capital raised (\$B) by select strategies \$400 \$350 \$300 \$250 \$200 \$150 \$100 \$50 2010 2012 2013 2015 2016 2019 2020 2014 2017 2018 2011 2021 2022 ■ Buyout megafunds ■ Middle-market buyout ■ Under \$100M ■ PE growth



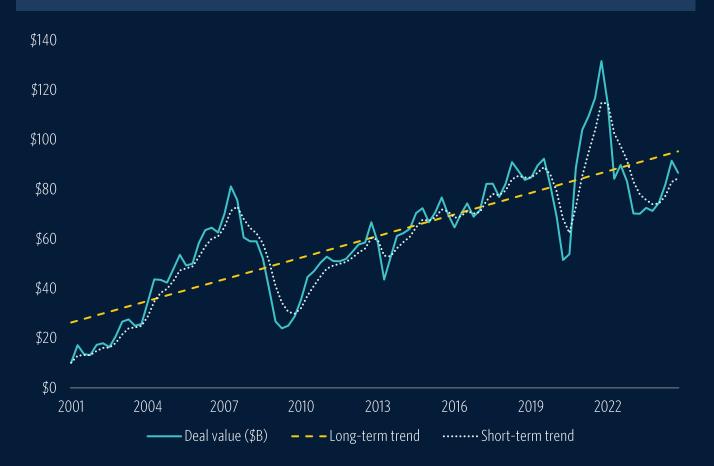


Source: PitchBook • Geography: US • As of December 31, 2024



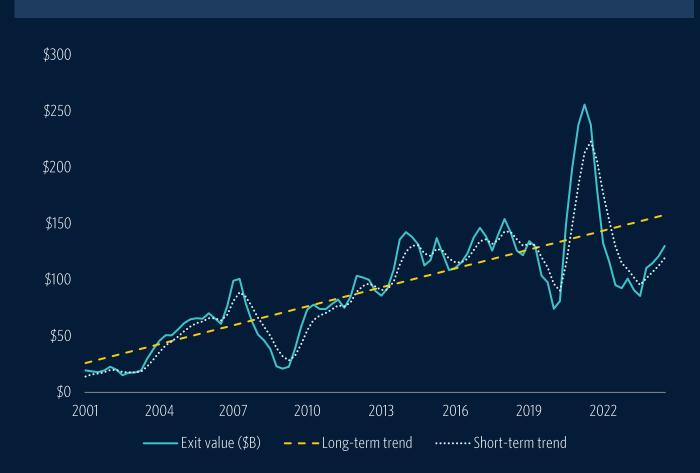
...and those low distribution rates have stemmed from below-trend exit activity. Trailing six-month buyout activity has recovered. Exits finally seem to be catching back up.

Figure 43 Trailing six-month PE buyout deal value trends



Source: PitchBook • Geography: US • As of December 31, 2024 Note: Data is seasonally adjusted and includes estimates for the four most recent quarters.

Figure 44 Trailing six-month PE exit value trends

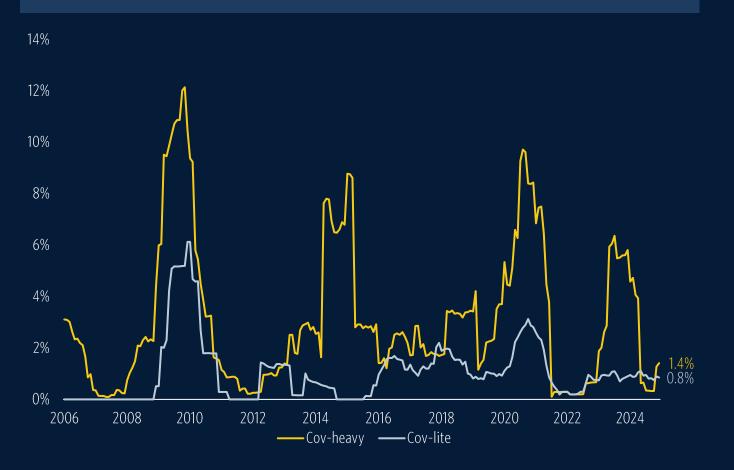


Source: PitchBook • Geography: US • As of December 31, 2024 Note: Data is seasonally adjusted <u>and includes estimates for the four most recent quarters.</u>



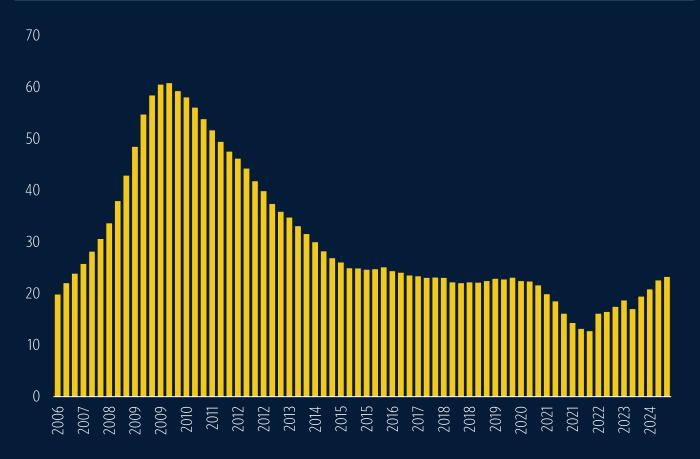
Default rates in the Morningstar LSTA US loan universe remain low but obscure the rising number of liability management exercises. Bankruptcy filings have steadily increased since 2021's lows, potentially signaling broader financial strain.

Figure 45 Morningstar LSTA US Leveraged Loan Index TTM default rates



Sources: PitchBook | LCD, Morningstar • Geography: US • As of December 31, 2024

Figure 46 > TTM corporate bankruptcy filings (thousands)

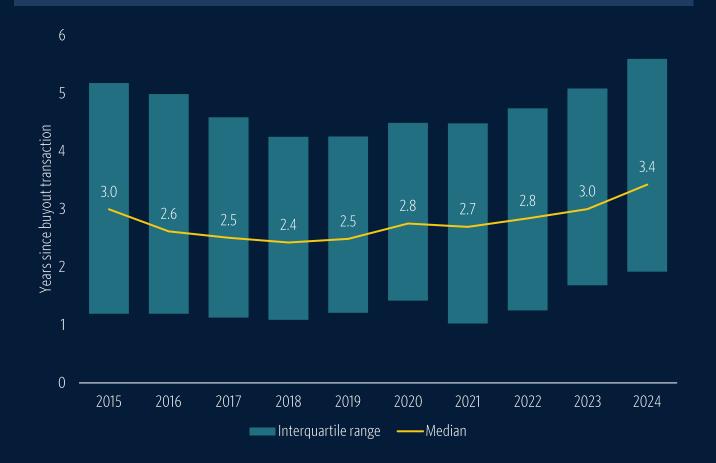


Source: US Courts • Geography: US • As of September 30, 2024



Buyout portfolios are aging as limited exit options extend holding periods. The median holding period for actively held buyout-backed companies has reached 3.4 years. Over 30% of all portfolio companies have been held for at least five years.

Figure 47 > Holding period of buyout-backed company inventory



Source: PitchBook • Geography: US • As of December 31, 2024

Figure 48 > Share of buyout-backed companies by holding period

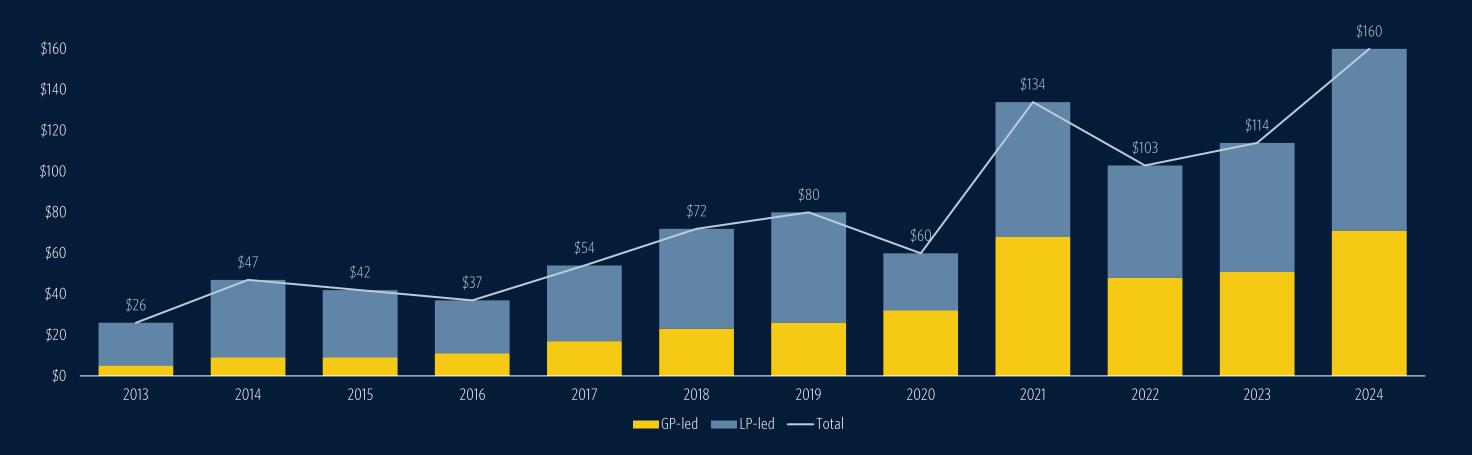


Source: PitchBook • Geography: US • As of December 31, 2024



Extended PE holding times and low distributions led to record secondaries transaction volumes in 2024. At \$71 billion, GP-led deals have become a mainstay in liquidity solutions.

Figure 49 Secondaries transaction value (\$B) by type

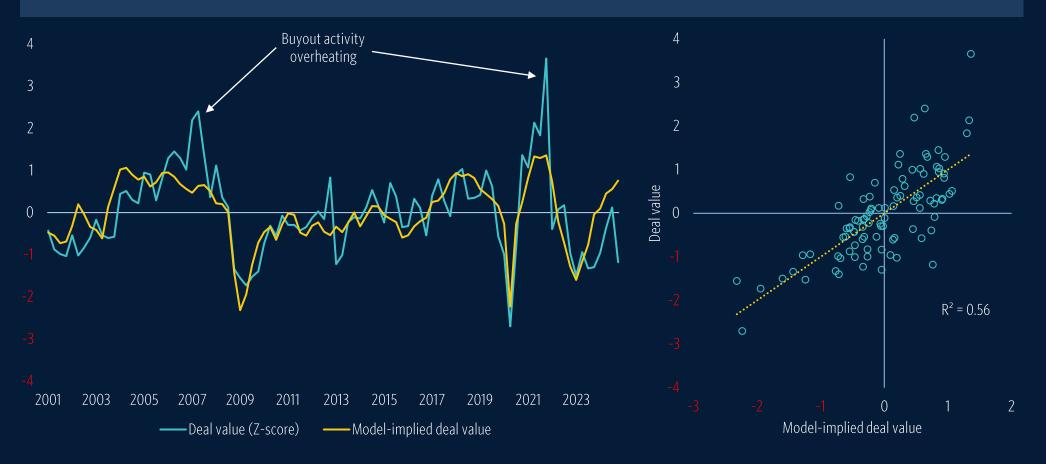


Source: Evercore • Geography: Global • As of December 31, 2024



Strong market conditions leave room for buyout dealmaking to increase if the strategy's historical relationship with the macro environment holds.

Figure 50 Detrended quarterly PE buyout deal value versus macro model-implied deal value (Z-score)



Source: PitchBook • Geography: US • As of December 31, 2024



Macro matters for dealmaking

The level of buyout deal activity is heavily influenced by the macro environment. We created a simple linear model to explain the variance in quarterly PE buyout deal value with the four key macro variables: real GDP, inflation (modeled as a second-order polynomial), business confidence, and high-yield spreads. The output from this model provides a high-level contemporaneous indicator of the dealmaking environment. Using data from 2001, the model has explained 60% of the variance in quarterly deal value.

Outside of overheating activity in the pre-GFC and post-pandemic periods, the biggest gap between actual deal value and model-implied deal value occurred in Q4 2024, where deal values fell short of expectations. If macro conditions remain supportive, we expect deal activity to continue to accelerate over the next several quarters, especially now that the uncertainty stemming from the US presidential election has passed.



The current PE barometer indicates a strong return environment through the end of 2024. However, after exceeding fundamental expectations in 2021, PE performance has shifted to underperforming them in 2024.

Figure 51 > Rolling one-year desmoothed PE fund returns and nowcast



Source: PitchBook • Geography: US • As of November 30, 2024

Figure 52 Difference between one-year desmoothed PE fund returns and nowcast



Source: PitchBook • Geography: US • As of November 30, 2024



EV/EBITDA multiples have expanded in both public markets and PE deals over the past decade. Valuations have not retraced much in the current higher-rate environment, though smaller buyout transactions are a possible pocket of value.

Figure 53 Median EV/EBITDA multiples in buyout transactions versus the S&P 500 16x 14x 12x 10x 8x 6x 4x 2x 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 —— Under \$100M —— Under \$1B —— \$1B+ —— S&P 500

Sources: Morningstar, PitchBook • Geography: North America and Europe • As of December 31, 2024



Venture capital



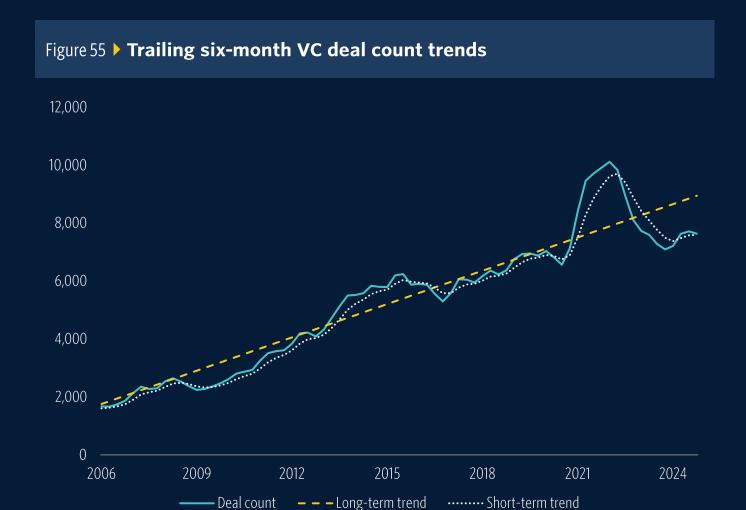
VC returns remain flatlined, showing little movement from the nadir. While exits from more mature companies are lacking, a sizable buildup of mature VC-backed companies and improving macro conditions suggest future upticks.

Figure 54 ▶ 10-year return of VC Private Capital Indexes —— Private capital —— Sub-\$250M —— \$250M+

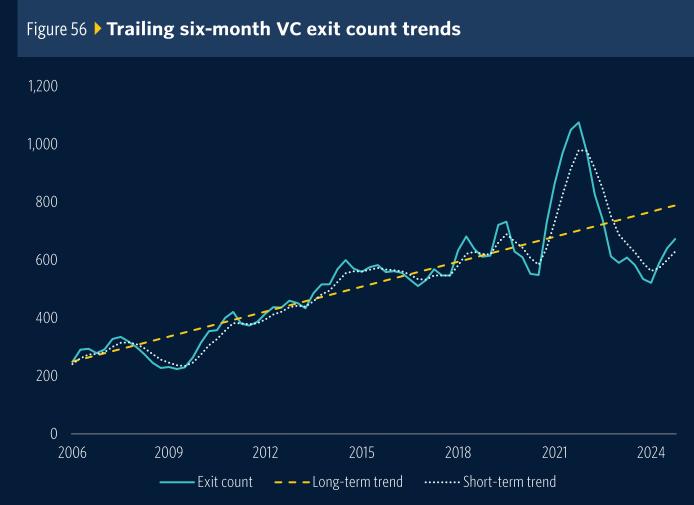
Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Despite a few notable companies with strong post-IPO performance, VC-backed exits remain well below the long-term trend. The improvement in exits has not yet been reflected in dealmaking activity across most of the market...







Source: PitchBook • Geography: US • As of December 31, 2024 Note: Data is seasonally adjusted and includes estimates for the four most recent quarters.



...with AI & ML standing out as the only positive long-term vertical trend, accounting for around 46% of VC deal value in 2024. Much of that capital has gone to LLM developers.

Figure 57 ▶ Trailing six-month VC deal trends dashboard

		Deal count				Deal value			
	Segment	Current	% of total	Long-term score	Short-term score	Current (\$B)	% of total	Long-term score	Short-term score
	Total	7,637	100.0%	-1.8 <mark>4</mark>	-0.55	\$46.14	100.0%	-1.16	-0.43
Vertical	AI & ML	2,346	30.1%	2.09	-0.03	\$15.20	27.8%	0.93	0.22
	Big Data	589	7.6%	-2. <mark>04</mark>	-0.85	\$4.60	8.4%	-1.26	-0.57
	Fintech	807	10.3%	-1.04	-1.03	\$5.67	10.4%	-0.85	-0.43
	Healthtech	903	11.6%	-1.28 <mark></mark>	-0.69	\$6.65	12.2%	-0.80	-0.90
	Life sciences	699	9.0%	-1.7 <mark>1</mark>	-0.14	\$6.79	12.4%	-1.6 <mark>3</mark>	-0.97
	Mobile	534	6.8%	-2.86	-1.88	\$3.23	5.9%	-2 <mark>.42</mark>	-0.87
	SaaS	1,922	24.6%	-2.44	-1.06	\$12.44	22.8%	-1.66	-0.76
Stage	Pre-seed/seed	2,425	31.8%	-2.46	-0.82	\$7.19	15.6%	-0.46	-0.91
	Early stage	2,602	34.1%	-1.16	-0.12	\$14.66	31.8%	-1.26	-0.18
	Late stage	2,122	27.8%	-0.68	-0.56	\$18.62	40.4%	-1.05	-0.39
	Venture growth	467	19.9%	0.71	0.16	\$5.66	37.3%	-1.59	-0.31

Trend (Z-score)

-2.0 +2.0

Source: PitchBook • Geography: US • As of December 31, 2024

Note: "Current" refers to the seasonally adjusted trailing six-month value.



Dashboard methodology

The deal trends dashboard provides a quantitative assessment of overall deal activity in the past six months, as well as within each vertical and stage after adjusting for seasonality and reporting lags. The top seven verticals in this venture dashboard were selected based on their number of venture deals over the past two years.

The long- and short-term Z-scores represent a Z-score normalized derivative from a full-period linear trendline and a 12-month exponential moving average, respectively.



Al domination has inflated market sentiment. The market remains tough for founders across most of the VC ecosystem. However, there is a growing worry that the Al vertical is becoming crowded.

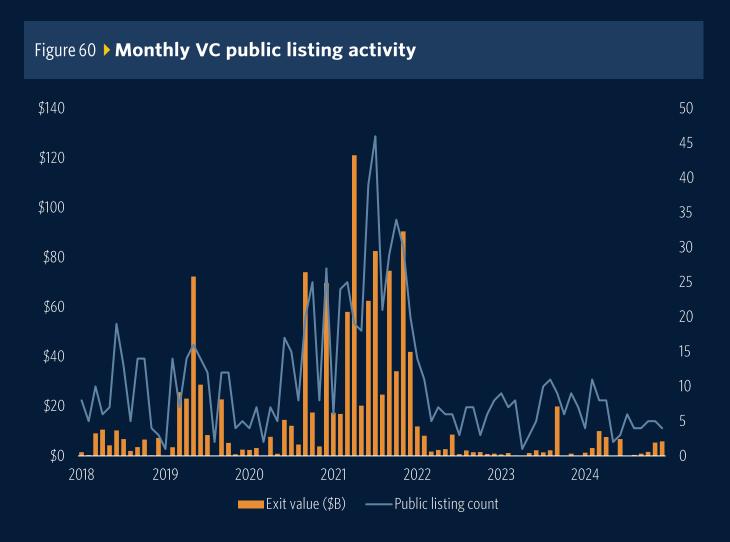
Figure 58 ▶ PitchBook VC Dealmaking Indicator 100 More investor friendly 90 80 70 50.0 is neutral 50 40 30 20 10 More startup friendly 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 ——Early-Stage Index ——Late-Stage Index ——Venture-Growth Index



Figure 59 **Early-Stage AI Dealmaking Indicator** 100 90 80 71.0 70 60 50 40 30 20 10 2015 2016 2023 2024 2019 ——Early-Stage Index (excluding AI) ——Early-Stage Al Index



Public listing activity remains subdued, but valuations have bottomed out. The IPO Index showcases the recovery of recently listed VC-backed companies, while the Unicorn 30 Index reflects the strength of top private companies.



Source: PitchBook • Geography: US • As of December 31, 2024

Figure 61 ➤ VC-Backed IPO and Morningstar PitchBook Unicorn 30 Index returns versus Morningstar Growth Index returns



Sources: PitchBook, Morningstar • Geography: US • As of January 21, 2025



Secondary discounts to last VC rounds have also improved since mid-2023. While still negative through 2024, their steady recovery toward parity shows greater bid-ask balance, at least for private companies that have traded.

Figure 62 > Average and median secondary premium/discount to last VC round



Source: Zanbato • Geography: Global • As of December 31, 2024



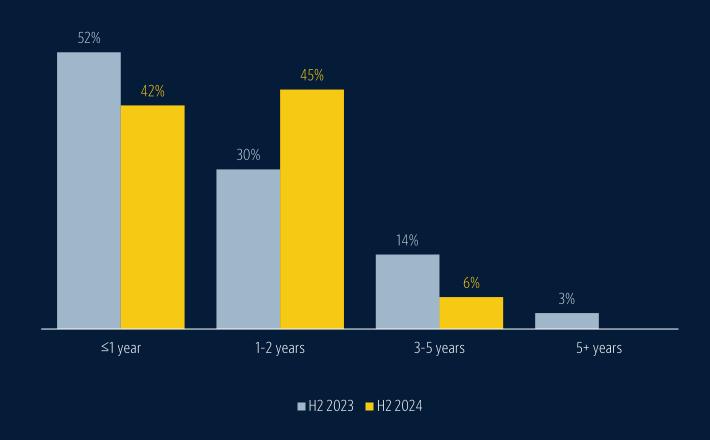
According to our recent VC tech survey, investor sentiment around IPOs has improved, driven by expectations of better IPO candidates and a favorable economic and political climate. However, fundraising for many VCs is still challenging...

Figure 63 > Factors viewed as most important to driving an increase in IPO activity

55% 47% 38% 30% 23% Better companies Decline in interest Stock gains and Accelerated GDP Resetting of Government filing to IPO multiple expansion stability valuation rates growth expectations ■ H2 2023 ■ H2 2024

Source: PitchBook • Geography: Global • As of December 9, 2024

Figure 64 • When do you plan to begin raising your next fund?

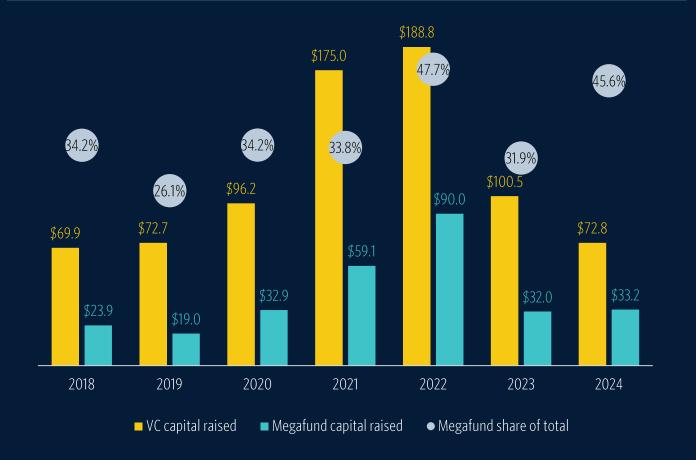


Source: PitchBook • Geography: Global • As of December 9, 2024



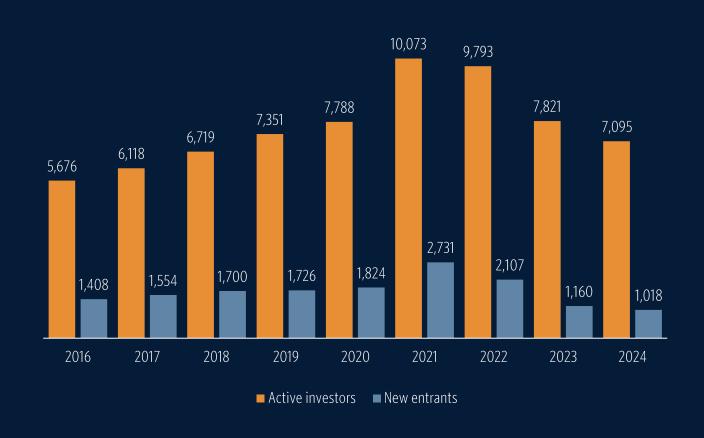
...and megafunds accounted for over 46% of total VC fundraising in 2024. Concurrently, a decline in both active investors and new entrants narrows the pool of market participants, further consolidating share in the hands of these large players.

Figure 65 Megafunds (\$1B+) as a share of total VC capital raised (\$B)



Source: PitchBook • Geography: US • As of December 31, 2024

Figure 66 > Count of active VC investors and new entrants

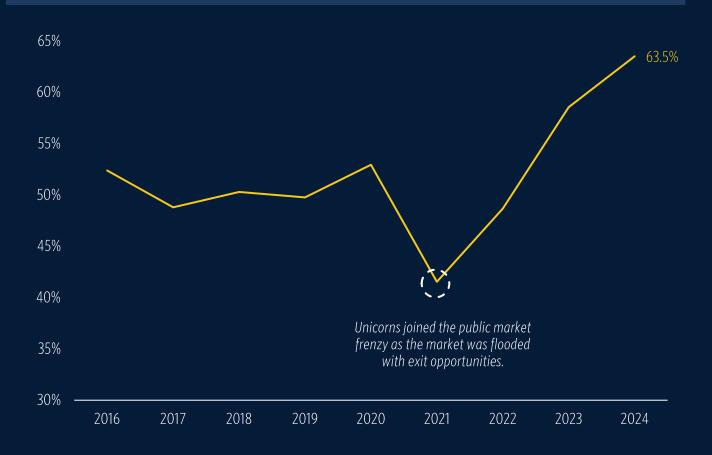


Source: PitchBook • Geography: US • As of December 31, 2024 Note: This chart includes only US investors investing in US VC deals.



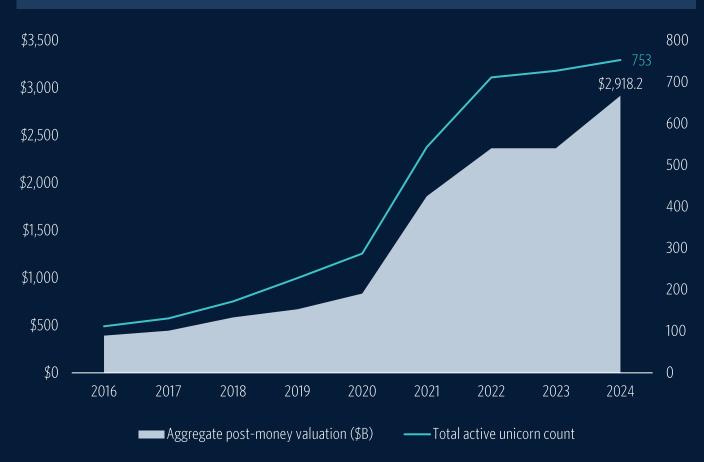
Despite changes in secondary pricing, the market cannot absorb the current backlog. As a sign of the backlog's scale, unicorn valuations are nearing \$3 trillion. Nearly two-thirds of unicorns raised their first VC round over seven years ago.

Figure 67 > Share of active unicorns that raised their first VC round at least seven years ago



Source: PitchBook • Geography: US • As of December 31, 2024

Figure 68 Aggregate unicorn post-money valuation and active unicorn count

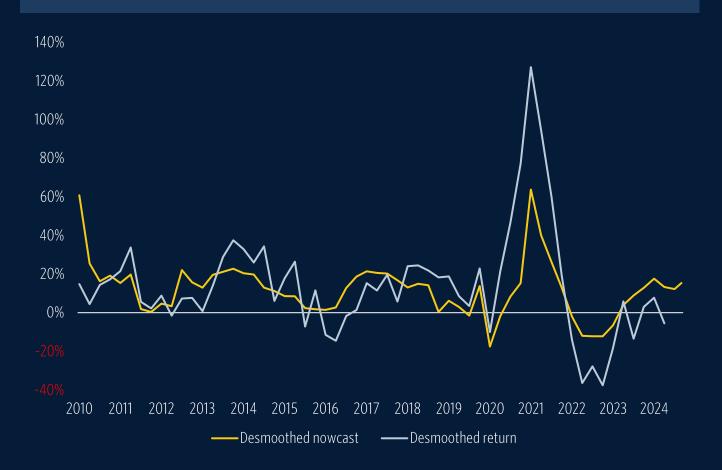


Source: PitchBook • Geography: US • As of December 31, 2024



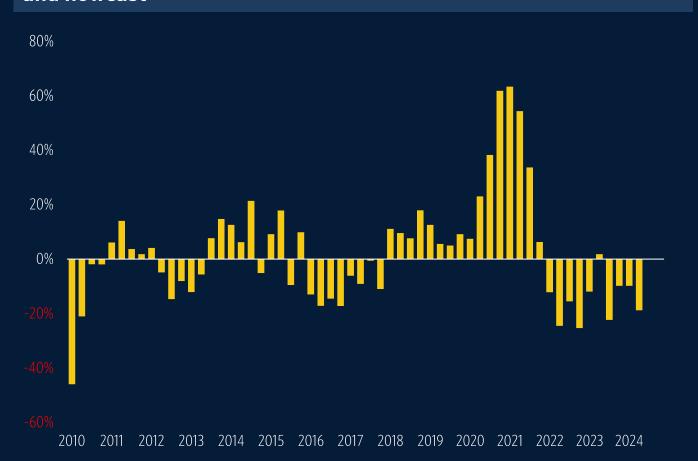
Similar to PE, the VC barometer signals a neutral-to-favorable return environment and is seeing its underperformance relative to fundamental expectations shift toward neutral.

Figure 69 > Rolling one-year desmoothed VC fund returns and nowcast



Source: PitchBook • Geography: US • As of November 30, 2024

Figure 70 Difference between one-year desmoothed VC fund returns and nowcast



Source: PitchBook • Geography: US • As of November 30, 2024



Private debt



Private debt products continue to deliver strong and stable income generation. Mezzanine has been an outperformer in the risk-on environment, while distressed opportunities have remained limited.



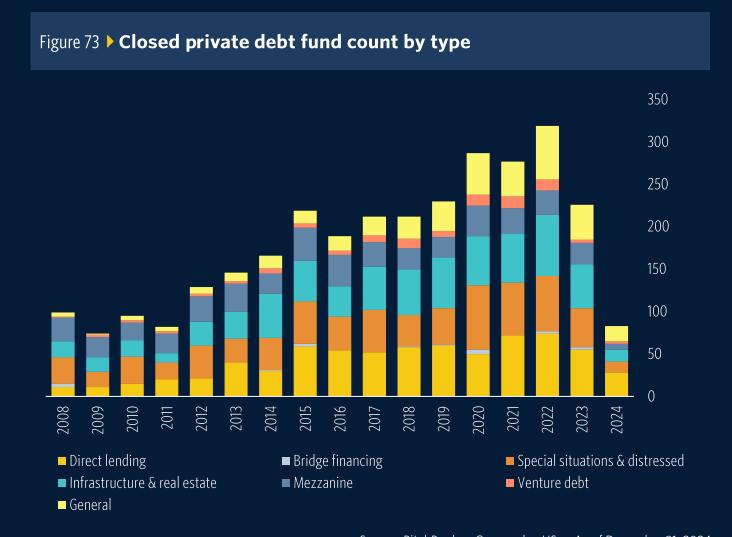
Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Direct lending funds raised a record \$90 billion in 2024, more than total private debt fundraising in 2015. While still below the peak of 2021, demand for private debt products remains solid.

Figure 72 Private debt capital raised (\$B) by type \$180 \$160 \$140 \$120 \$100 \$80 \$60 \$40 \$20 2015 2016 2020 2010 2012 2013 2014 2018 2019 2011 2017 2021 2022 2023 Direct lending ■ Bridge financing ■ Special situations & distressed ■ Infrastructure & real estate ■ Mezzan<u>ine</u> ■ Venture debt General





Source: PitchBook • Geography: US • As of December 31, 2024



Banks are easing their lending standards, bringing the key loan-officer signal back to a more neutral position. As banks become more willing to lend, competition for private debt investors intensifies.

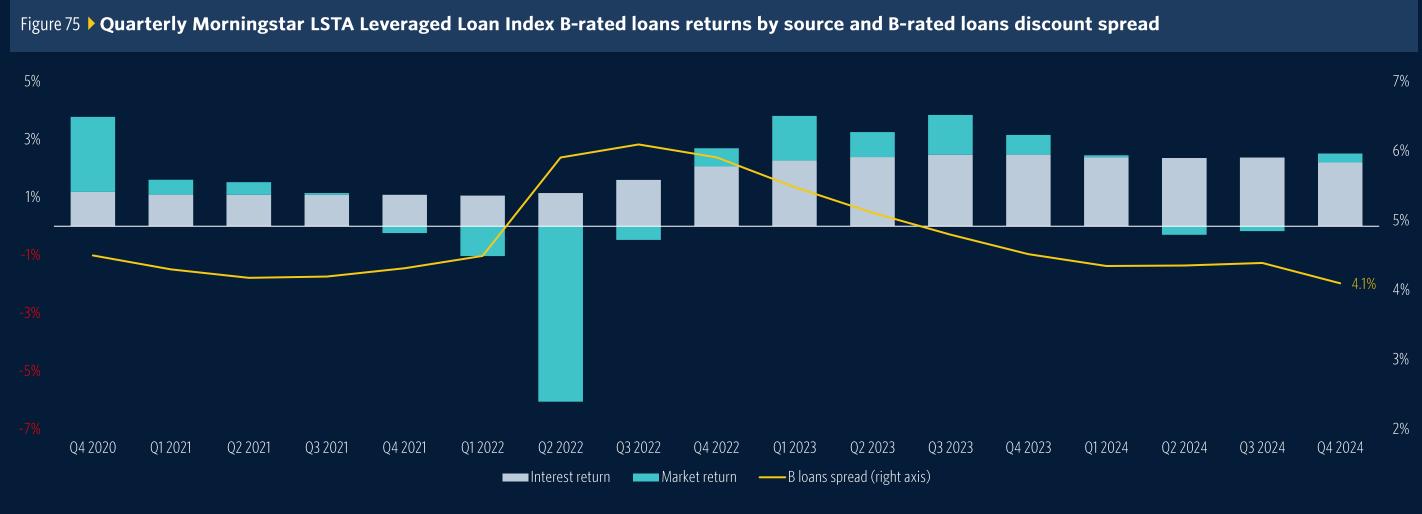
Figure 74 Net share of banks tightening standards on loans to small and medium-to-large firms



Source: <u>Senior Loan Officer Survey</u> • Geography: US • As of November 12, 2024



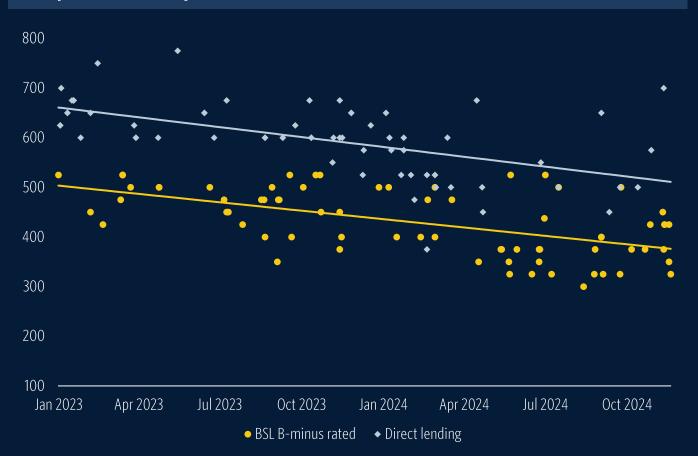
Total returns for floating-rate credit have been substantial, driven by elevated rates and tightening credit spreads. However, with the Fed cutting rates and credit spreads near all-time lows, newly deployed private debt capital faces an uphill climb.





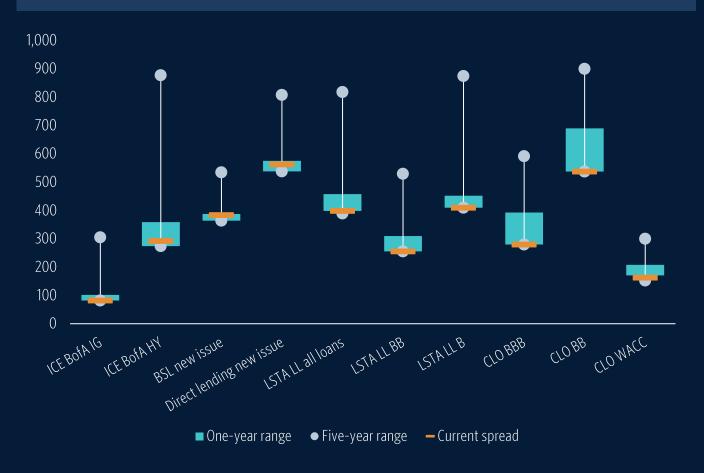
The chief credit market trend is tighter spreads, with public corporates, direct lending new issues, leveraged loans, and collateralized loan obligations (CLOs) all near historical lows. Direct lending new issues maintain a premium over BSL.

Figure 76 New-issue spread of acquisition-related deals by PE-backed companies (basis points)



Source: PitchBook | LCD • Geography: US • As of December 31, 2024

Figure 77 > Credit spread dispersion by ranges (basis points)



Sources: PitchBook | LCD, <u>ICE Indices</u> • Geography: US • As of December 31, 2024



In 2024, credit spreads moved only one way: down. Lenders eager to deploy capital or stay invested are paying up for new exposures or accepting concessions to remain in place.

Figure 78 > Change in credit spread from a year ago (basis points) Direct lending ICE BofA HY BSL new issue new issue LSTA LL all loans LSTA LL BBB LSTA LL BB LSTA LL B LSTA LL CCC CLO AAA CLO AA CLO A CLO BBB CLO BB CLO WACC -234

Sources: PitchBook | LCD, <u>ICE Indices</u> • Geography: US • As of December 31, 2024 Note: CLO spreads are the average CLO coupon spread by month and exclude middle-market deals.



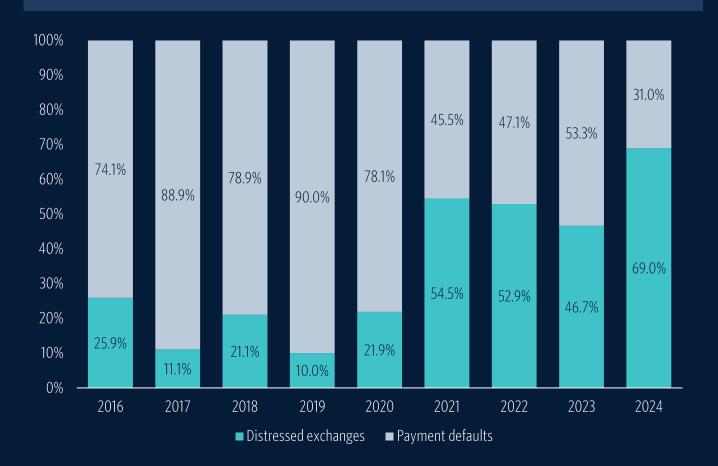
One advantage often touted by private debt is its flexibility and willingness to collaborate with borrowers. While defaults have decreased, there has been a sharp rise in liability management exercises to avoid formal default.

Figure 79 Dual-track loan default rate for issuer count



Sources: PitchBook | LCD, Morningstar • Geography: US • As of December 31, 2024

Figure 80 > Share of distressed exchanges and payment defaults



Sources: PitchBook | LCD, Morningstar • Geography: US • As of December 31, 2024



The recent repricing wave highlights a competitive lending landscape, with investors accepting lower returns to keep capital invested.

Figure 81 Loans priced at par and above by issuer rating



Source: PitchBook | LCD • Geography: US • As of December 31, 2024



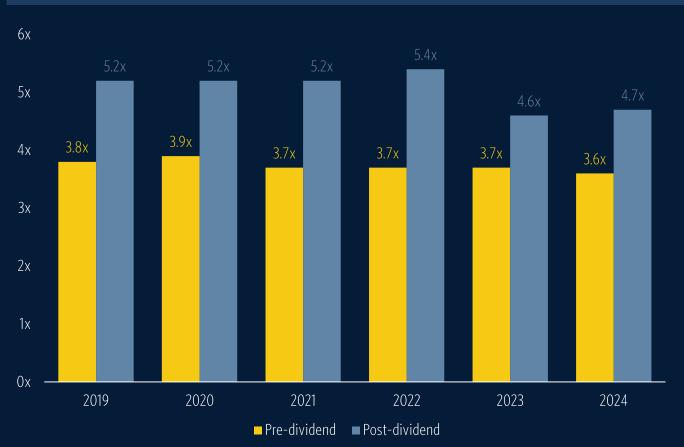
Lenders may find dividend recaps unsavory, but 2024 saw a rise in volume as investors were compelled to put capital to work. Historically, undergoing a dividend recap has increased leverage by a turn.

Figure 82 • Quarterly nonrefinancing new-issue loan volume (\$B) by type



Source: PitchBook | LCD • Geography: US • As of December 31, 2024

Figure 83 > Pre- and post-dividend leverage



Source: PitchBook | LCD • Geography: US • As of December 31, 2024 Note: This chart includes only deals where there are observations for both periods.



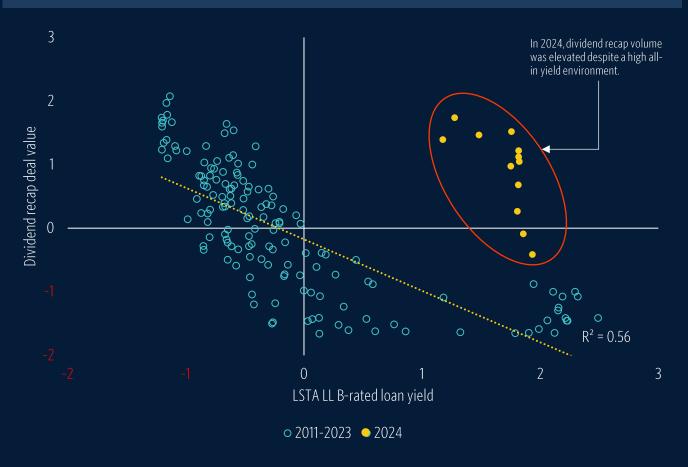
Typically, increases in dividend recap volume have been associated with lower yields, as cheap money fuels deals. However, in 2024, this trend was disrupted as dividend recaps surged despite elevated cost of capital.

Figure 84 > Standardized sponsored dividend recap deal value and LSTA LL B-rated loan yield (Z-score)



Source: PitchBook | LCD • Geography: US • As of December 31, 2024

Figure 85 > Standardized sponsored dividend recap deal value and LSTA LL B-rated loan yield (Z-score)

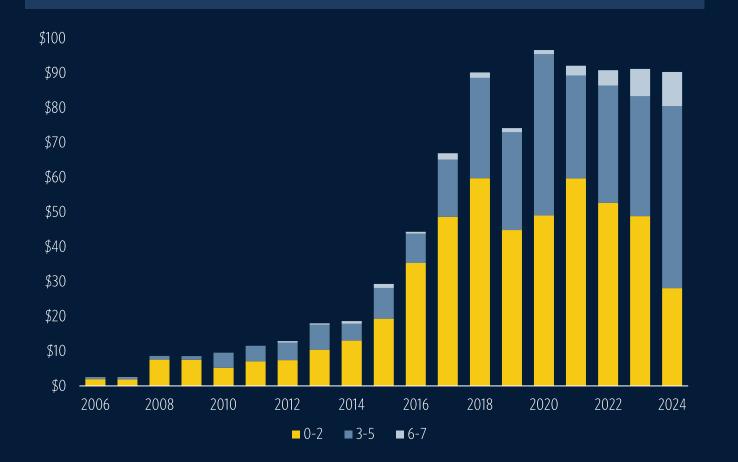


Source: PitchBook | LCD • Geography: US • As of December 31, 2024



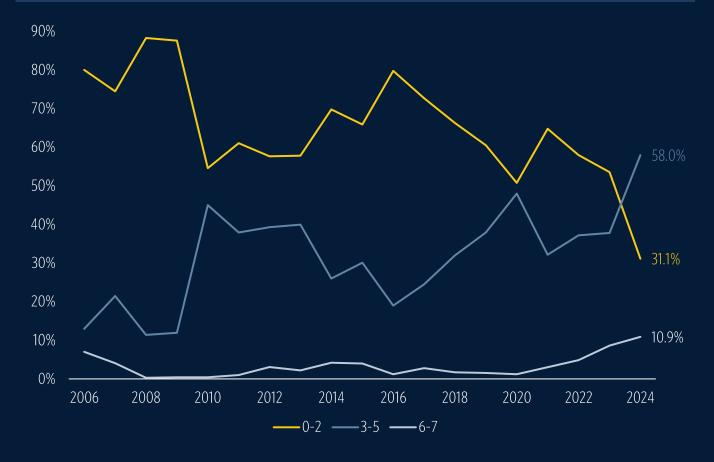
Direct lending dry powder is aging as PE buyout deal values remain below trend, limiting financing opportunities for lenders. Couple that with strong fundraising, and direct lending managers may struggle to deploy capital on schedule.

Figure 86 Direct lending dry powder (\$B) by age bucket (years)



Source: PitchBook | LCD • Geography: US • As of March 31, 2024

Figure 87 > Share of direct lending dry powder by age bucket (years)

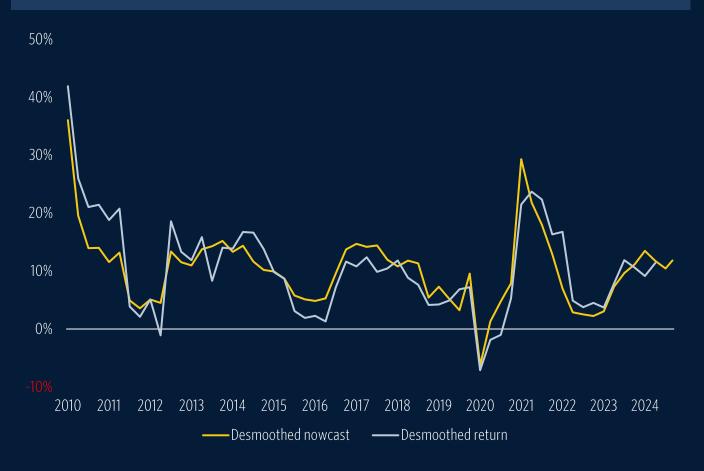


Source: PitchBook | LCD • Geography: US • As of March 31, 2024



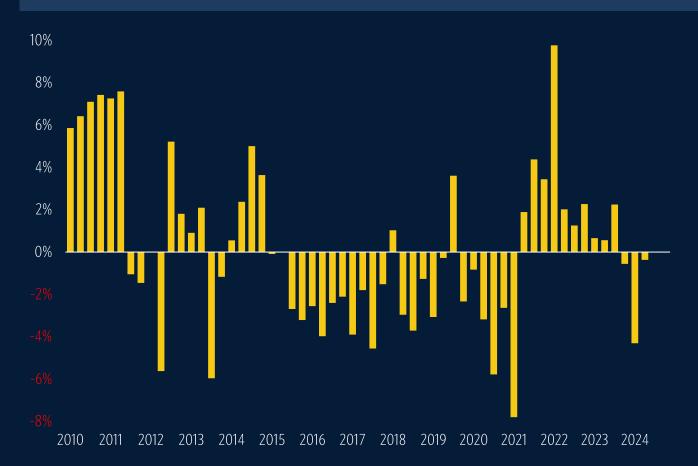
Private debt returns have closely tracked with our private debt barometer, indicating that returns are aligning with fundamental expectations.

Figure 88 > Rolling one-year desmoothed private debt fund returns and nowcast



Source: PitchBook • Geography: Global • As of November 30, 2024

Figure 89 Difference between one-year desmoothed private debt fund returns and nowcast



Source: PitchBook • Geography: US • As of November 30, 2024



The composition of bank balance sheets has been shifting, with a smaller share of loans going to businesses directly and a larger share to nondepository financial institutions, such as private debt, PE, and other private funds investing in corporates.

Figure 90 ▶ Share of commercial bank assets by loan type 40% 34.4% 30% 20% 0% 2025 2016 2017 2018 2020 2021 2022 2023 2024 2015 ——Real estate ——Commercial & industrial ——Consumer ——Nondepository financial institutions

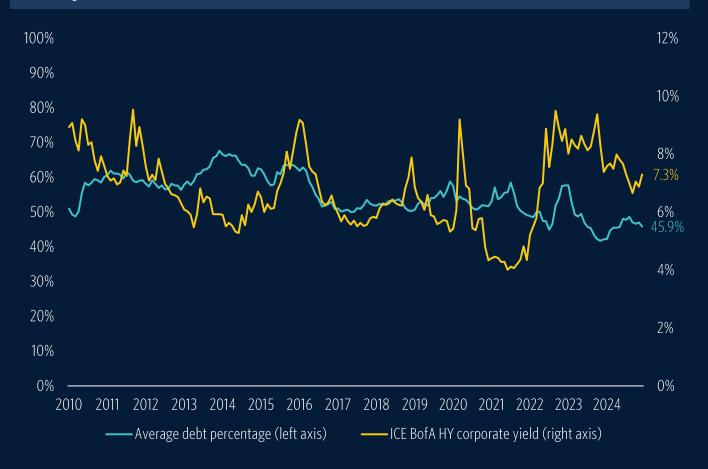


Figure 91 > Annualized 10-year growth in loan assets at commercial banks 13.6% 14% 12% 10% 8% 6% 4.4% 4% 2% Total bank credit Real estate Commercial & Nondepository Consumer financial institutions industrial



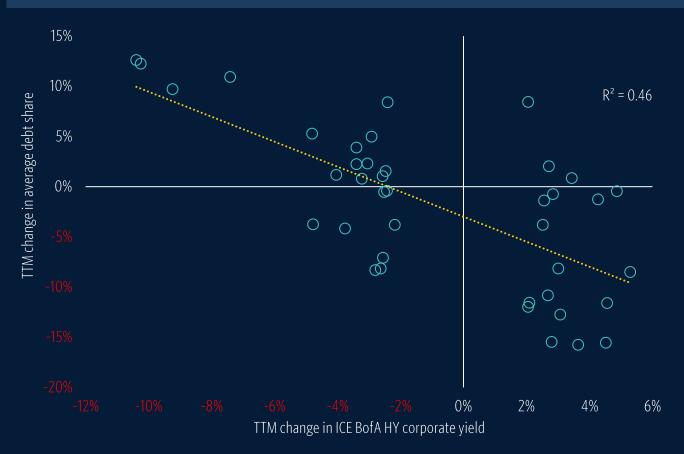
Debt utilization in buyout deals has an inverse relationship with the cost of debt. As yields decline and borrowing costs decrease, financing buyouts becomes more attractive, leading to increased debt usage in these transactions.

Figure 92 Average debt share in buyouts and high-yield (HY) corporate bond yields



Sources: PitchBook, ICE Data Indexes • Geography: US • As of December 31, 2024

Figure 93 > 12-month change in HY corporate bond yield greater than 200 basis points versus change in average debt share on buyout deals

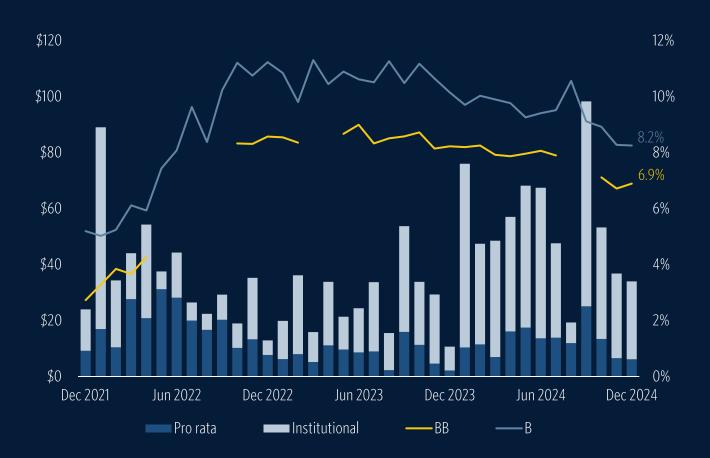


Source: PitchBook • Geography: US • As of December 31, 2024



Leveraged loan volumes remained strong throughout 2024 as yields declined. The performance of the LSTA US Leveraged Loan Index illustrates the appeal of a stable floating-rate income stream for investors.

Figure 94 Monthly leveraged loan value (\$B) and yields



Source: PitchBook | LCD • Geography: US • As of December 31, 2024

Figure 95 Morningstar LSTA US Leveraged Loan Index monthly returns

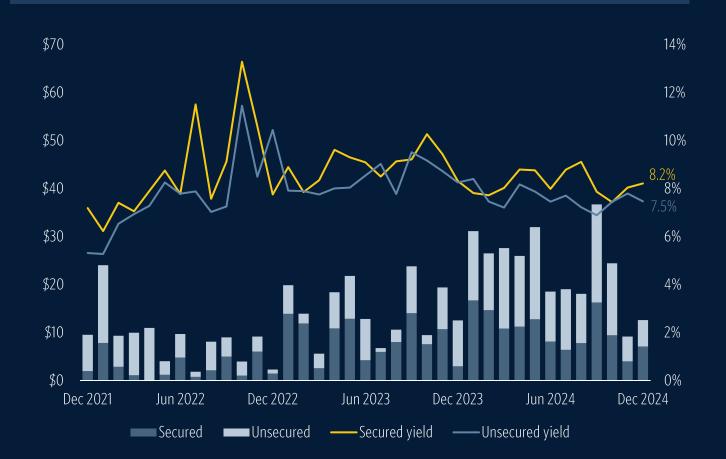


Sources: PitchBook | LCD, Morningstar • Geography: US • As of December 31, 2024



High-yield issuance in 2024 surged compared with the prior two years, with a greater share of unsecured issuance than secured. Middle-market volumes remained subdued despite yields coming down 125 basis points throughout the year.

Figure 96 Monthly high-yield bond values (\$B) and yields



Source: PitchBook | LCD • Geography: US • As of December 31, 2024

Figure 97 Monthly middle-market loan value (\$B) \$4 12% 10% \$3 8.2% 8% \$2 6% 4% Dec 2021 Jun 2022 Dec 2022 Jun 2023 Dec 2023 Jun 2024 Dec 2024 —— Avg. new-issue yield (\$50M or less EBITDA) Pro rata **Institutional**

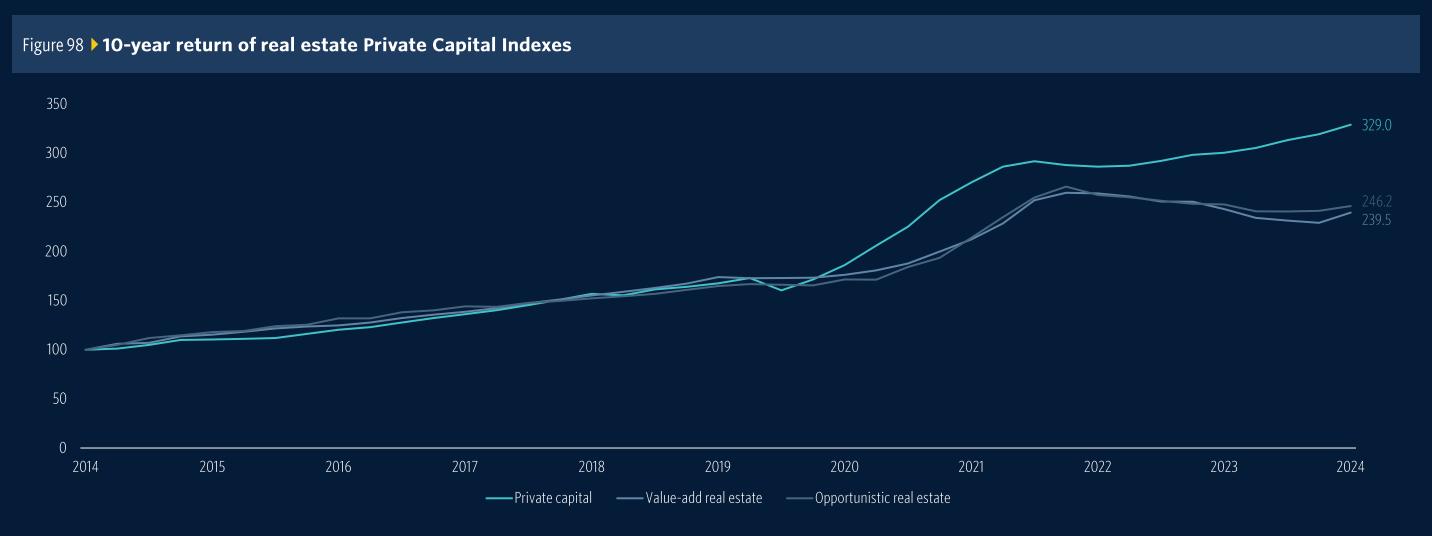
Source: PitchBook | LCD • Geography: US • As of December 31, 2024



Real estate



The broader real estate market is dealing with depressed valuations, which have weighed on returns. Real estate has underperformed all private capital, without much difference in value-add and opportunistic strategies.



Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary.



Fundraising for private fund real estate continues to trend lower, with commitments failing to reach \$60 billion for the second straight year. However, fundraising is not as depressed as fund counts as the largest GPs take more share.

Figure 99 ▶ Real estate capital raised (\$B) by select strategies \$140 \$120 \$100 \$80 \$60 \$40 \$20 \$0

■ Core/core+ ■ General ■ Value-add ■ Opportunistic ■ Distressed



Figure 100 > Closed real estate fund count by select strategies ■ Core/core+ ■ General ■ Value-add ■ Opportunistic ■ Distressed

Source: PitchBook • Geography: US • As of December 31, 2024



Since the beginning of 2023, the pace of standard tightening among lenders has slowed, suggesting that the challenges in the real estate capital markets are gradually being resolved.

Figure 101 Net share of banks tightening standards on real estate loans by category

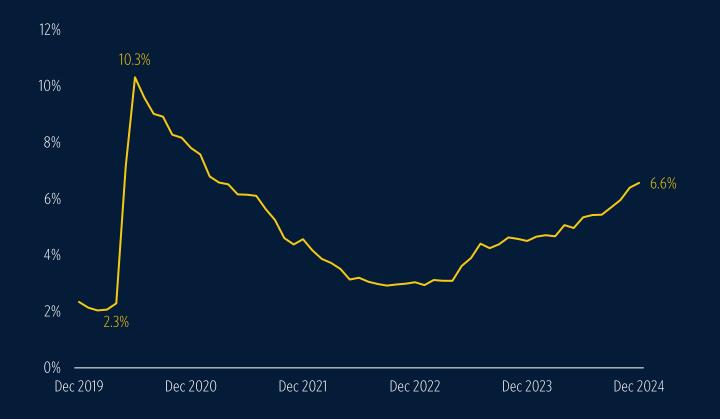


Source: Senior Loan Officer Survey • Geography: US • As of November 12, 2024 Note: The survey series was split starting in 2014.



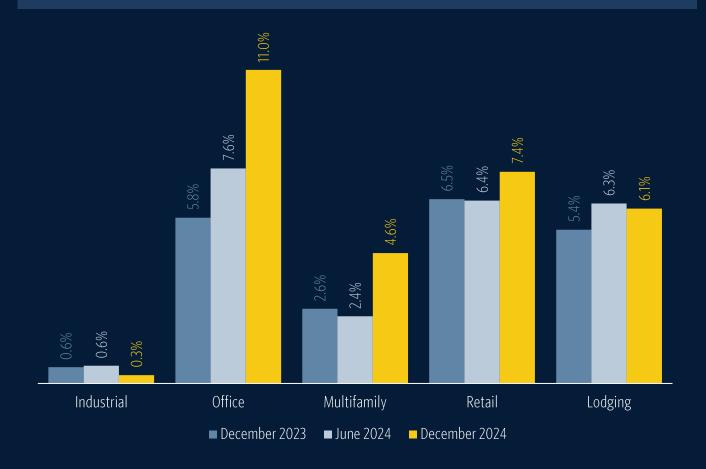
Commercial mortgage-backed securities (CMBS) delinquencies trended up in 2024 largely due to the office sector, which hit double-digit rates. Concerningly, multifamily and retail delinquency rates also rose in the back half of the year.

Figure 102 > CMBS delinquency rates



Source: Trepp • Geography: US • As of December 31, 2024

Figure 103 CMBS delinquency rates by property type



Source: <u>Trepp</u> • Geography: US • As of December 31, 2024

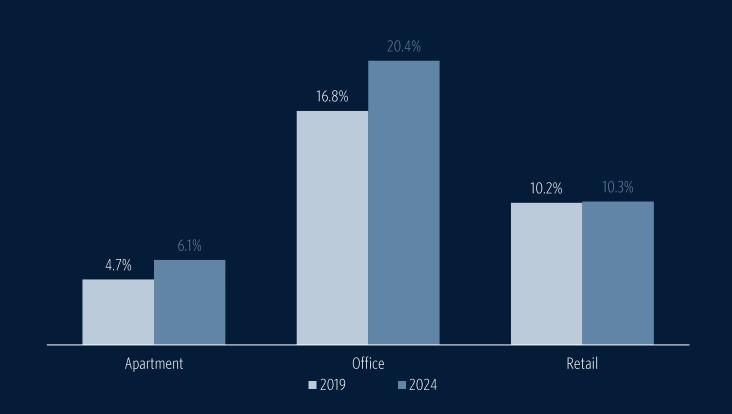


Vacancy rates have ticked up in office and apartments over the past year. The average office vacancy rate has eclipsed 20%, stemming from structural changes that began during the pandemic.

Figure 104 ▶ Change in average vacancy rate by property sector 4% 3% 2% 2021 2024 2018 2019 2020 2022 2023 ——Apartment ——Office ——Retail



Figure 105 Average vacancy rates by property sector



Source: Moody's • Geography: US • As of December 31, 2024



The impressive run-up in industrial has stalled, and the sector has been the worst performer over the past year. Hopes of a bottoming out and more return-to-office announcements helped lift office REIT returns in 2024.

Figure 106 > REIT Index returns by sector (rebased to 100 at end of 2015)



Source: Nareit • Geography: US • As of December 31, 2024

Figure 107 ▶ One-year REIT Index returns by sector +24.2% Healthcare Office +21.5% +20.5% Apartment +14.0% Retail Self-storage Lodging Industrial

Source: Nareit • Geography: US • As of December 31, 2024



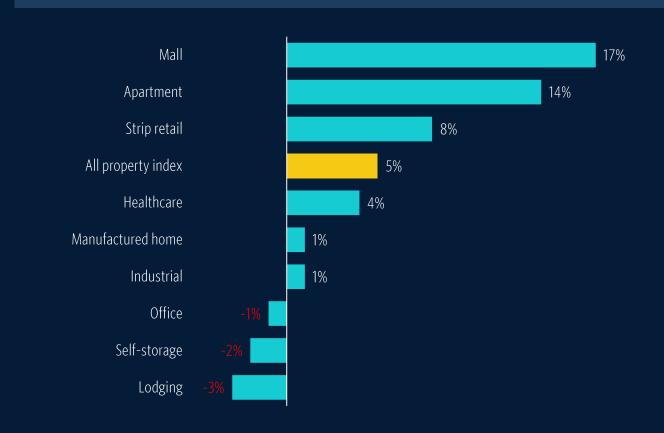
In private markets, real estate valuations picked back up in 2024, led by retail and multifamily. Private market values for office have not yet followed the growth experienced in public REITs.

Figure 108 ▶ Green Street All Property Return Index by quarter



Source: Green Street • Geography: US • As of December 31, 2024

Figure 109 Green Street Price Index one-year change by property type

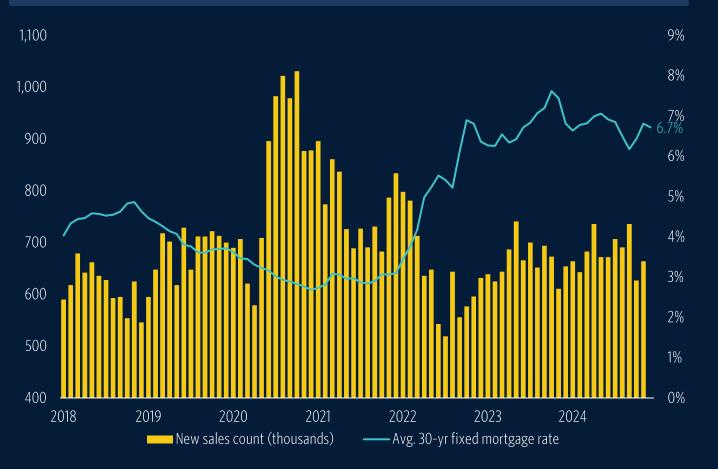


Source: <u>Green Street</u> • Geography: US • As of December 31, 2024



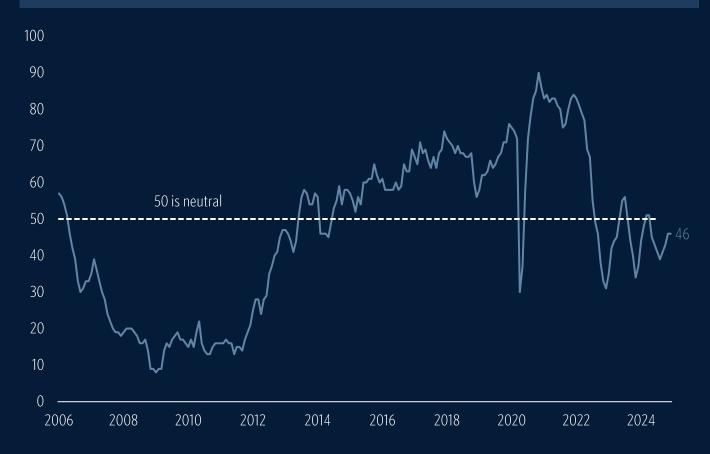
Mortgage rates dipped briefly with the start of Fed rate cuts but have since kicked back up toward 7% on average. Housing market sentiment remains slightly on the pessimistic side.

Figure 110 New single-family home sales and average 30-year fixed mortgage rate



Source: FRED • Geography: US • As of December 31, 2024; new sales as of November 30, 2024

Figure 111 NAHB/Wells Fargo Housing Market Index

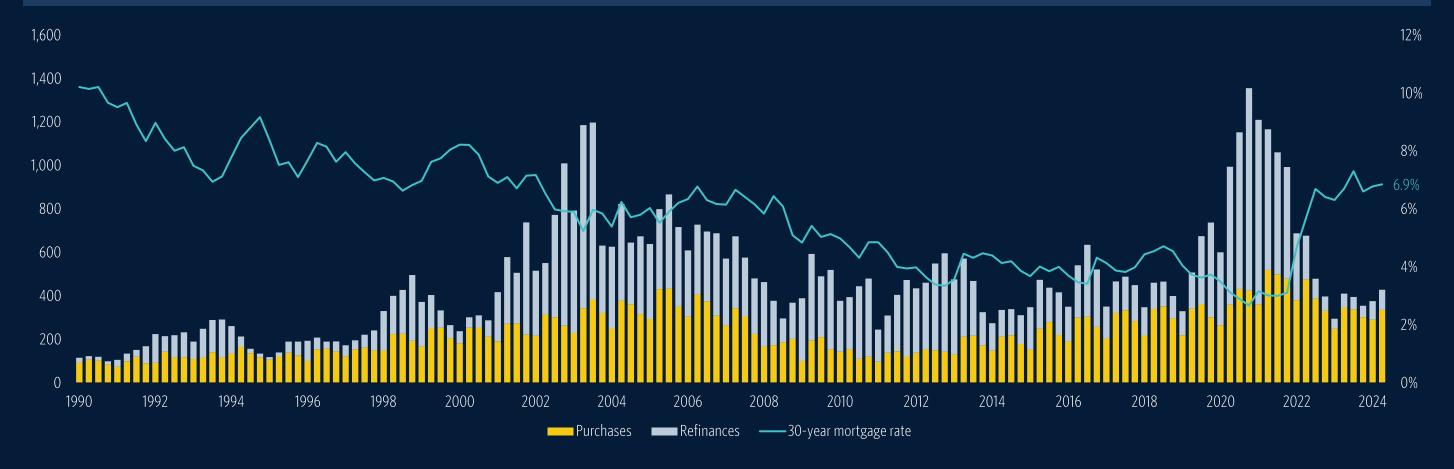


Source: NAHB/Wells Fargo • Geography: US • As of December 31, 2024



With most homeowners locked into bottom-low interest rates, there has been little demand for refinancing. It will likely take sustained declines in rates to kick-start new growth in that market and in new home purchases.

Figure 112 • Quarterly mortgage origination estimates and average 30-year mortgage rate

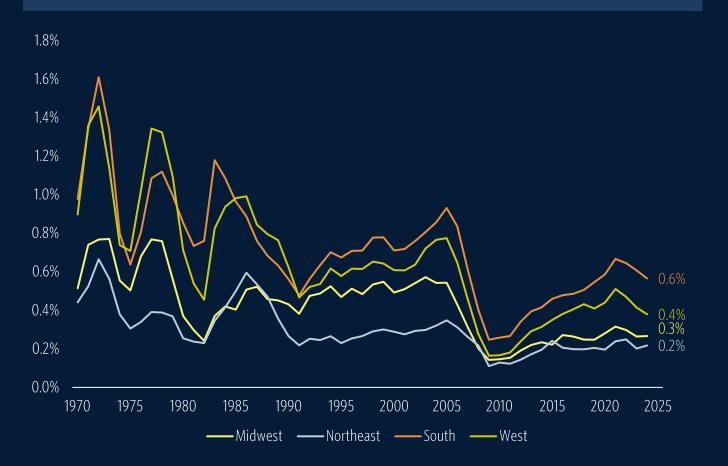


Sources: Mortgage Bankers Association, FRED • Geography: US • As of June 30, 2024



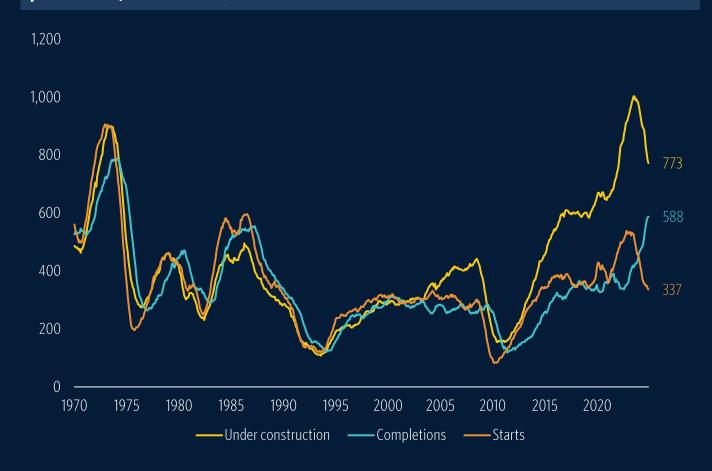
Multifamily housing starts have ticked downward, but completions have risen following the onslaught of new construction that started when rates were near zero. Overall housing starts are still low relative to regional populations.

Figure 113 > Housing starts as a share of population by region



Source: FRED • Geography: US • As of December 31, 2024

Figure 114 > Annualized multifamily housing starts and completions (five-plus units, thousands)

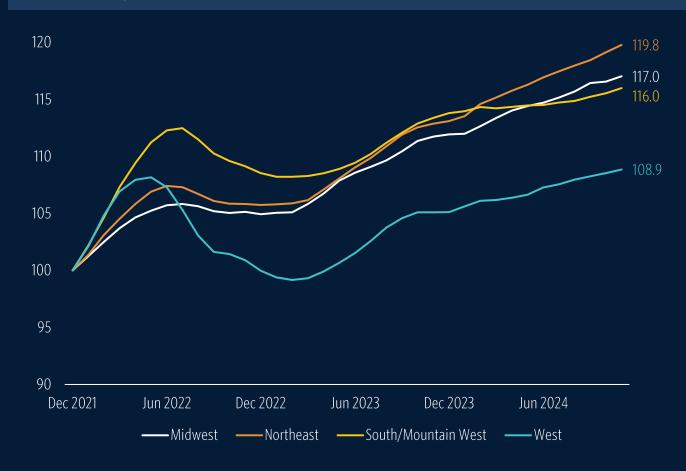


Source: FRED • Geography: US • As of December 31, 2024



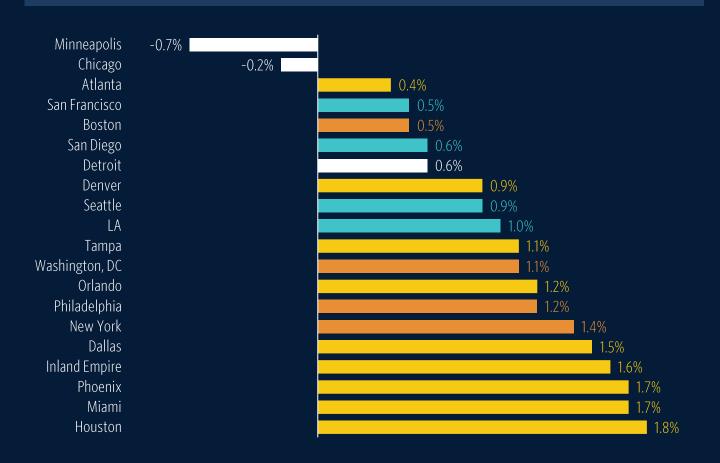
The Sun Belt markets of Houston, Miami, and Phoenix led in employment growth throughout 2024, while major coastal cities were in the middle of the pack. Price appreciation has been highest for the Northeast over the past few years.

Figure 115 Average home price appreciation by region (rebased to 100 at end of 2021)



Source: FRED • Geography: US • As of November 30, 2024

Figure 116 Done-year change in employment in select cities

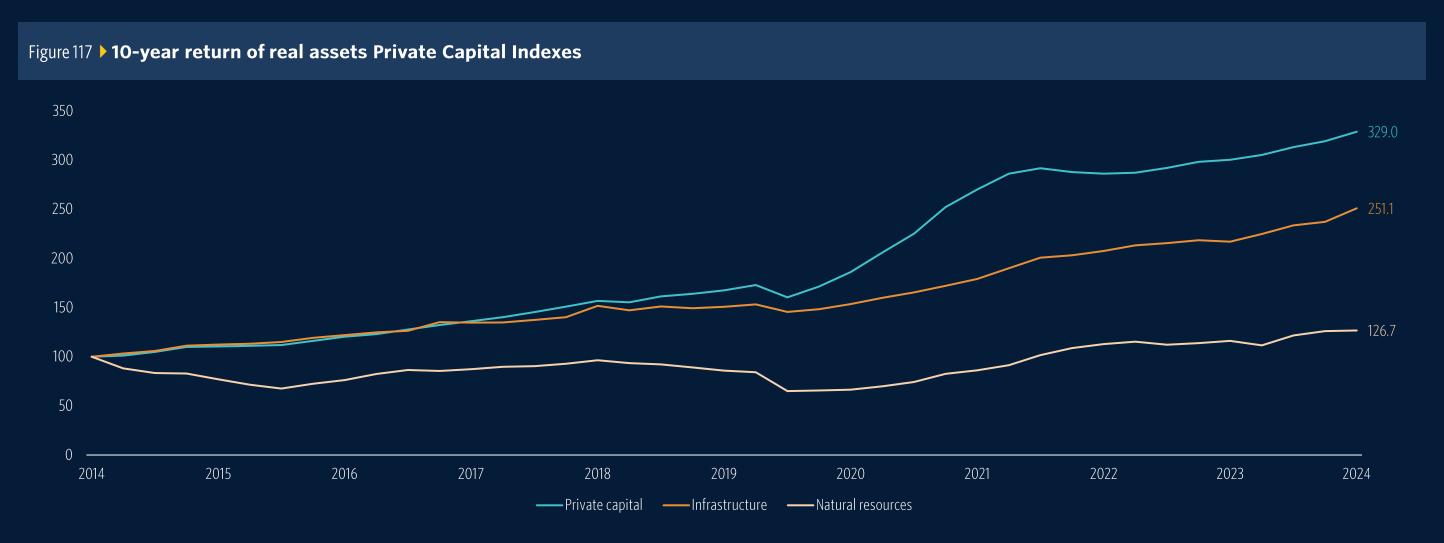


Source: Bureau of Labor Statistics • Geography: US • As of November 30, 2024



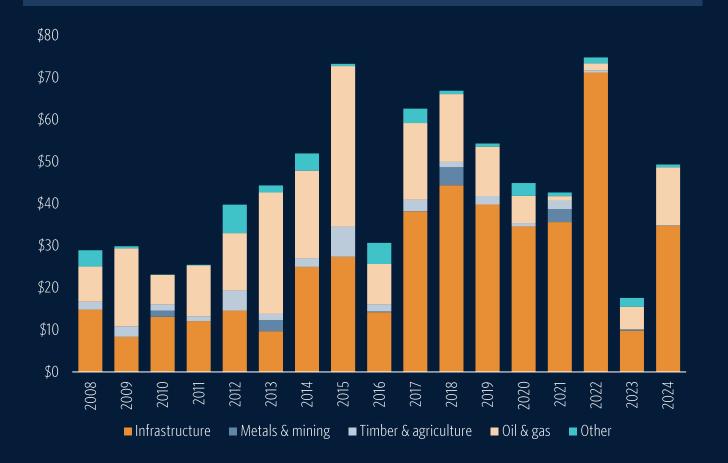
Infrastructure and natural resources

Infrastructure returns have remained steady, thanks to infrastructure's countercyclical nature and inflation protection. Natural resources are more exposed to commodity volatility, which in part has contributed to the divergence in returns.



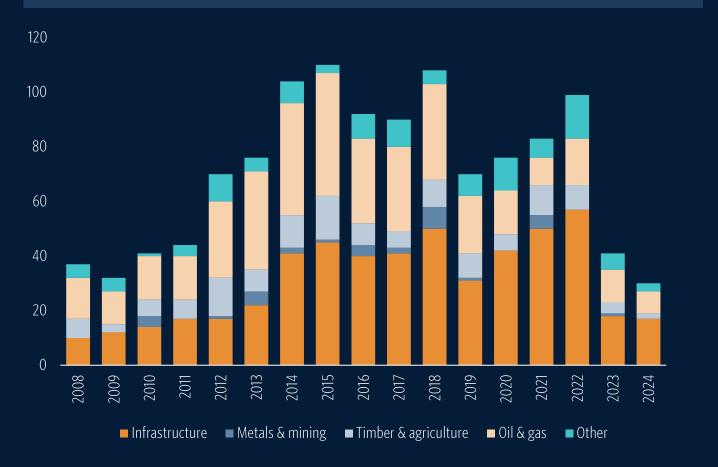
Source: PitchBook • Geography: US • As of September 30, 2024 Note: Data for Q3 2024 is preliminary. The outperformance of infrastructure relative to natural resources has coincided with infrastructure's growing domination of LP commitments. Fundraising improved substantially in 2024, tripling in capital raised from 2023 fund closings.

Figure 118 Infrastructure and natural resources capital raised (\$B) by type



Source: PitchBook • Geography: US • As of December 31, 2024

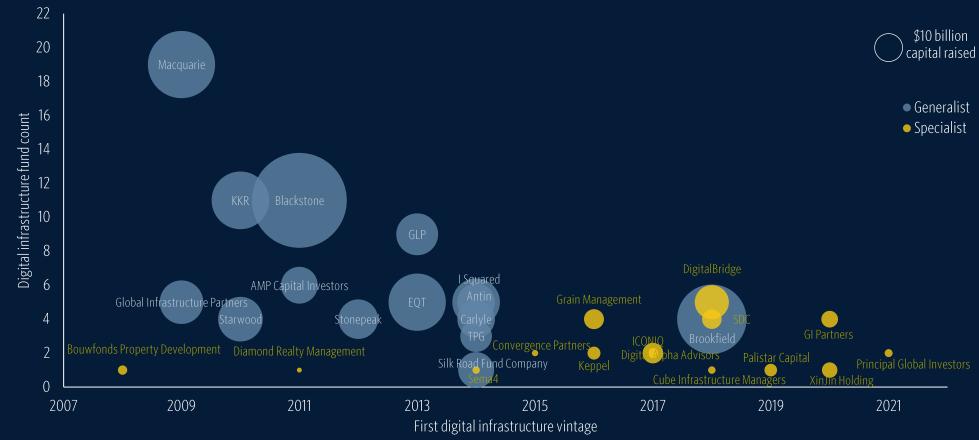
Figure 119 Closed infrastructure and natural resources fund count by type



Source: PitchBook • Geography: US • As of December 31, 2024

All hype has been a boon to digital infrastructure assets and has accelerated a decadeplus trend of private investment in datacenters, attracting dozens of specialists.

Figure 120 > Top digital infrastructure fund managers by capital raised (2014 to 2023)



Source: PitchBook • Geography: Global • As of December 31, 2023



Digital infrastructure funds

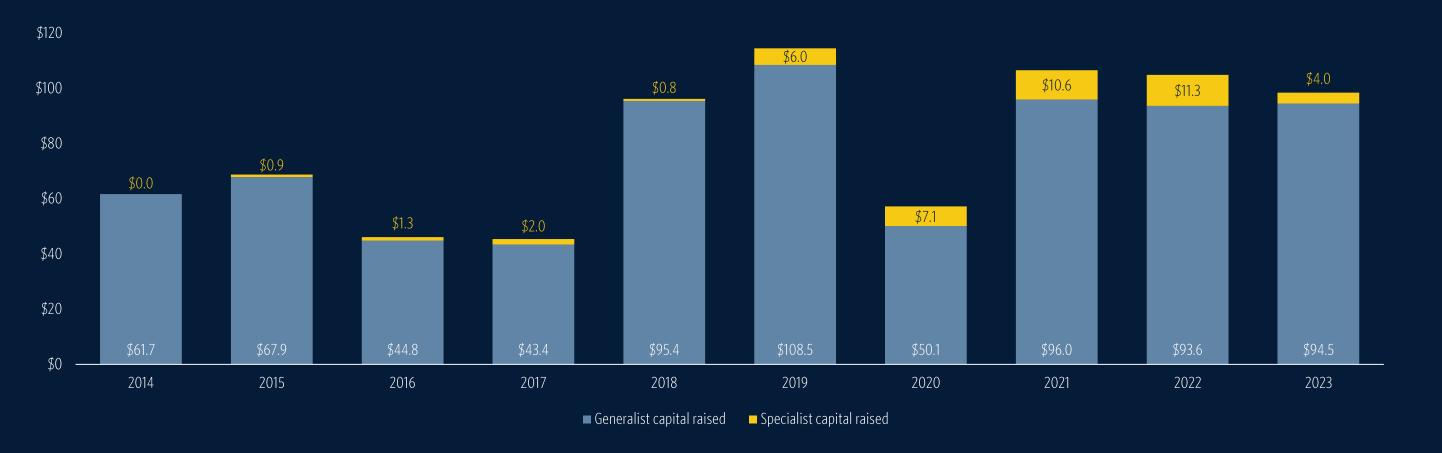
We define digital infrastructure funds as any infrastructure or real estate vehicle that has made an investment in digital infrastructure or that has specified that it targets assets under the digital infrastructure umbrella as part of its mandate.

The universe of digital infrastructure funds contains generalist funds, which invest in digital infrastructure alongside other infrastructure or real estate sectors, and specialist funds, which invest exclusively or almost exclusively in digital infrastructure.

Read more in our <u>Analyst Note:</u>
<u>Infrastructure Investors Capitalize on the Digital Revolution</u>.

Since 2014, over \$800 billion has been raised in funds with at least some investment in digital infrastructure. \$44 billion has been raised by specialist funds in that time frame.

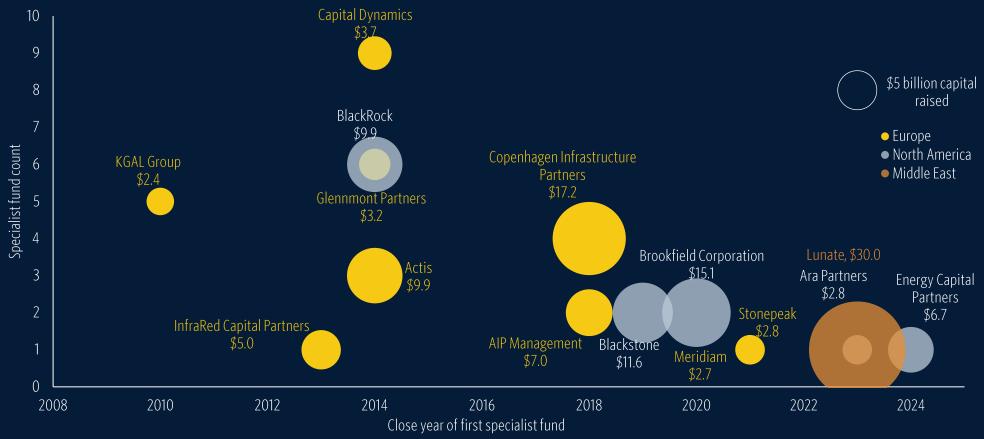
Figure 121 > Capital raised (\$B) among vehicles investing in digital infrastructure



Source: PitchBook • Geography: Global • As of December 31, 2023

Similarly, the energy transition theme has attracted dedicated GPs and fund strategies at mega firms. European managers specialized first.

Figure 122 > Top energy transition specialist managers by capital raised (\$B) since 2009



Source: PitchBook • Geography: Global • As of June 30, 2024

Energy transition funds

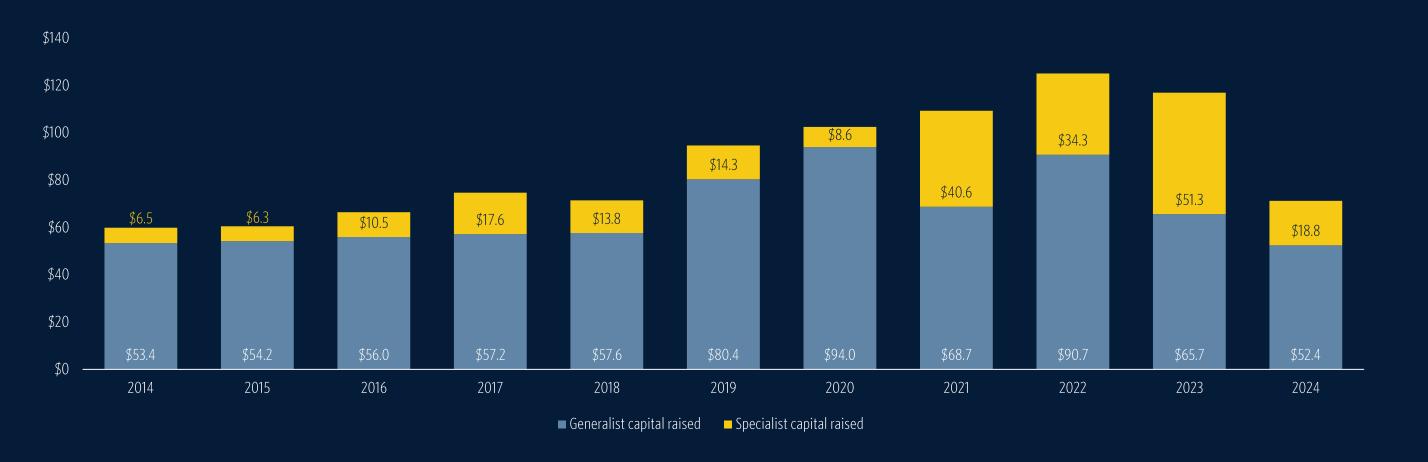
Energy transition infrastructure funds are defined as those investing in energy transition assets or explicitly targeting them as part of their mandate. These assets include renewable and low-carbon energy (solar, wind, hydropower, geothermal, bioenergy, waste-toenergy, and nuclear); EV charging; carbon capture, utilization, and storage; and battery storage. The category includes both generalist funds, which invest in energy transition alongside other sectors, and specialist funds, which focus almost exclusively on these assets, allowing for occasional opportunistic investments outside their primary theme.

We highlight notable specialist firms here, but you can read more in our <u>Analyst Note: Infrastructure Funds</u> <u>Fuel the Energy Transition</u>.



Energy transition specialists have taken increasing share of vehicles with exposure to the theme. Nearly \$223 billion in commitments has been raised by specialist funds since 2014, with another \$730 billion coming from generalists.

Figure 123 Capital raised (\$B) among vehicles investing in energy transition infrastructure



Source: PitchBook • Geography: Global • As of December 31, 2024

Commodity price appreciation has stabilized after spiking from 2021 to mid-2022, helping bring down goods inflation in the US. Still, gold became one of the top-performing investments of 2024, rising 27.4%.

Figure 124 > Select commodities price performance



Source: Morningstar • Geography: Global • As of December 31, 2024



Since the pandemic, the cost of shipping goods has stabilized as supply chain constraints work themselves out, with the exception being water transportation, whose price index rose 8.0% in 2024...

Figure 125 Producer Price Index change since 2019 for freight transportation components



Source: FRED • Geography: US • As of December 31, 2024

...while the throughput at US ports, as proxied by Port of Los Angeles container volumes, has risen above pre-pandemic levels, growing 19.3% in 2024 from year-end 2023.

2018

2019

2020

Figure 126 Port of Los Angeles 12-month container volume (millions TEUs)

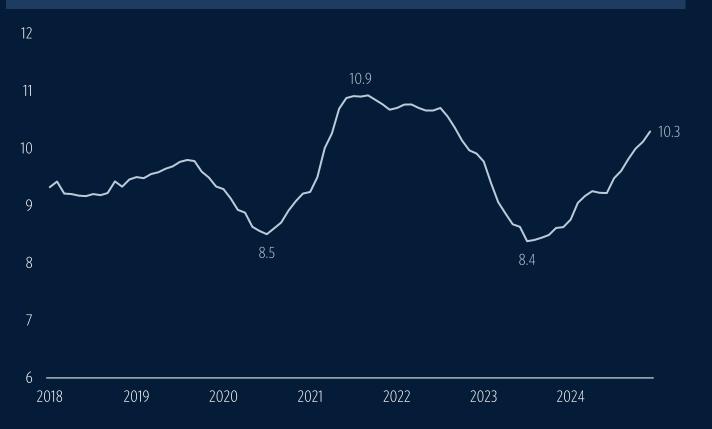


Figure 127 • Port of Los Angeles container volume YoY change

30%

20%

10%

-10%

-10%

-21.7%

2021

Source: Port of Los Angeles • Geography: Los Angeles • As of December 31, 2024

Note: TEU stands for 20-foot equivalent unit.

Source: Port of Los Angeles • Geography: Los Angeles • As of December 31, 2024

2023

2024

2022



Additional research

Market updates



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