PitchBook

QUANTITATIVE PERSPECTIVES

US Market Insights

Q1 2024

US Market Insights

Introduction

Pessimism entering 2023 has given way to renewed confidence about an economic soft landing in 2024. Rates have remained elevated, but market expectations are that a higher-for-not-much-longer environment is upon us. Positive economic indicators, improving credit conditions, and lower inflation have private market investors looking forward to this year and beyond.

Still, valuations across many areas of the market appear high relative to the current interest rate regime, particularly in tracking VC, buyout, and real estate pricing. Plus, corporate default rates trended higher throughout 2023. The new environment has led to a bifurcation across sectors and strategies. As always, there are risks and opportunities for allocators investing in private capital markets.

We proceed with cautious optimism as the Federal Reserve (Fed) appears to be done with the latest series of tightening measures, the private markets have had plenty of time to come to terms with the worth of their portfolios, and signs of a risk-on attitude in the public markets could finally unjam exit activity.

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Macro landscape

Key takeaways

- The engineering of a soft landing may actually be happening, given recent GDP figures, thus removing some downside uncertainty in the private markets and bringing some hope to an unfreezing of deal activity.
- Faith in an economic recovery is still not widespread, however, as both consumer and business confidence remain below their 30-year median levels—a state that has persisted since 2020.
- Inflationary pressures have relaxed considerably, though consumer price index (CPI) figures are still above the Fed target of 2%. That said, for three consecutive meetings, the Fed has held rates steady and signaled that three rate cuts may be in the cards for 2024.
- Forward economic indicators work except when they don't. Despite a persistently inverted yield curve, the rule of thumb that such an inversion means recession has not proven to be a negative omen so far.
- One indicator that has persistently resisted signs of recession has been jobs. While some industries have been announcing cuts, the US unemployment rate has remained surprisingly low, tempering the pain of rising rates and inflation because at least people are employed.
- The increase in rates has taken some pressure off allocators to extend into higher-risk assets in order to meet their return targets, which could be a negative for VC and high-yield debt flows.

Our “Macro environment dashboard” provides a look at broad trends in the economy and financial markets. To end 2023, strong GDP growth and falling inflation coincided with risk-on public markets.

Macro environment dashboard

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023*
Macroeconomics	Real GDP growth (annualized)	4.2%	5.2%	6.2%	3.3%	7.0%	-2.0%	-0.6%	2.7%	2.6%	2.2%	2.1%	4.9%	3.3%
	CPI (3-month annualized)	3.1%	4.5%	8.8%	5.2%	10.4%	9.7%	10.5%	2.5%	3.3%	3.8%	2.7%	4.9%	1.8%
	Core CPI (3-month annualized)	2.0%	1.9%	9.4%	3.0%	8.0%	5.5%	7.1%	6.0%	4.3%	5.1%	4.1%	3.1%	3.3%
	Job creation	2.2%	2.1%	2.5%	2.9%	3.1%	2.3%	1.5%	2.0%	1.2%	1.4%	1.6%	1.2%	1.1%
	Unemployment rate	6.7%	6.1%	5.9%	4.7%	3.9%	3.6%	3.6%	3.5%	3.5%	3.5%	3.6%	3.8%	3.7%
	Consumer sentiment	80.7	84.9	85.5	72.8	70.6	59.4	50	58.6	59.8	62	64.2	67.9	69.7
	Business confidence	101.4	102	101.7	101.6	101.3	100.8	100.2	99.5	98.9	98.6	98.5	98.8	98.6
Yields	Federal funds rate	0.09%	0.07%	0.08%	0.08%	0.08%	0.20%	1.21%	2.56%	4.10%	4.65%	5.08%	5.33%	5.33%
	US 10-year Treasury	0.93%	1.74%	1.45%	1.52%	1.52%	2.32%	2.98%	3.83%	3.88%	3.48%	3.81%	4.59%	3.88%
	US 2-year Treasury	0.13%	0.16%	0.25%	0.28%	0.73%	2.28%	2.92%	4.22%	4.41%	4.06%	4.87%	5.03%	4.23%
	High Yield OAS	3.86	3.36	3.04	3.15	3.1	3.43	5.87	5.43	4.81	4.58	4.05	4.03	3.39
Index returns	S&P 500	12.1%	6.2%	8.5%	0.6%	11.0%	-4.6%	-16.1%	-4.9%	7.6%	7.5%	8.7%	-3.3%	11.7%
	Russell 2000	31.4%	12.7%	4.3%	-4.4%	2.1%	-7.5%	-17.2%	-2.2%	6.2%	2.7%	5.2%	-5.1%	14.0%
	Nasdaq Composite	15.6%	3.0%	9.7%	-0.2%	8.4%	-8.9%	-22.3%	-3.9%	-0.8%	17.0%	13.1%	-3.9%	13.8%
	Morningstar/LSTA US Leveraged Loans	3.8%	1.8%	1.5%	1.1%	0.7%	-0.1%	-4.5%	1.3%	2.6%	3.2%	3.1%	3.5%	2.9%
	Nareit All Equity REITs	8.1%	8.3%	12.0%	0.2%	16.2%	-5.3%	-14.7%	-10.8%	4.1%	1.7%	1.2%	-8.3%	18.0%
	Morningstar Infrastructure Index	10.9%	5.2%	5.6%	-2.0%	8.2%	0.9%	-10.0%	-8.4%	10.4%	1.9%	1.9%	-6.9%	10.9%

Trend

Positive

Neutral

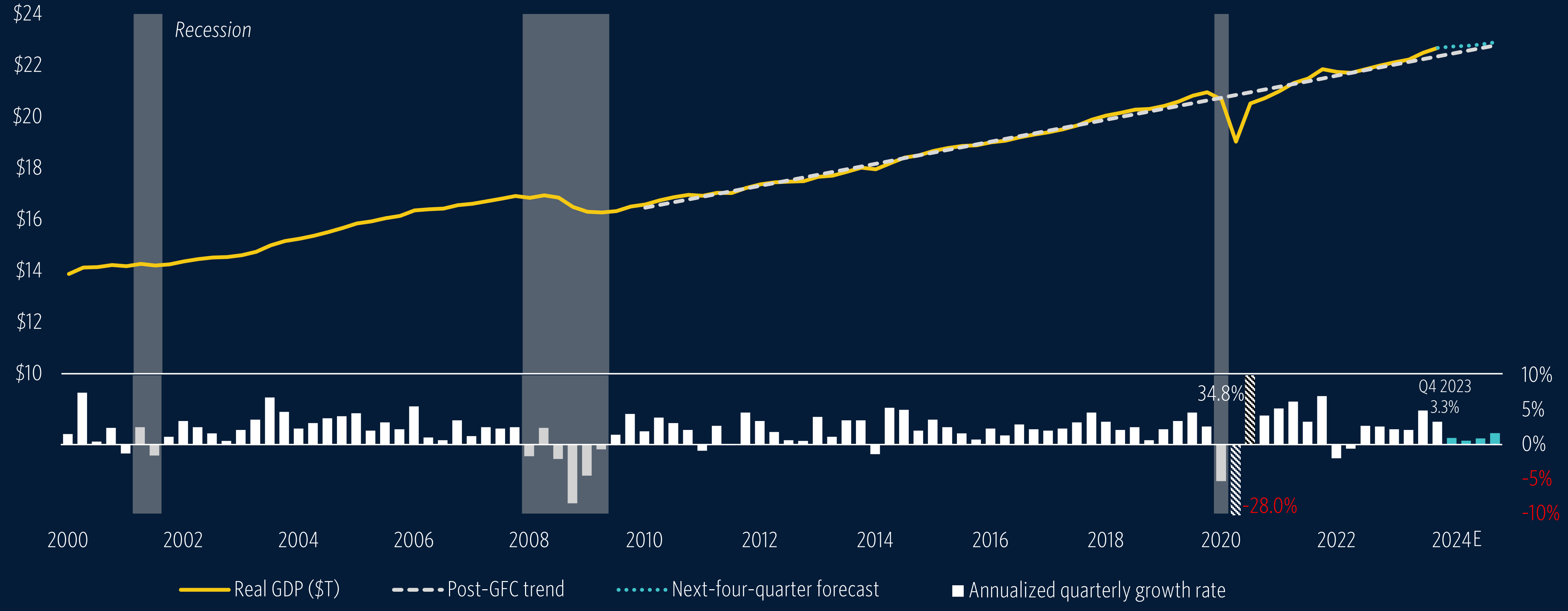
Negative

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, ICE Data Indexes, OECD, University of Michigan, Morningstar, PitchBook | LCD · Geography: US · *As of December 31, 2023; business confidence as of November 30, 2023

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

Above-trend real GDP in 2023 brings the US closer to a successful soft landing. GDP growth forecasts are muted, but recession fears have noticeably receded.

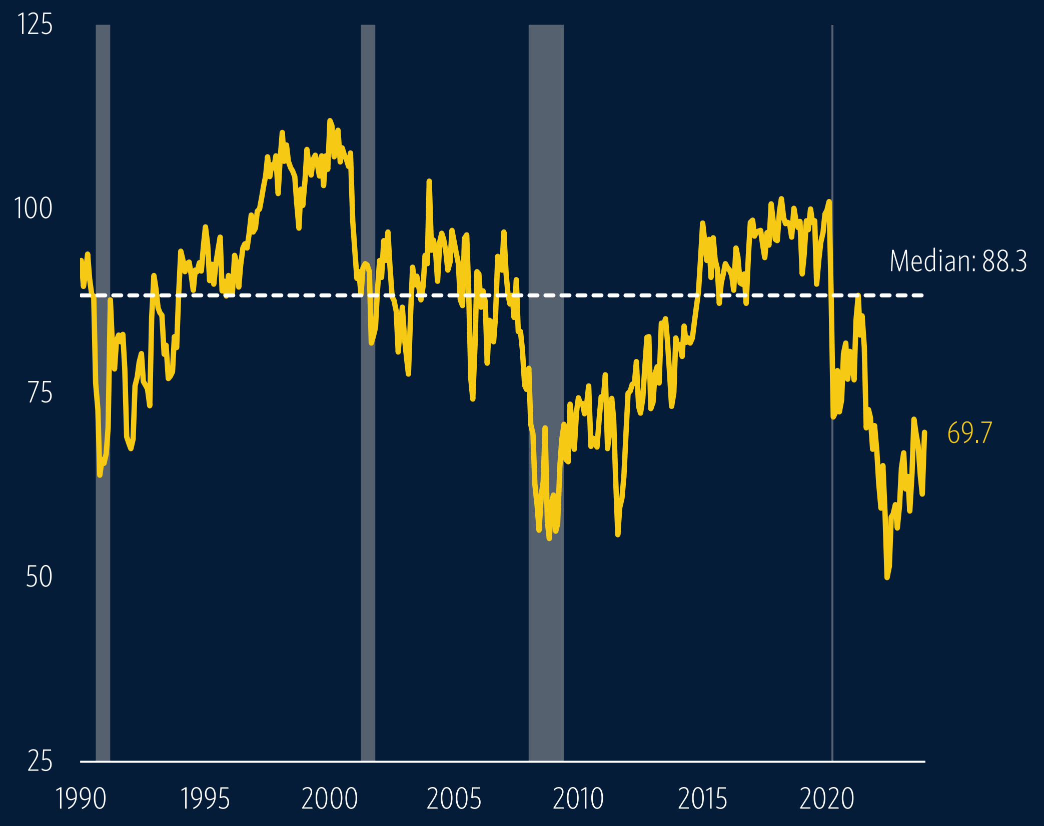
Real GDP compared with trend following the global financial crisis (GFC)*



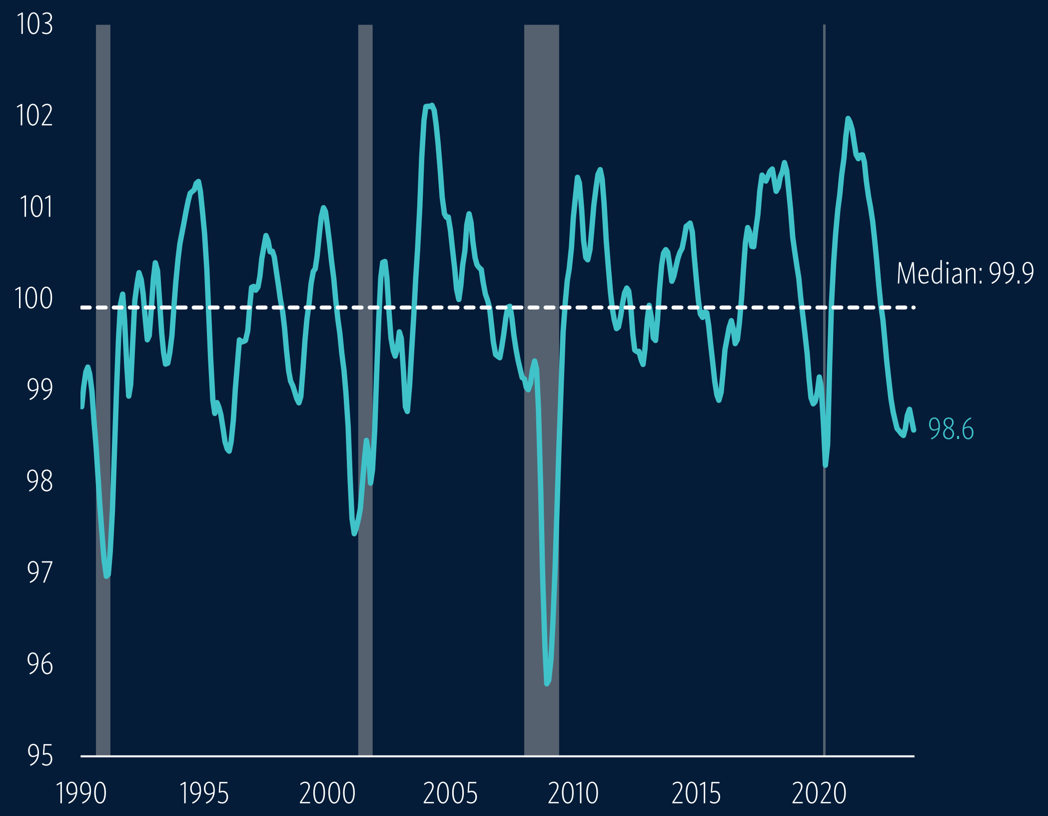
Sources: Bureau of Economic Analysis, Wall Street Journal Economic Forecasting Survey · Geography: US · *As of December 31, 2023

Consumer sentiment improved over 2023, but both consumers and businesses are still wary despite positive economic data.

University of Michigan Consumer Sentiment Index*



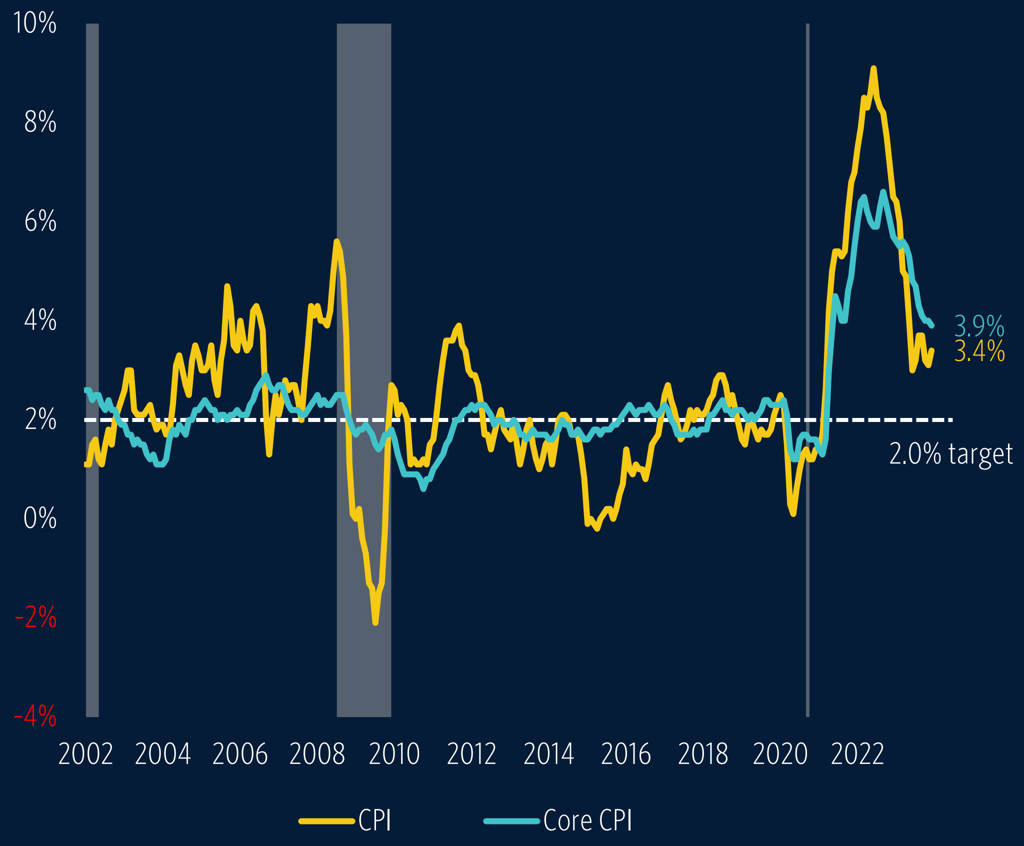
US Business Confidence Index**



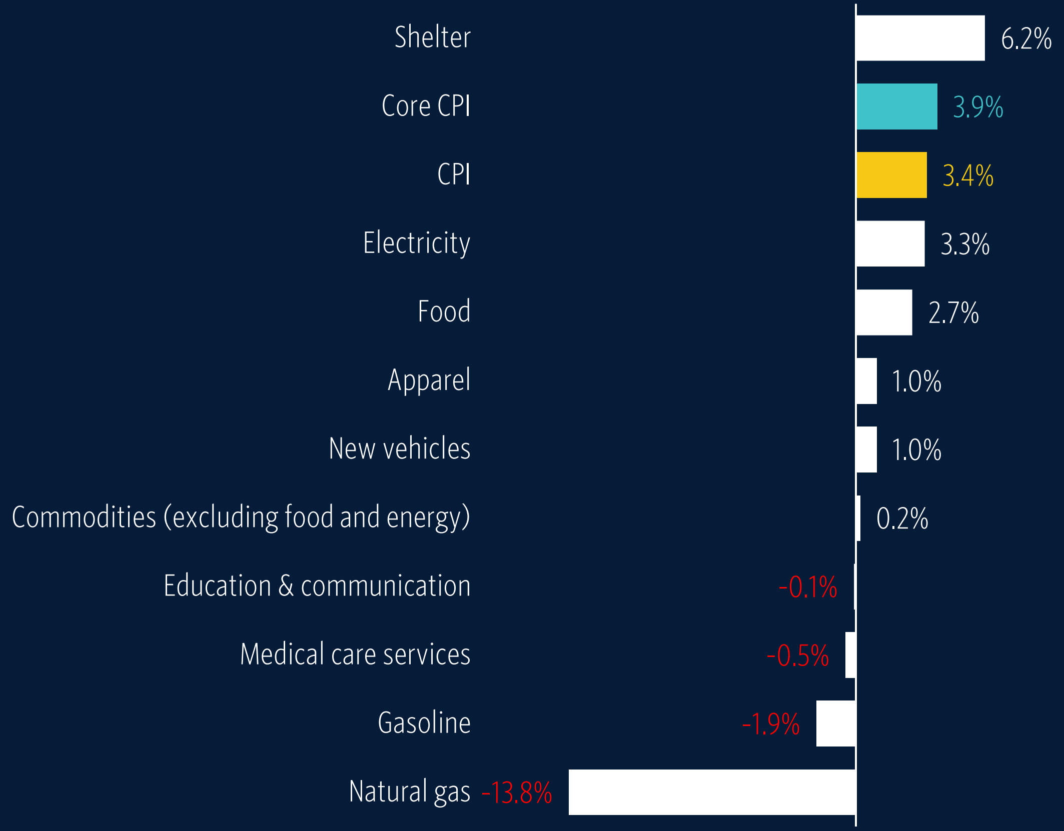
Sources: University of Michigan, OECD · Geography: US · *As of December 31, 2023 · **As of November 30, 2023

Easing of energy and logistics prices propelled inflation's impressive downward progress toward the Fed's 2% target...

Year-over-year change in CPI*



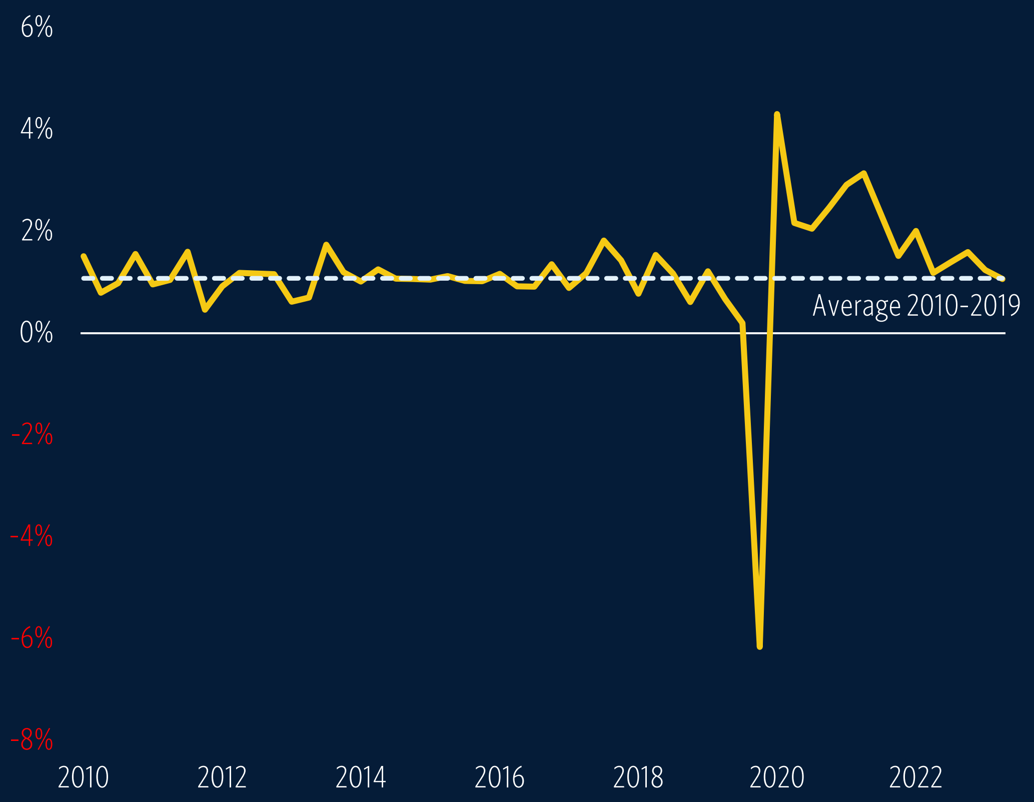
CPI one-year change by select categories in December 2023*



Source: Bureau of Labor Statistics · Geography: US · *As of December 31, 2023

...and strong job gains have driven the unemployment rate back to the lows of 2019. While still positive, job creation has cooled to the average growth of the pre-pandemic decade.

Quarter-over-quarter US job creation change*

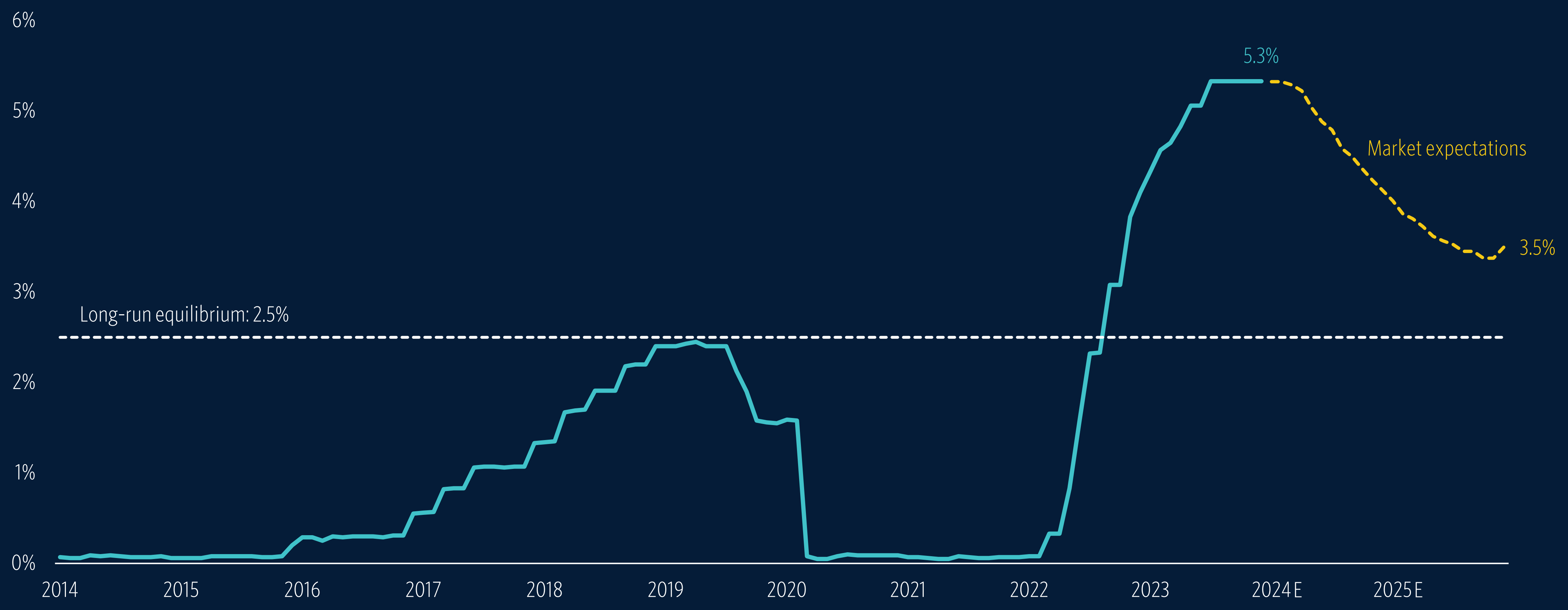


US unemployment rate*

Source: Bureau of Labor Statistics · Geography: US · *As of December 31, 2023

The market is pricing in substantial cuts to policy rates even though the Fed has attempted to temper expectations.

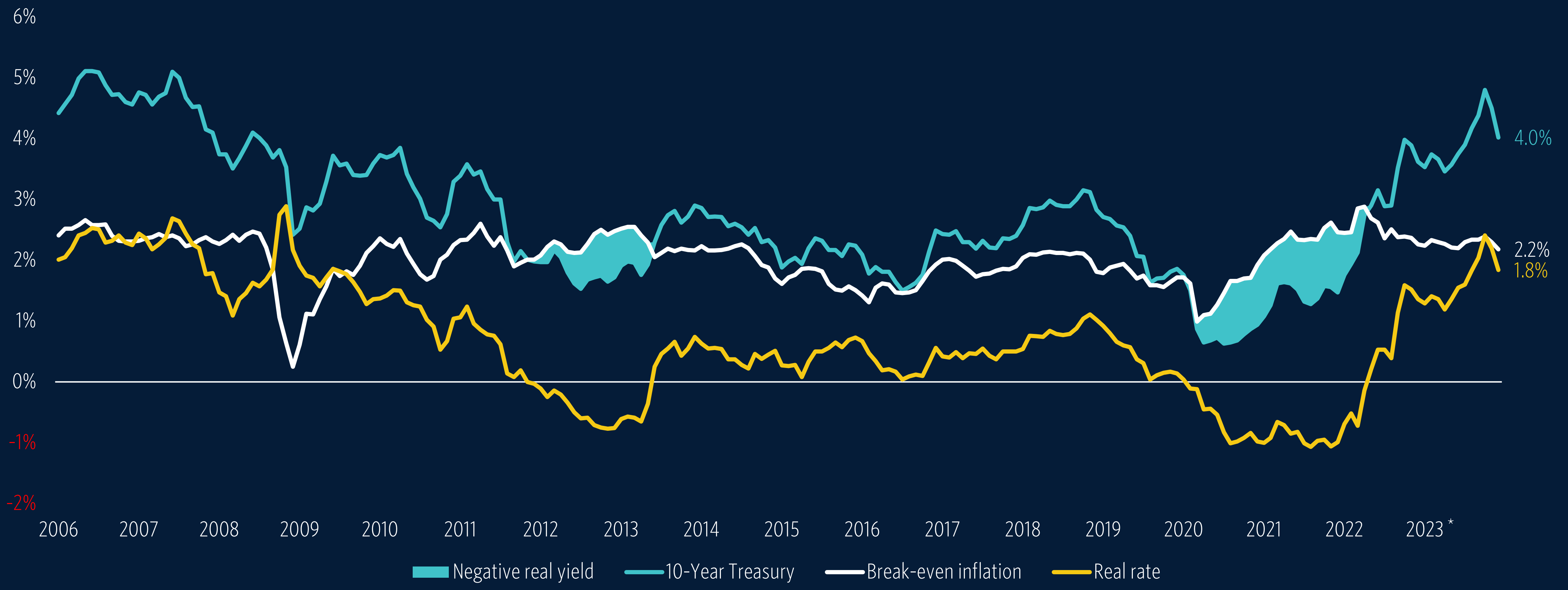
Federal funds rate with forward market expectations*



Sources: Federal Reserve, CME Group · Geography: US · *As of January 30, 2024

The era of zero or negative real yields has ended. Higher interest rates have allocators rethinking risk exposures, lenders tightening standards, and dealmakers reevaluating leverage...

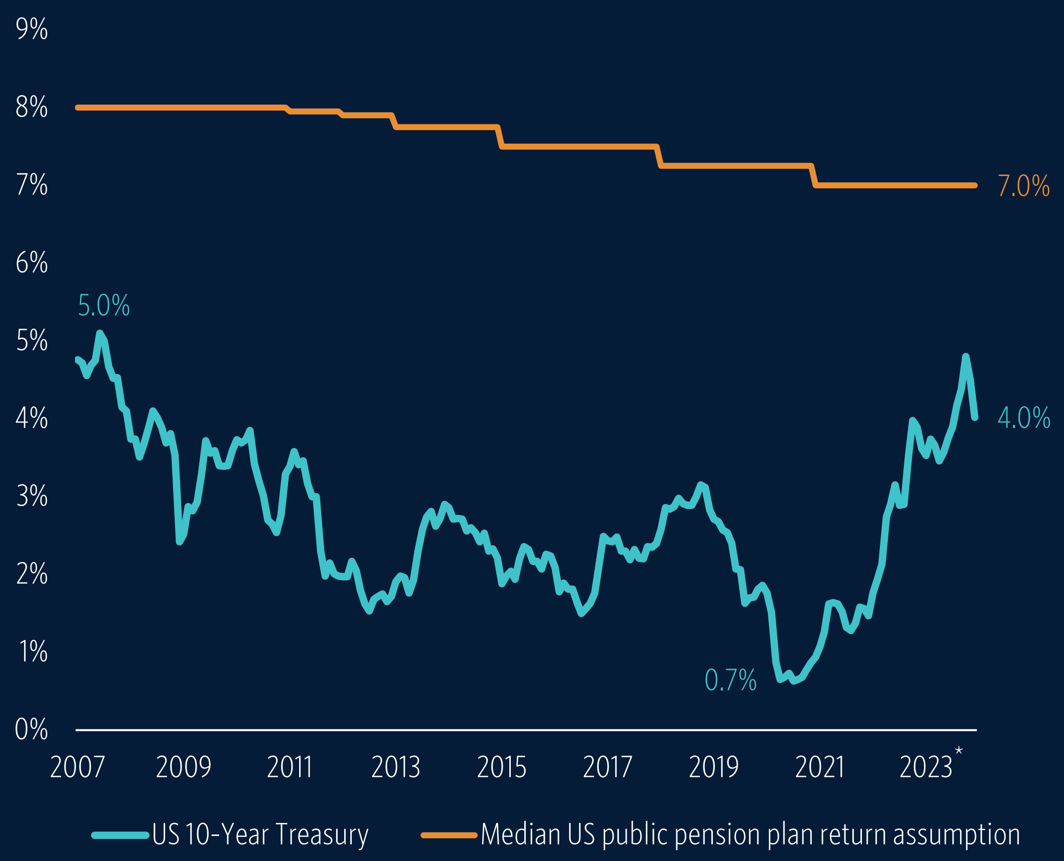
10-Year Treasury real versus nominal rates (monthly series)



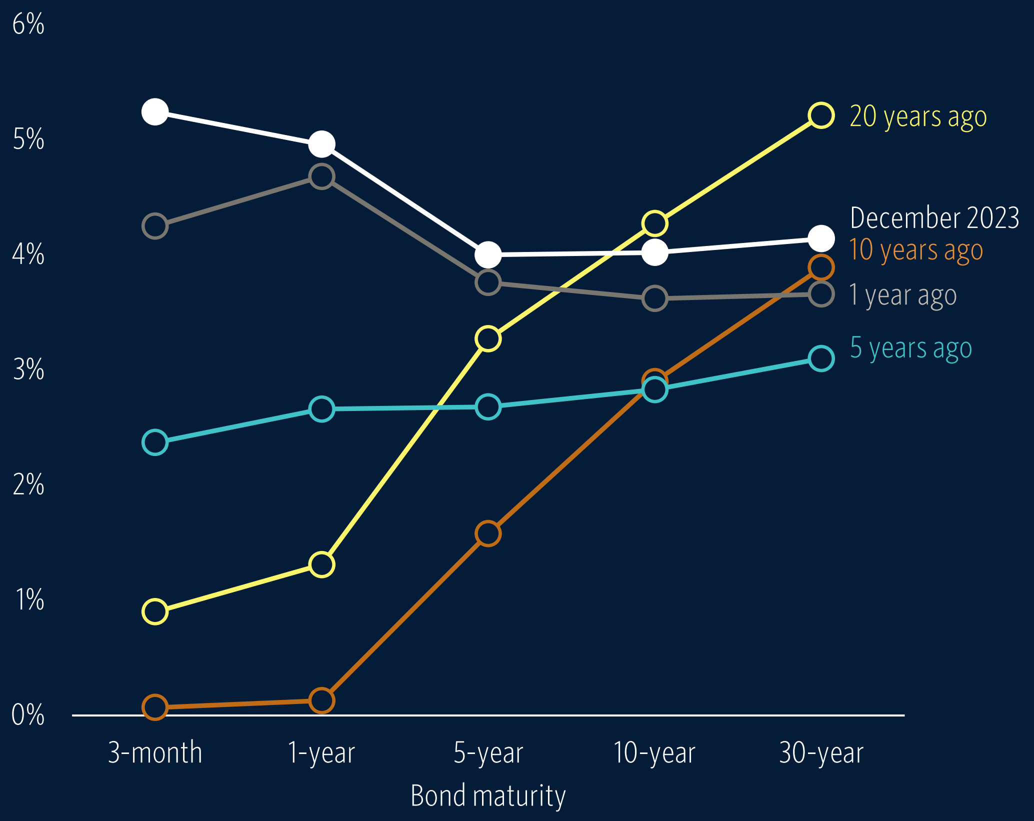
Source: FRED · Geography: US · *As of December 31, 2023

…but a deeply inverted yield curve showcases the market’s view that short-term rates aren’t here to stay. Still, with systematically higher rates, portfolio optimization math changes.

US pension plan return assumptions versus 10-Year Treasury



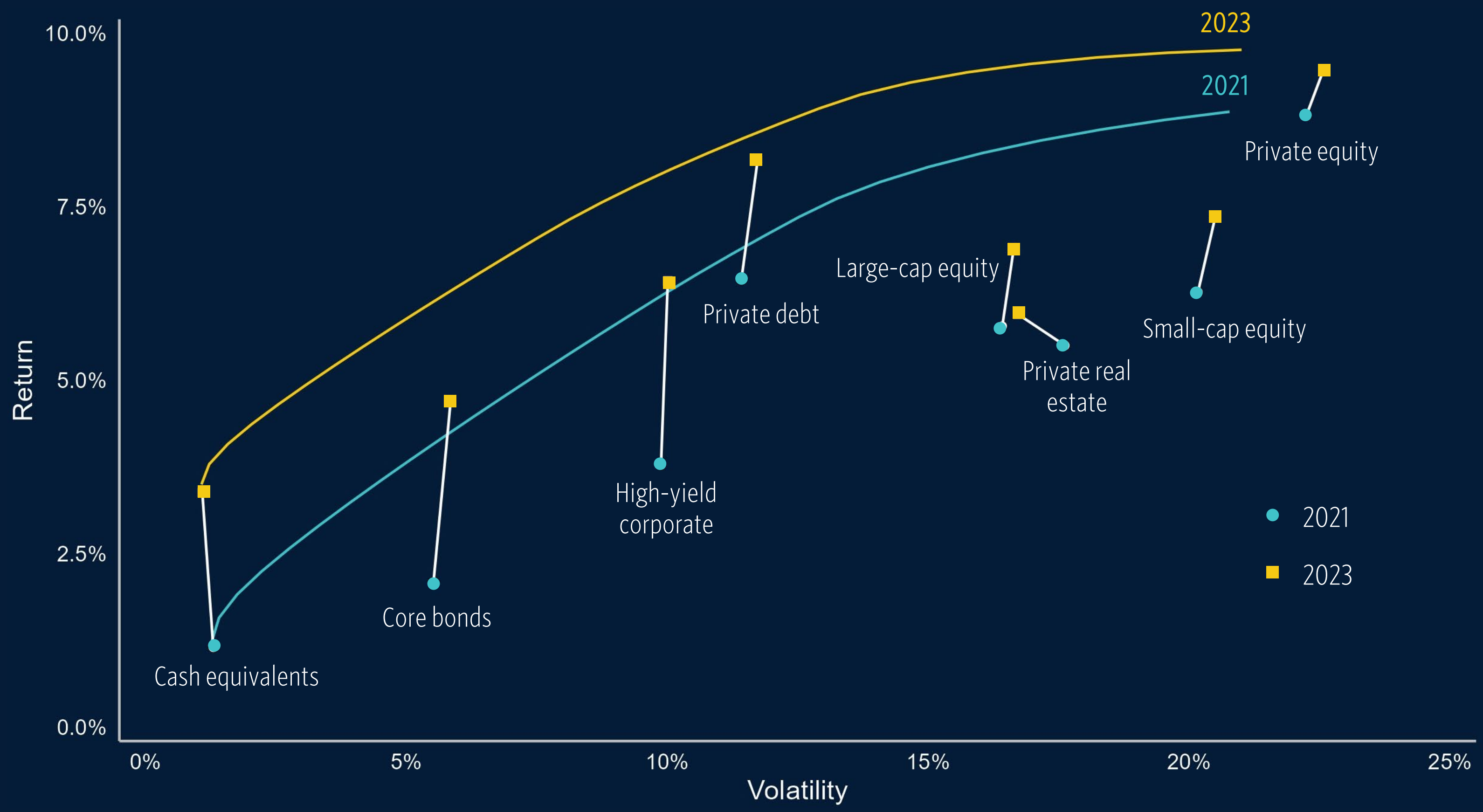
Treasury market yield curve*



Sources: FRED, National Association of State Retirement Administrators · Geography: US
*As of December 31, 2023

Higher yields have shifted the efficient frontier up, which significantly alters risk-return trade-offs in a multi-asset portfolio.

10-year expected risk and return for select asset classes with efficient frontiers*



Sources: PitchBook, Horizon Actuarial · Geography: US · *As of August 2023

Note: The 2023 expectations were generated before the recent further rise in long-term bond yields.

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 stimulus 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 quite different than the last decade, and 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 like PE and high-yield debt.

Private markets overview

Key takeaways

- Our private markets dashboard provides a heatmap of recent deal trends and private fund performance. Q4 2023 volumes of buyouts, growth equity, and VC investment were each down -47.8%, -44.9%, and -61.8%, respectively, compared with the same period in 2021.
- The anomalous behavior of PE fund returns brought about by the pandemic and its aftermath has settled back to track more closely to patterns more expected by fundamental market factors. Our Venture Capital Index is down 22.7% from its peak in Q4 2021.
- Supported by two major pieces of legislation in the last few years, 2022 and 2023 put infrastructure in the spotlight in terms of both fundraising and returns.
- Manager selection is important in private markets, as the dispersion of returns between top- and bottom-decile funds within each of the strategies runs in the thousands of basis points.
- Adjusting for appraisal-based valuation methods, our volatility and correlation estimates of private markets compared to public indexes provide useful insight for portfolio construction inputs.
- Overall, valuations are still not at levels that would suggest great returns from recent vintages, excepting perhaps for private debt, which hasn't seen such an attractive environment since just after the GFC.

Private markets were challenged as deal activity slowed and exits dried up. In 2023, power at the negotiating table swung to investors in VC, as measured by our VC Dealmaking Indicator.

Private market dashboard

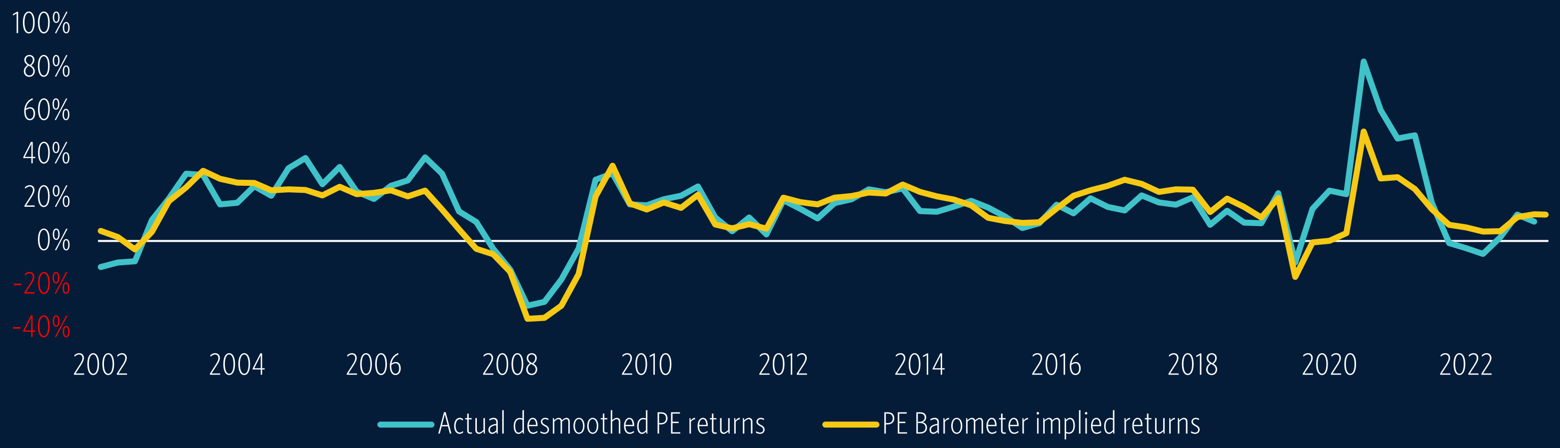
		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023*
Deal activity trends ($B)	Buyout	$255.9	$243.7	$326.7	$294.5	$342.3	$260.5	$292.5	$202.4	$187.9	$193.2	$185.3	$182.8	$178.8
	PE growth	$22.5	$41.9	$25.4	$34.0	$38.1	$45.4	$22.2	$22.1	$23.0	$27.1	$23.1	$31.9	$21.0
	Leveraged loans	$95.2	$228.0	$195.9	$203.7	$172.5	$167.4	$134.3	$78.1	$67.1	$71.9	$79.5	$103.7	$40.9
	PE exits via IPOs	$39.5	$44.7	$92.3	$76.7	$26.2	$4.3	$2.2	$0.0	$0.0	$0.9	$3.5	$0.0	$1.8
	PE exits via M&A	$43.6	$63.1	$38.5	$83.8	$89.8	$41.9	$31.3	$33.4	$20.8	$38.0	$17.6	$22.4	$32.9
	Early-stage VC	$13.6	$16.4	$21.3	$20.9	$28.3	$23.7	$20.2	$14.5	$11.5	$10.3	$11.2	$9.3	$8.9
	Late-stage VC	$17.4	$34.8	$36.8	$40.6	$41.2	$33.6	$29.0	$17.1	$14.0	$23.6	$16.6	$20.2	$17.0
	Venture growth	$12.6	$24.6	$20.6	$20.8	$23.0	$16.1	$20.2	$7.6	$10.0	$13.4	$6.6	$6.6	$9.4
	VC exits via IPOs	$104.4	$92.5	$213.8	$99.8	$127.2	$3.6	$0.7	$0.6	$1.8	$1.1	$3.4	$19.8	$0.9
	VC exits via M&A	$37.4	$15.1	$25.3	$34.7	$28.2	$12.0	$12.1	$11.3	$4.8	$7.6	$3.8	$10.3	$8.1
VC Dealmaking Indicators	Early stage	42.1	36.8	28.4	19.5	9.3	5.6	8.2	17.2	35.1	53.7	68.4	79.7	85.1
	Late stage	41.8	35.6	24.8	13	5.5	3.5	8.6	24.6	46.6	61.1	79.9	85	78.5
	Venture growth	34.3	22.8	15	11.3	5.4	6.9	10.6	27.9	44.1	55.5	68.1	71.2	72.4
PitchBook Private Capital Index quarterly returns**	Private equity	7.5%	16.1%	13.6%	7.9%	6.3%	1.5%	-2.7%	-0.8%	0.7%	3.3%	3.5%	0.4%	
	Venture capital	15.1%	23.6%	14.0%	8.1%	6.1%	-4.3%	-9.7%	-1.7%	-5.7%	-2.7%	0.4%	-1.2%	
	Private credit	3.6%	6.4%	8.2%	2.3%	2.7%	2.9%	-0.9%	0.4%	2.1%	2.8%	0.6%	3.5%	
	Infrastructure	4.3%	3.4%	4.2%	3.4%	6.6%	5.6%	1.5%	2.3%	2.7%	1.0%	0.8%	-2.6%	
	Real estate	-0.1%	7.4%	5.7%	10.7%	7.5%	7.8%	2.9%	-0.4%	-1.4%	-1.2%	0.7%	0.6%	
	All private capital	7.0%	13.2%	11.9%	7.1%	5.9%	2.2%	-1.7%	-0.4%	0.1%	1.7%	2.3%	0.6%	

Trend: Positive / Neutral / Negative

Source: PitchBook · Geography: US · *As of December 31, 2023 · **As of September 30, 2023
Note: Color shading reflects the relative Z-score over the last 10 years. Private Capital Index returns in Q3 2023 are preliminary.

Recent PE fund returns have been more in line with our PE Barometer after a period of wide divergence in 2020 and 2021.

Rolling one-year PE fund returns*



Difference between actual and implied rolling one-year PE fund returns*

Source: PitchBook · Geography: US · *PE returns data as of September 30, 2023; PE Barometer inputs as of November 30, 2023
Note: Q3 2023 returns are preliminary.

The PitchBook PE Barometer is a factor-based framework that estimates PE fund returns based on key economic and market variables. Historically, it has tracked actual returns reasonably well. However, from late 2020 through 2021, PE fund returns were considerably higher than the implied returns from the PE Barometer. This performance gap reversed in early 2022 as fund managers gradually marked their valuations to market.

For more information about the PitchBook PE Barometer, please visit this webpage.

Since the anomalous years of 2020 and 2021, VC has fallen back as other strategies like private debt, natural resources, and infrastructure—traditionally laggards—recently landed in the top half.

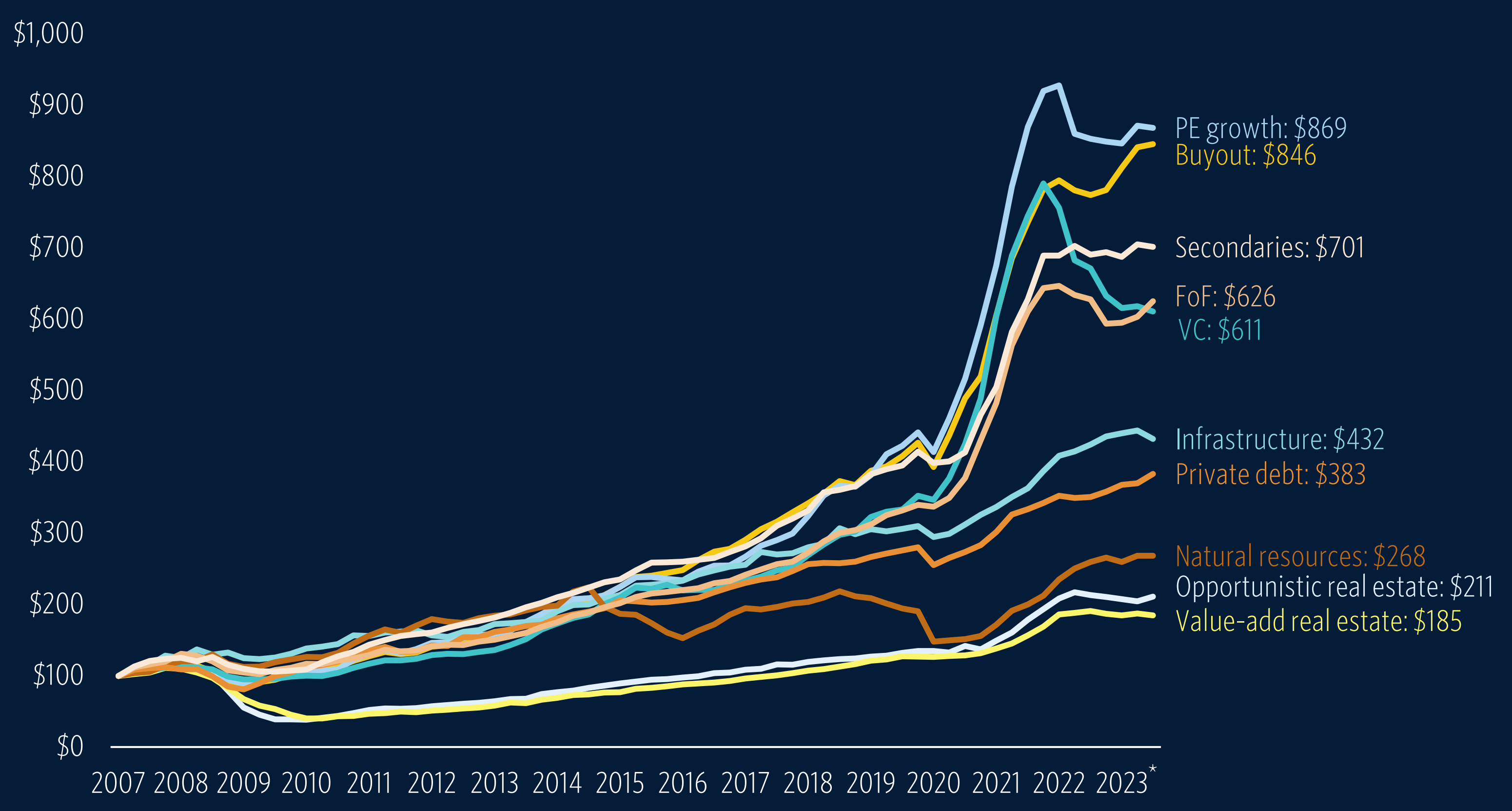
Yearly pooled IRRs by strategy

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*	15-year horizon IRR
Secondaries 23.1%	Secondaries 19.3%	Buyout 14.7%	VC 22.0%	VC 20.9%	Buyout 15.4%	Natural resources 16.2%	Buyout 18.2%	PE growth 20.2%	PE growth 21.6%	VC 37.7%	VC 62.2%	Natural resources 25.4%	Buyout 7.7%	PE growth 14.3%
Opportunistic real estate 20.4%	Natural resources 17.0%	Private debt 14.7%	Buyout 20.9%	Infrastructure 16.7%	Value-add real estate 13.4%	Buyout 14.5%	Secondaries 17.1%	VC 19.4%	VC 16.5%	PE growth 36.0%	PE growth 56.5%	Infrastructure 13.9%	All private capital 4.0%	Buyout 13.3%
PE growth 19.7%	Opportunistic real estate 13.0%	PE growth 14.2%	Opportunistic real estate 20.2%	FoF 15.8%	VC 12.5%	All private capital 10.8%	PE growth 17.0%	FoF 16.5%	Buyout 16.1%	FoF 25.8%	Buyout 50.3%	Value-add real estate 10.6%	Private debt 3.4%	Secondaries 12.2%
Private debt 19.4%	Value-add real estate 12.4%	Opportunistic real estate 13.4%	Value-add real estate 19.8%	Buyout 15.8%	Secondaries 11.8%	Opportunistic real estate 9.8%	All private capital 13.8%	Secondaries 14.5%	FoF 12.6%	Buyout 22.4%	FoF 49.5%	Opportunistic real estate 8.9%	PE growth 2.6%	VC 11.3%
Buyout 18.6%	PE growth 12.2%	All private capital 12.7%	PE growth 18.1%	All private capital 14.5%	FoF 11.1%	Private debt 9.6%	FoF 11.8%	Value-add real estate 13.0%	Secondaries 12.5%	All private capital 16.4%	Secondaries 48.1%	Private debt 4.4%	Infrastructure 1.9%	All private capital 11.1%
Natural resources 18.3%	VC 10.8%	Secondaries 12.1%	All private capital 17.2%	Value-add real estate 14.4%	PE growth 11.0%	Value-add real estate 8.8%	Value-add real estate 11.1%	Buyout 11.7%	All private capital 11.3%	Secondaries 13.6%	All private capital 43.3%	Secondaries 1.4%	Secondaries 1.6%	FoF 10.9%
All private capital 16.9%	Buyout 10.1%	Value-add real estate 12.0%	FoF 13.5%	PE growth 14.2%	All private capital 10.1%	Infrastructure 8.3%	Opportunistic real estate 10.9%	All private capital 11.4%	Private debt 8.4%	Infrastructure 6.4%	Natural resources 36.0%	All private capital 0.4%	FoF 1.6%	Private debt 8.7%
Infrastructure 13.9%	All private capital 9.7%	FoF 9.1%	Private debt 11.7%	Opportunistic real estate 13.8%	Infrastructure 8.9%	PE growth 8.1%	Private debt 10.3%	Infrastructure 9.8%	Value-add real estate 8.3%	Value-add real estate 6.0%	Opportunistic real estate 35.2%	Buyout 0.2%	Natural resources 0.9%	Infrastructure 8.2%
FoF 11.6%	FoF 8.8%	VC 7.3%	Natural resources 7.8%	Secondaries 13.5%	Opportunistic real estate 8.5%	FoF 7.2%	VC 9.5%	Opportunistic real estate 7.9%	Opportunistic real estate 7.2%	Private debt 2.7%	Value-add real estate 28.1%	FoF -7.0%	Value-add real estate 0.1%	Opportunistic real estate 6.9%
VC 11.5%	Infrastructure 5.8%	Natural resources 6.7%	Secondaries 7.6%	Private debt 12.7%	Private debt 5.1%	Secondaries 5.7%	Natural resources 8.6%	Private debt 6.3%	Infrastructure 3.5%	Opportunistic real estate 2.5%	Private debt 20.2%	PE growth -7.2%	VC -2.3%	Value-add real estate 6.2%
Value-add real estate -2.4%	Private debt 4.2%	Infrastructure 6.2%	Infrastructure 4.8%	Natural resources 0.3%	Natural resources -18.2%	VC 0.1%	Infrastructure 8.0%	Natural resources 5.1%	Natural resources -9.4%	Natural resources -16.6%	Infrastructure 18.5%	VC -17.9%	Opportunistic real estate -2.9%	Natural resources 5.4%

Source: PitchBook · Geography: US · *As of June 30, 2023

Over the long term, PE growth and buyout have been standout performers. VC was keeping pace but has retrenched since 2021.

Hypothetical growth of $100 invested in Q1 2007

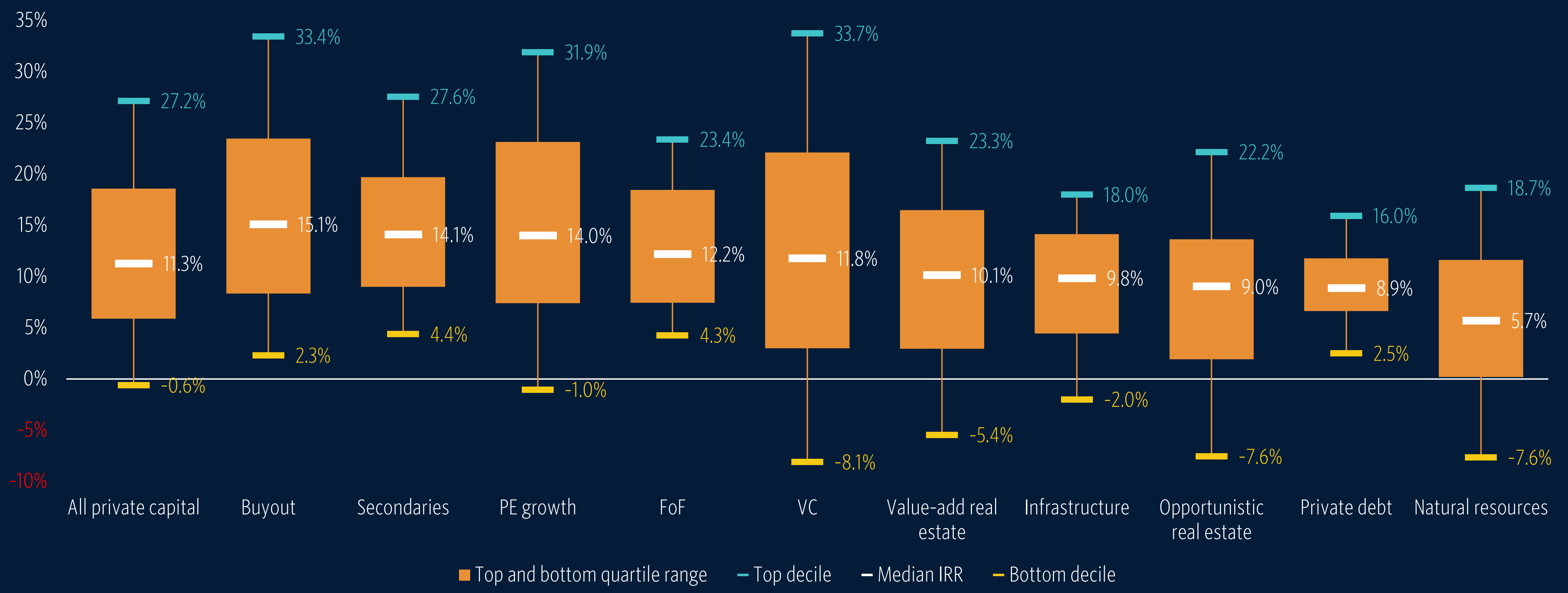


Source: PitchBook · Geography: US · *As of September 30, 2023
Note: Data for Q3 2023 is preliminary.

This assumes investing 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 use our quarterly returns series available in our PitchBook Benchmarks report to calculate the growth in asset value. This data also constitutes our Private Capital Indexes. Actual results experienced by limited partners will vary widely.

While median returns in private markets often compare favorably to public markets, any given fund's return may deviate substantially. Fund selection decisions are of the utmost importance.

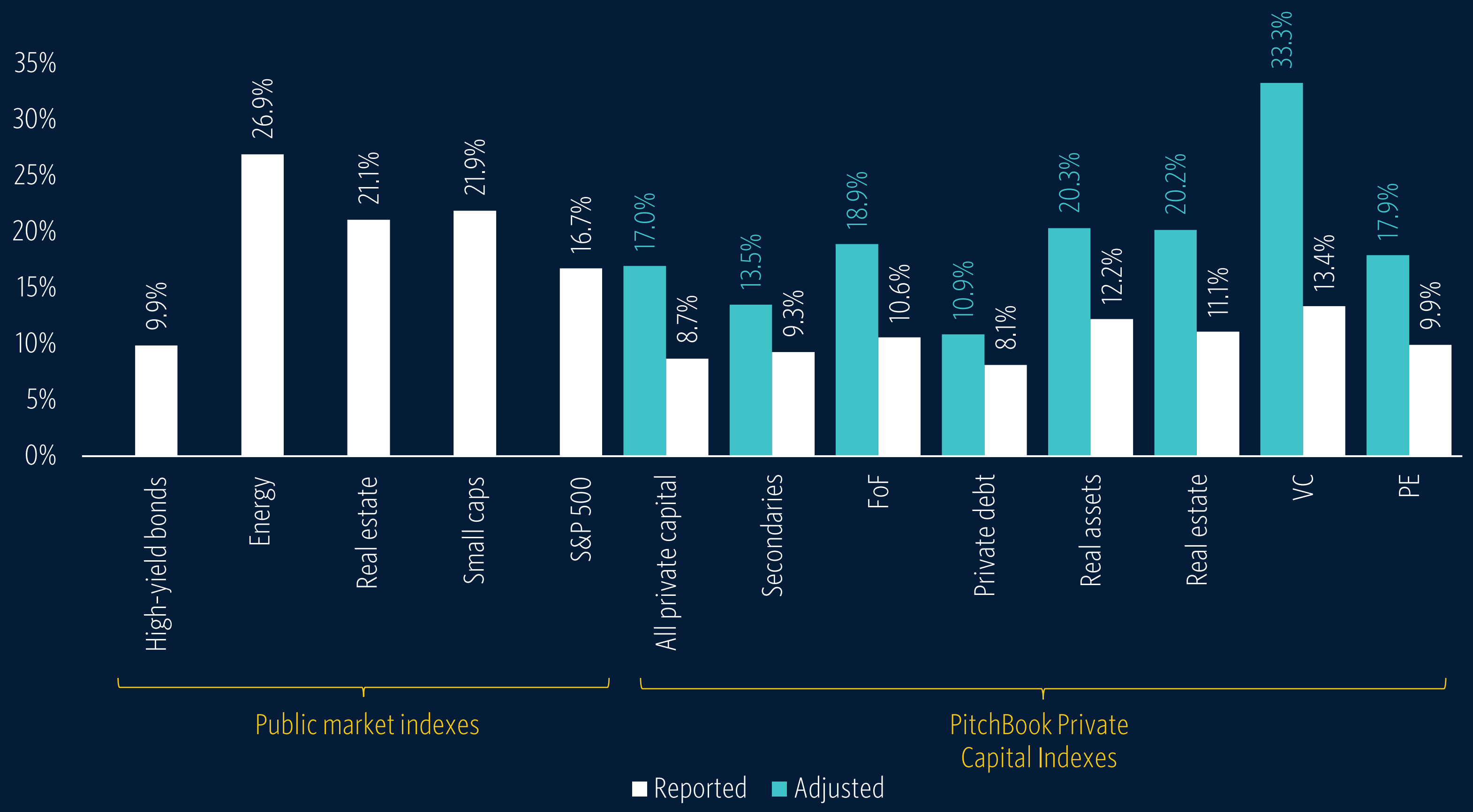
Private, closed-end fund net IRR dispersion by strategy (vintages 2002 to 2018)*



Source: PitchBook · Geography: US · *As of June 30, 2023

We estimate that private capital funds exhibit significantly higher volatilities than indicated by reported figures…

Reported and adjusted private market volatility compared with public indexes*



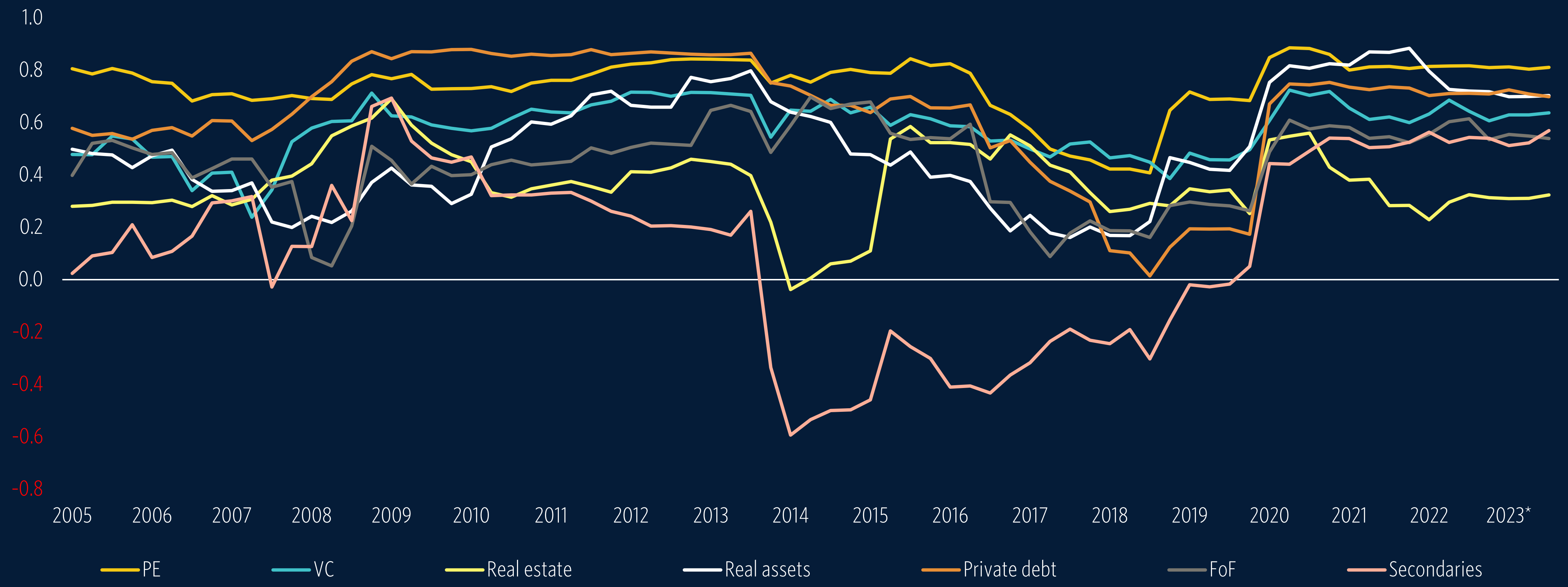
Sources: Morningstar, PitchBook · Geography: US · *As of September 30, 2023
Note: Public indexes are based on quarter-end total returns. Public indexes aside from the S&P 500 are provided by Morningstar Indexes.

In contrast to 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 smooth 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 Analyst Note: Return Smoothing in Private Markets.

...and from a portfolio construction standpoint, while return correlations to public equities are a key input to consider, they are not static...

Rolling 5-year correlation with S&P 500 quarterly returns using adjusted private capital returns



Sources: Morningstar, PitchBook · Geography: US · *As of September 30, 2023

...and depending on the index compared against, correlations will be quite different. In the long term, secondaries not only provide J-curve mitigation, but also an interesting diversification case.

Return correlation matrix using adjusted returns since 2000*

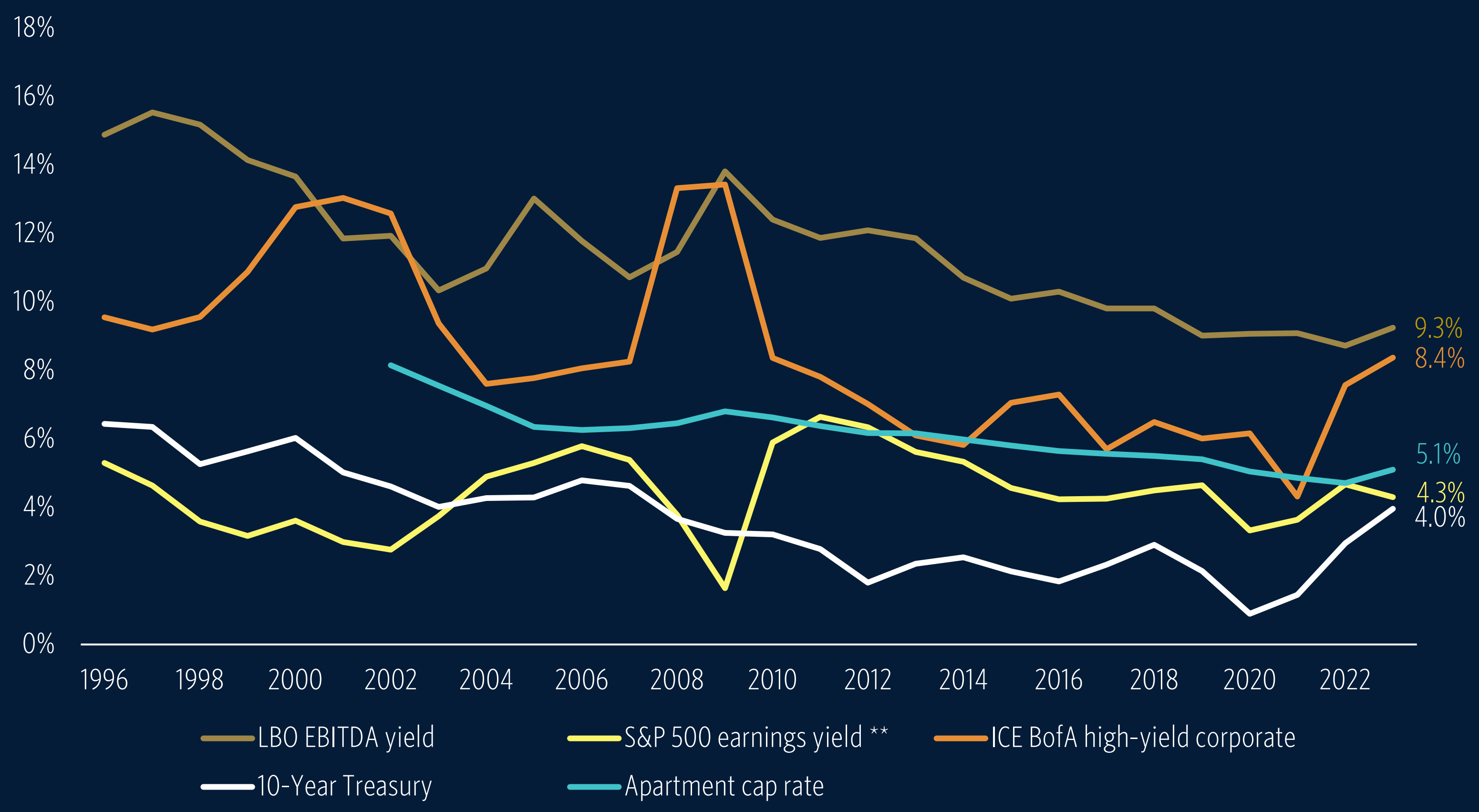
PitchBook Private Capital Indexes								Public market indexes						
All private capital	PE	VC	Real estate	Real assets	Private debt	FoF	Second-aries	S&P 500	Small caps	Real estate	Energy	High-yield bonds	US Treasuries	
1.00	0.97	0.65	0.60	0.54	0.77	0.56	0.20	0.77	0.72	0.52	0.54	0.66	-0.45	All private capital
	1.00	0.57	0.52	0.49	0.69	0.49	0.17	0.77	0.72	0.51	0.52	0.65	-0.42	PE
		1.00	0.24	0.27	0.43	0.59	0.07	0.47	0.41	0.24	0.24	0.38	-0.37	VC
			1.00	0.29	0.48	0.24	0.20	0.30	0.24	0.24	0.23	0.17	-0.19	Real estate
				1.00	0.40	0.38	0.14	0.43	0.49	0.38	0.52	0.42	-0.27	Real assets
					1.00	0.40	0.17	0.65	0.63	0.56	0.57	0.69	-0.46	Private debt
						1.00	0.39	0.41	0.36	0.27	0.20	0.35	-0.20	FoF
							1.00	0.23	0.23	0.29	0.21	0.07	-0.10	Secondaries
								1.00	0.92	0.70	0.63	0.75	-0.44	S&P 500
									1.00	0.74	0.68	0.76	-0.45	Small caps
										1.00	0.45	0.67	-0.14	Real estate
											1.00	0.53	-0.55	Energy
												1.00	-0.32	High-yield bonds
													1.00	US Treasuries

Sources: Morningstar, PitchBook · Geography: US · *As of September 30, 2023

Note: Public indexes are based on quarter-end total returns. Public indexes aside from the S&P 500 are provided by Morningstar Indexes.

The hunt for yield over the past decade saw rates compress generally. High-yield corporate bonds stand out as relatively attractive.

Average yields on select asset classes*



Sources: PitchBook | LCD, FRED, Robert Shiller, National Multi-Family Housing Council · Geography: US
*As of December 31, 2023 · **As of September 30, 2023

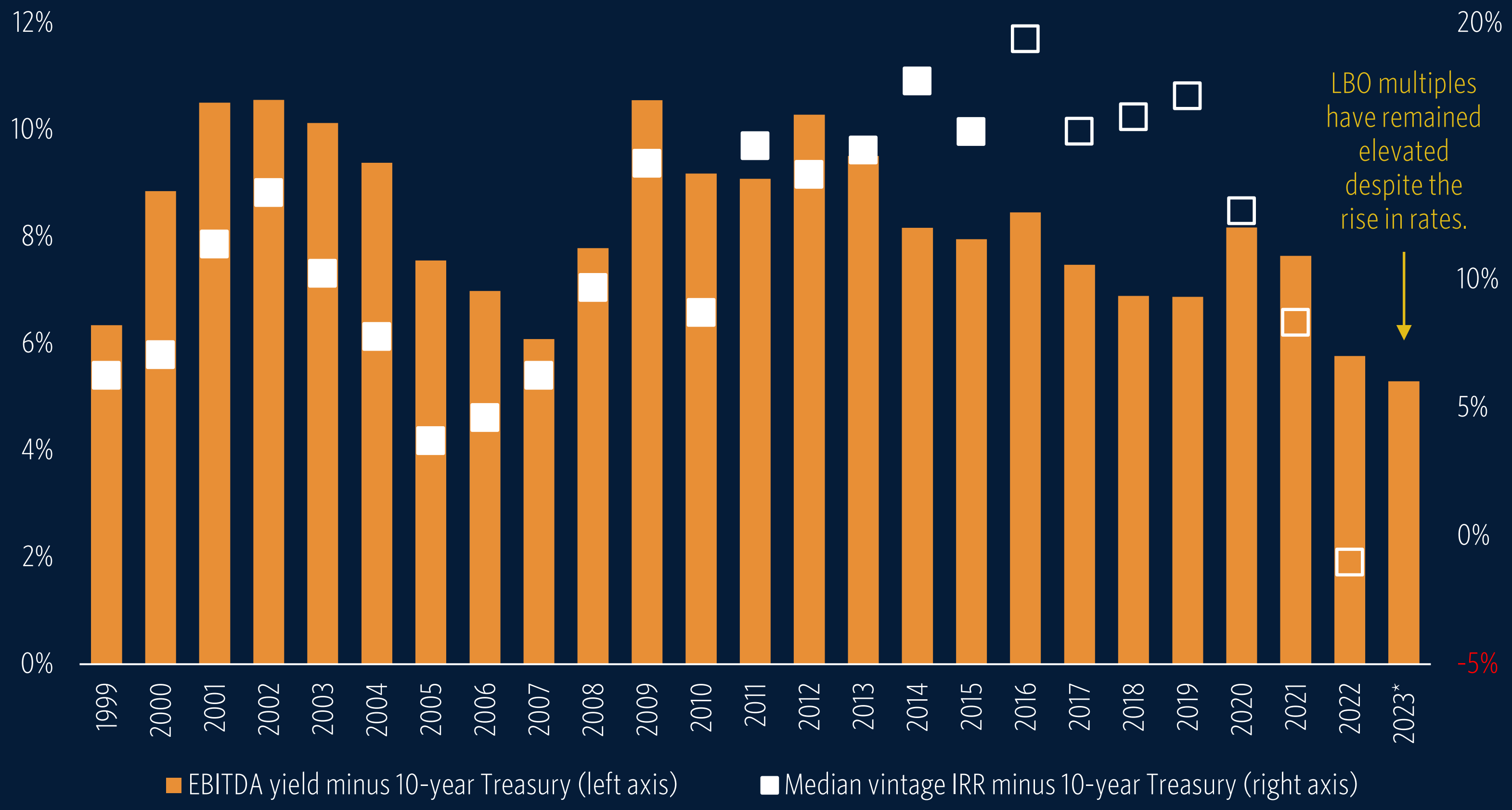
Data definitions:

- **LBO EBITDA yield:** The inverse of the average purchase-price-to-EBITDA multiple in buyout deals.
- **S&P 500 earnings yield:** The inverse of the trailing 12-months (TTM) price-to-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.
- **Apartment cap rate**: Net operating income over property value.

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.

Despite the uptick in LBO EBITDA yields, the risk-free rate's move up makes 2023 valuations particularly unattractive, historically speaking.

Average LBO EBITDA yield versus median PE fund vintage IRR (relative to 10-year Treasury)**



Source: PitchBook | LCD · Geography: US · *As of December 31, 2023 · **As of June 30, 2023

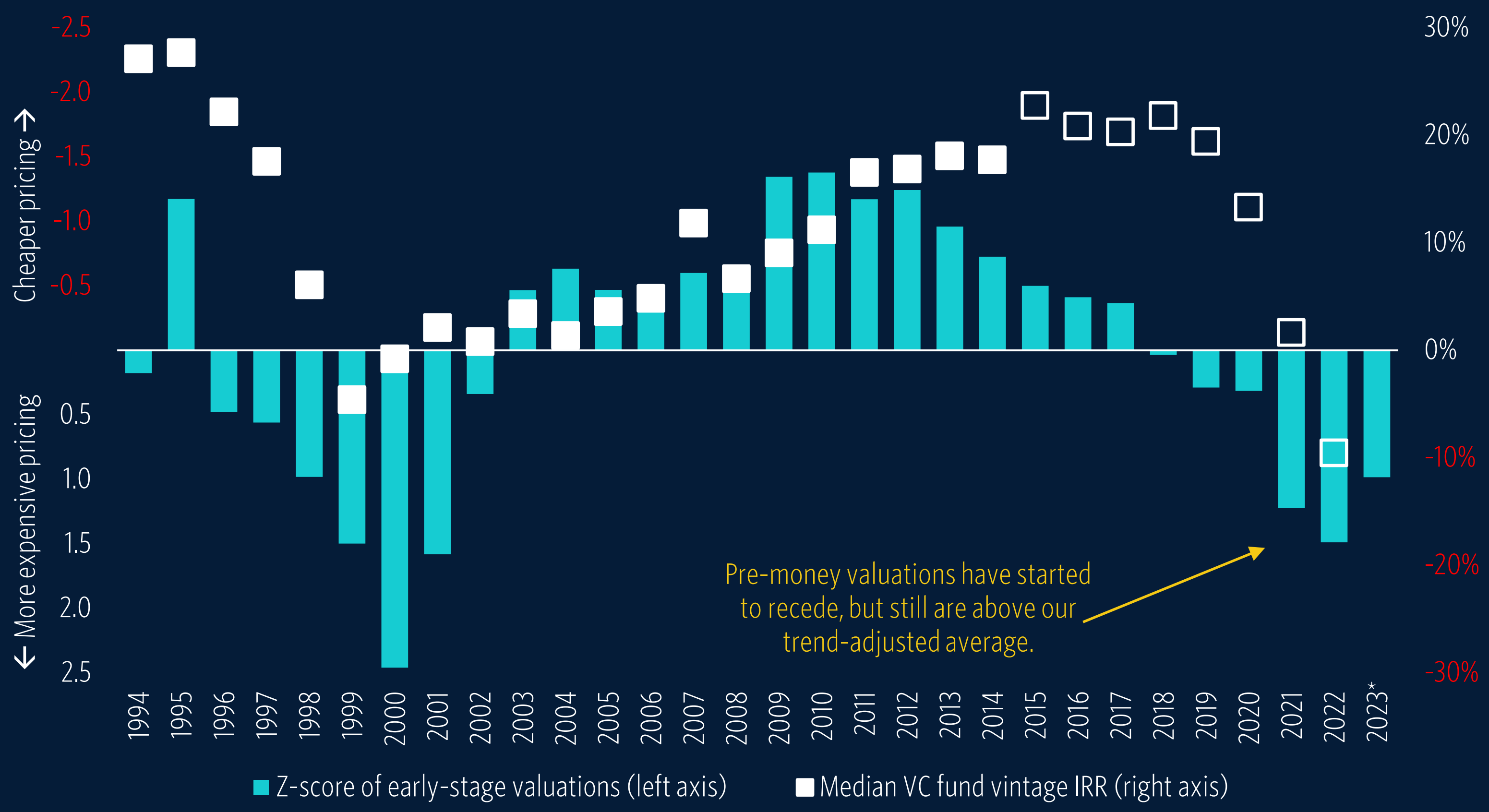
Note: Unfilled markers reflect vintages that have the majority of their returns unrealized.

Comparing EBITDA yields to the 10-year Treasury allows us to normalize for the interest rate environment when each vintage was beginning to make their leveraged investments. We then net that against buyout fund IRRs to approximate returns over that risk-free rate.

For more on our views of the PE market, check out our Allocator Outlook and US Private Equity Outlook.

The dot-com era provides an indication that bubbly entry valuations will be a headwind for the future returns of recent VC fund vintages.

Average early-stage pre-money valuations (axis inverted) versus median VC fund IRRs**



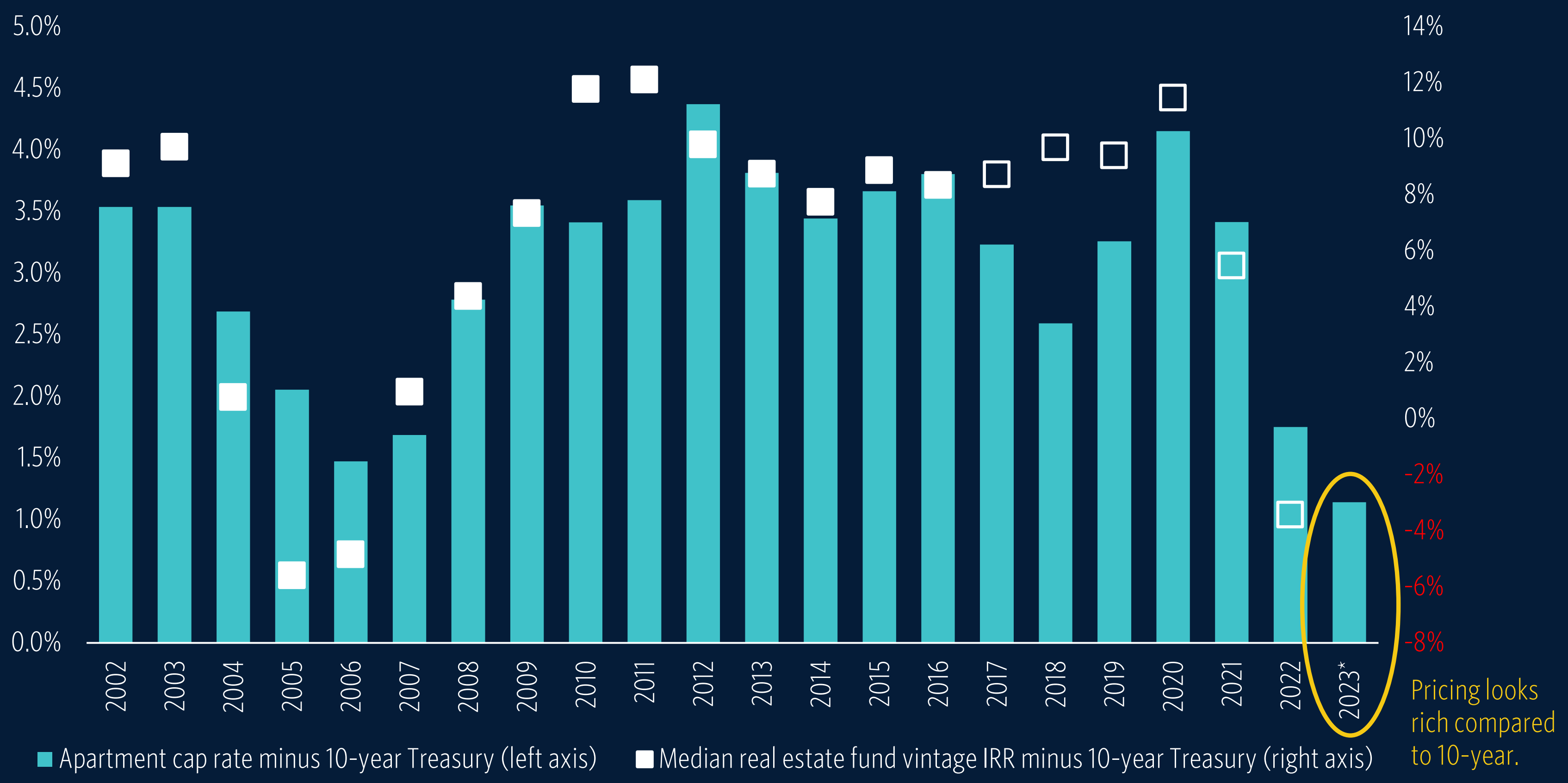
Source: PitchBook · Geography: US · *As of December 31, 2023 · **As of June 30, 2023
Note: Unfilled markers reflect vintages that have the majority of their returns unrealized.

To get to a measurement on how relatively cheap or expensive the median deal looks historically, for our analysis, we took pre-money valuations, log-transformed them, and then compared them to a linear trend.

For more on our views of the VC market, check out our [Allocator Outlook](#) and [US Venture Capital Outlook](#).

Using apartments as a proxy, valuations in real estate have yet to recede meaningfully. Investors should be wary of the tight spread to the 10-year.

Average apartment cap rates versus median real estate fund vintage IRRs (relative to 10-year Treasury)**



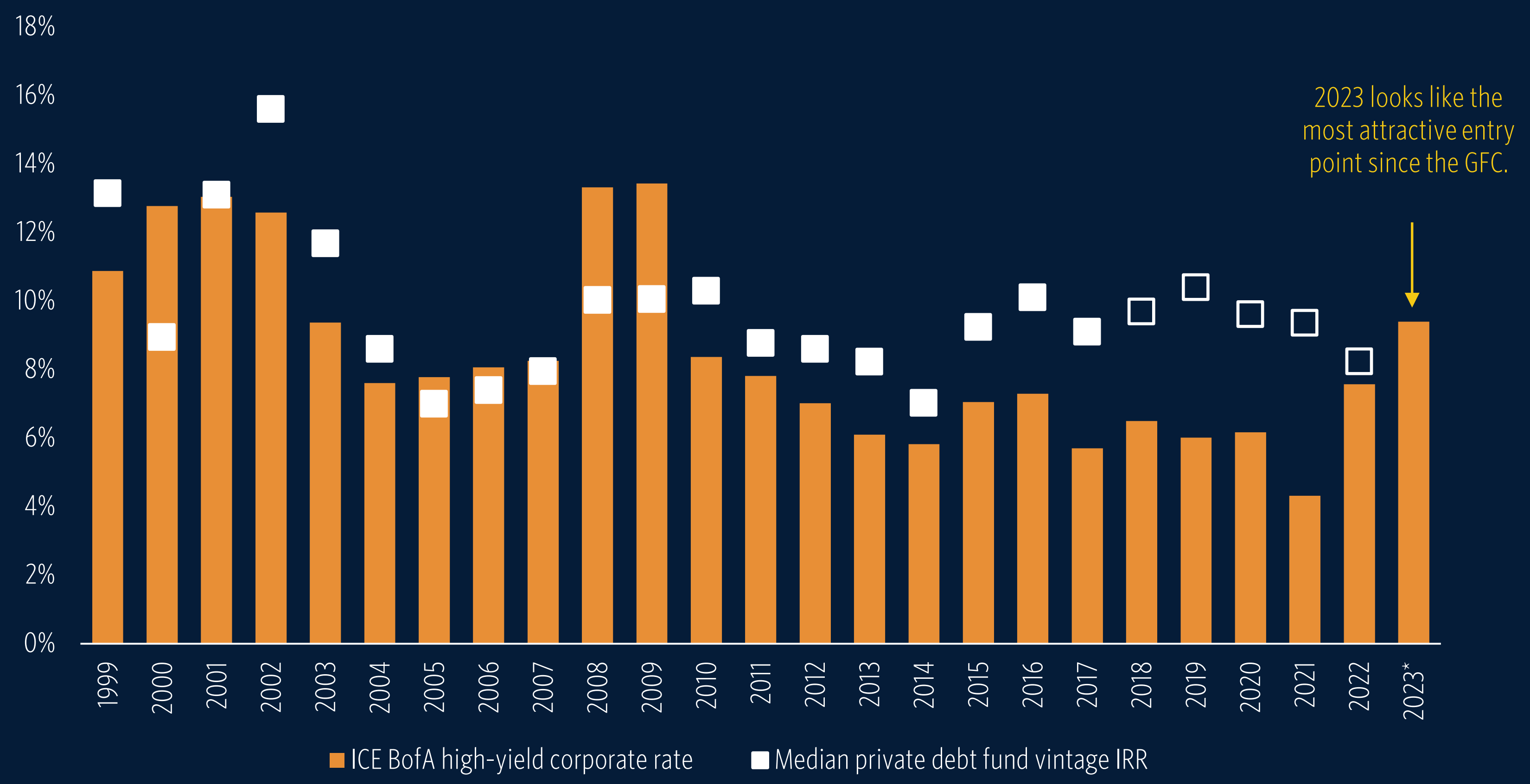
Sources: National Multi-Family Housing Council, PitchBook · Geography: US · *As of December 31, 2023 · **As of June 30, 2023
Note: Unfilled markers reflect vintages that have the majority of their returns unrealized.

As we describe more in the "Real estate" section of this report, some property types have pulled back in pricing more quickly than others, with office being the hardest hit. Still, apartment cap rates relative to the risk-free rate are a warning sign of the sector's return outlook.

For more on our views of the real estate market, check out our Allocator Outlook.

Higher interest rates have been a boon to private debt funds of late. Attractive yields have historically translated to better fund returns.

Average high-yield bond rates versus median private debt fund vintage IRR**



Sources: FRED, PitchBook · Geography: US · *As of December 31, 2023 · **As of June 30, 2023
Note: Unfilled markers reflect vintages that have the majority of their returns unrealized.

While the makeup of our private debt benchmarks has shifted with the growth of direct lending platforms following the GFC, we believe the historical context presented provides a useful comparison.

For more on our views of the private credit market, check out our Allocator Outlook and US Private Credit Outlook.

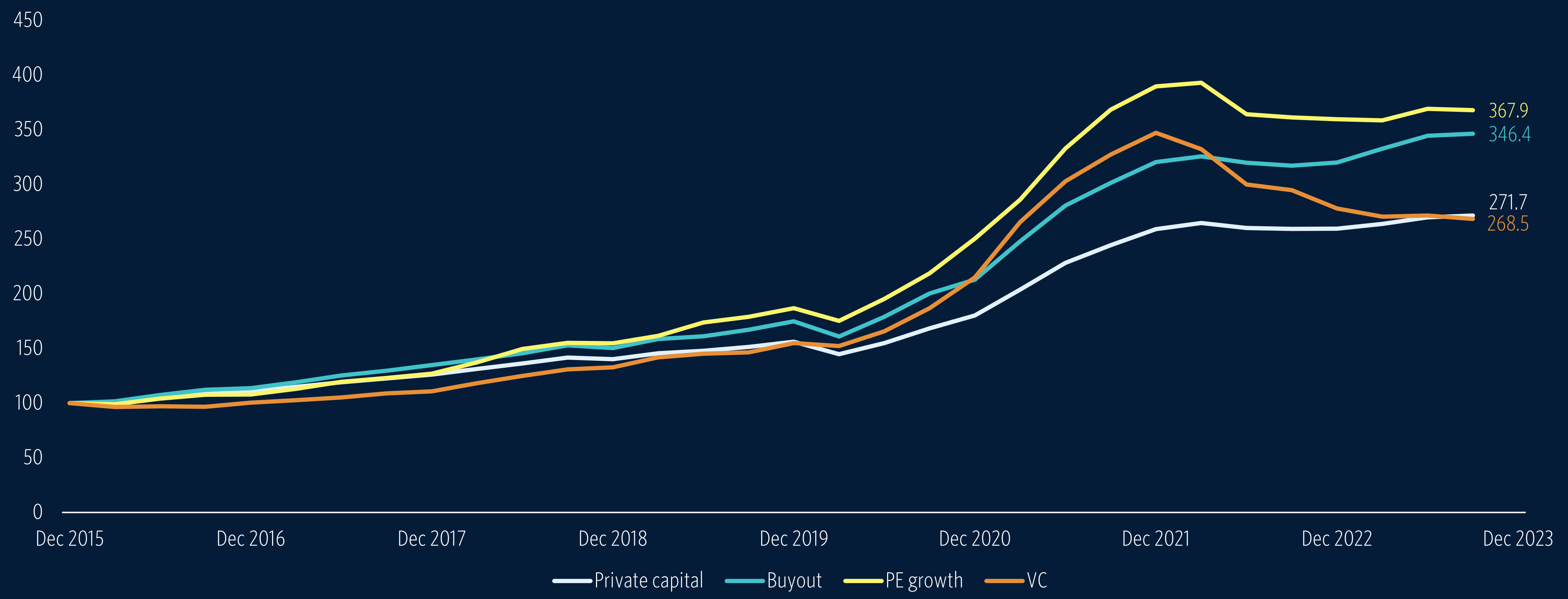
PE and VC

Key takeaways

- VC fund performance has taken a hit as euphoric valuations from 2020 to 2021 come back down to earth. Buyout fund returns have remained relatively insulated from the higher rate environment and may have dodged the bullet of 2022's public market sell-off.
- The need for capital in the startup ecosystem has become much higher than what VC investors have been willing to provide, spurring belt tightening and down rounds.
- The dearth of available capital is a direct result of LP commitments being down in VC and PE growth vehicles. However, buyout hit a new high of $301.6 billion in funds closed in 2023.
- The massive decline in VC fundraising and corresponding drop in deal activity have put fund managers in a seat of power vis-à-vis entrepreneurs, hopefully resulting in higher-quality deals getting done.
- IPOs flatlined over the past year. In 2023, there were only 15 PE-backed IPOs and 80 (mostly small) VC-backed IPOs—the lowest total since 2011. A return of the IPO market would likely unlock more LP capital for new fund commitments.
- Unicorn creation has come back down to reality. In 2023, 45 new unicorns were minted, while 23 fell out of the club. Still, there are over 700 unicorns with $1 billion-plus valuations held by VCs hoping to distribute capital to LPs that can be recycled into fund commitments.
- Although down when compared to 2022 activity, PE deal values have been in line with pre-pandemic trends.

VC has continued to give back its outsized returns from 2020 and 2021, but buyout and PE growth have stabilized and even attempted an upward trajectory.

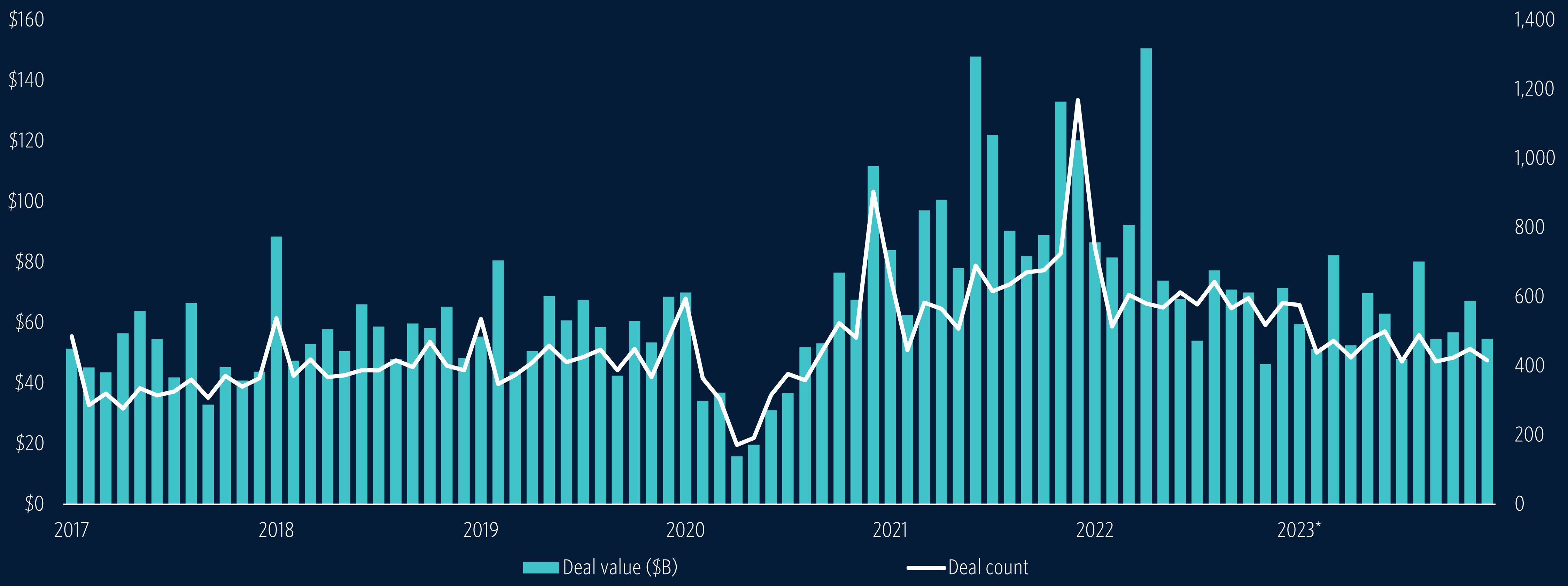
PitchBook US Private Capital Indexes (rebased to 100 in 2015)*



Source: PitchBook · Geography: US · *As of September 30, 2023
Note: Data for Q3 2023 is preliminary.

While headlines often focus on the decline in buyout deal activity since 2022, levels are not vastly different than prior to the pandemic.

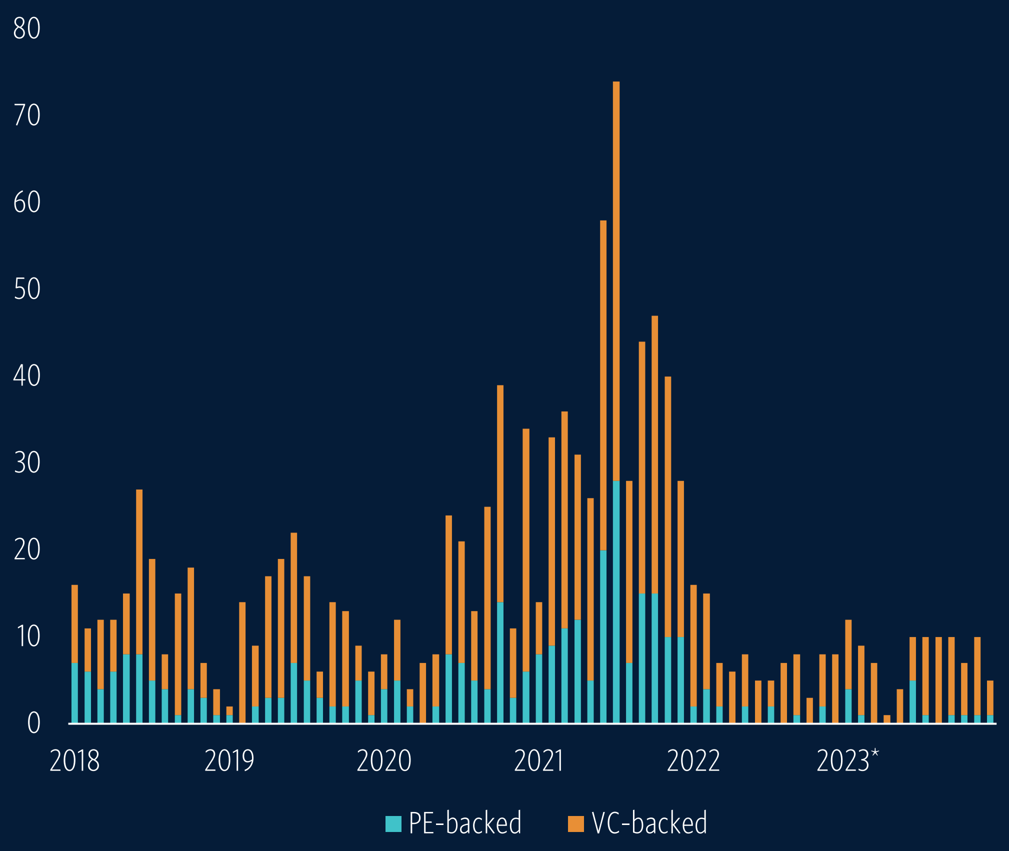
Monthly buyout deal activity



Source: PitchBook · Geography: US · *As of December 31, 2023

Although a minority of exits, IPOs are a key indication of how healthy the exit environment is, especially for VC. The current prognosis? Anemic.

Monthly PE- and VC-backed public listing count

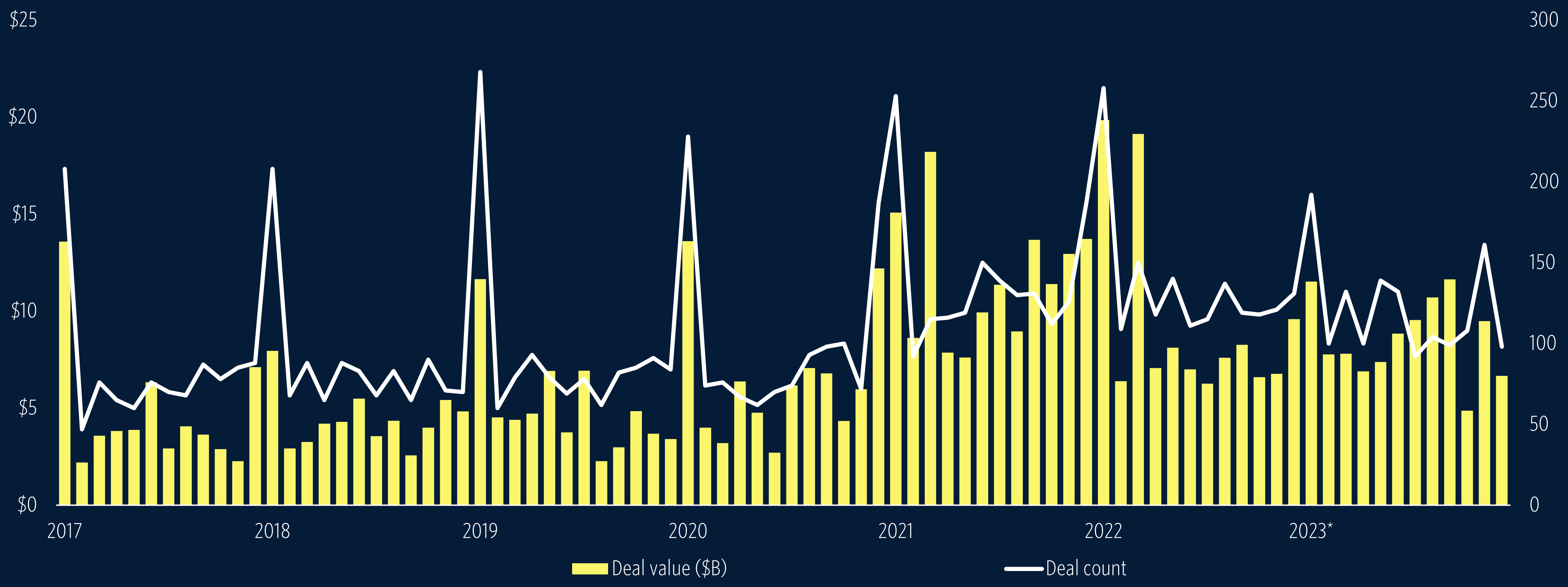


PitchBook IPO and DeSPAC indexes return since start of 2022*

Sources: Morningstar, PitchBook · Geography: US · *As of December 31, 2023

One somewhat bright spot in the PE universe has been PE growth, which while off from 2021 to 2022 levels, is still notching deal counts and values higher than before the pandemic.

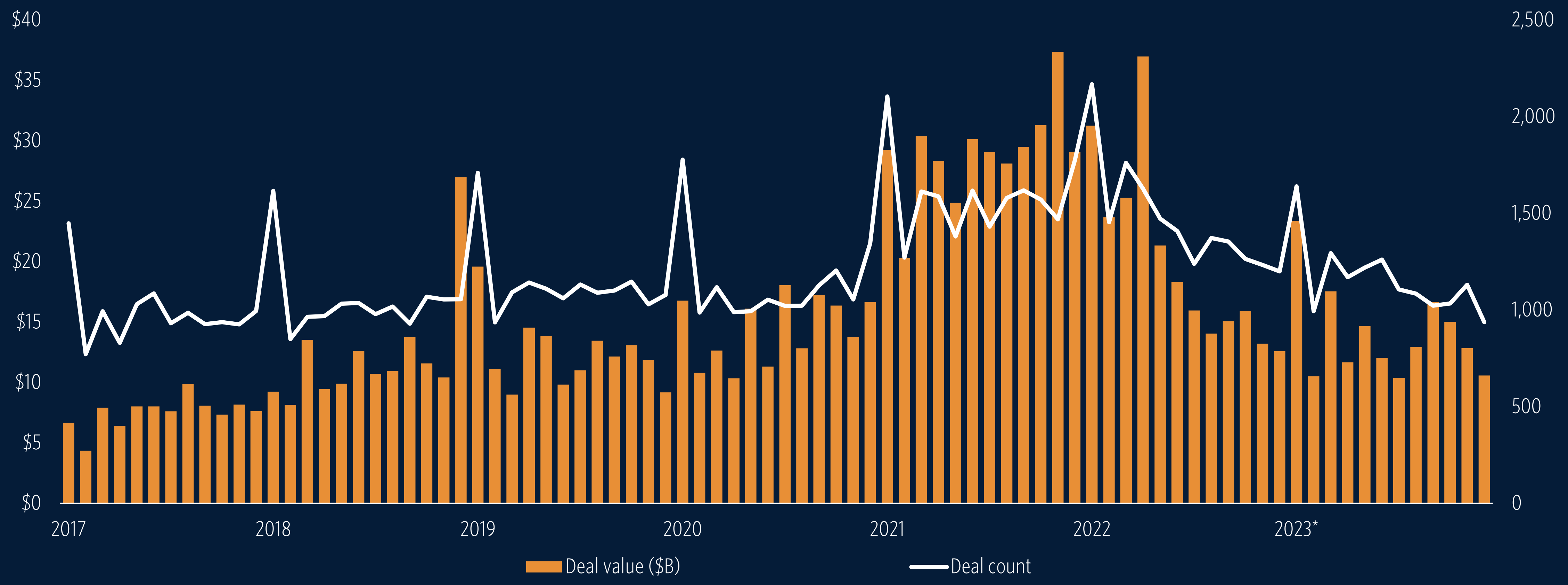
Monthly PE growth deal activity



Source: PitchBook · Geography: US · *As of December 31, 2023
Note: January spikes occur due to data collection of known deal years without a corresponding date.

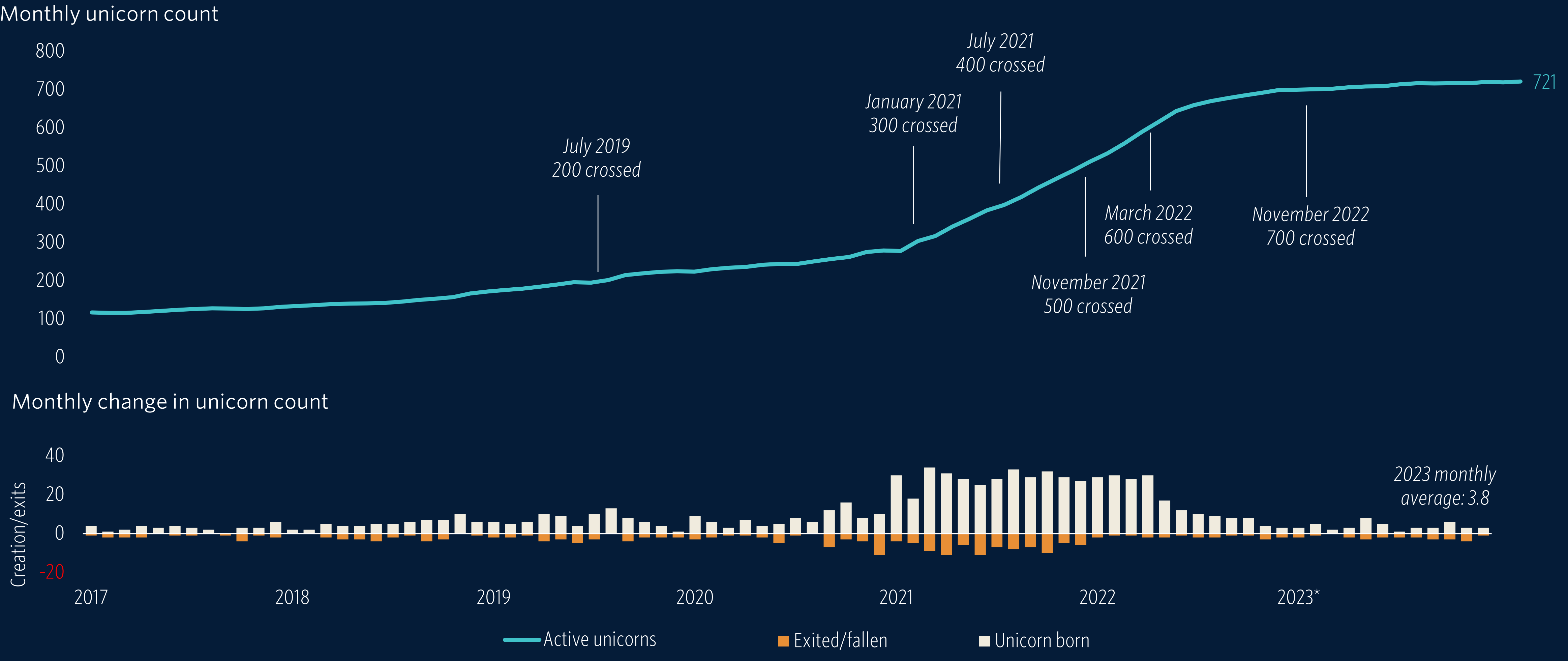
VC deal count has dropped less than deal value, indicating a lot of froth has been removed from the markets and more sober valuations may be occurring.

Monthly VC deal activity



Source: PitchBook · Geography: US · *As of December 31, 2023
Note: January spikes occur due to data collection of known deal years without a corresponding date.

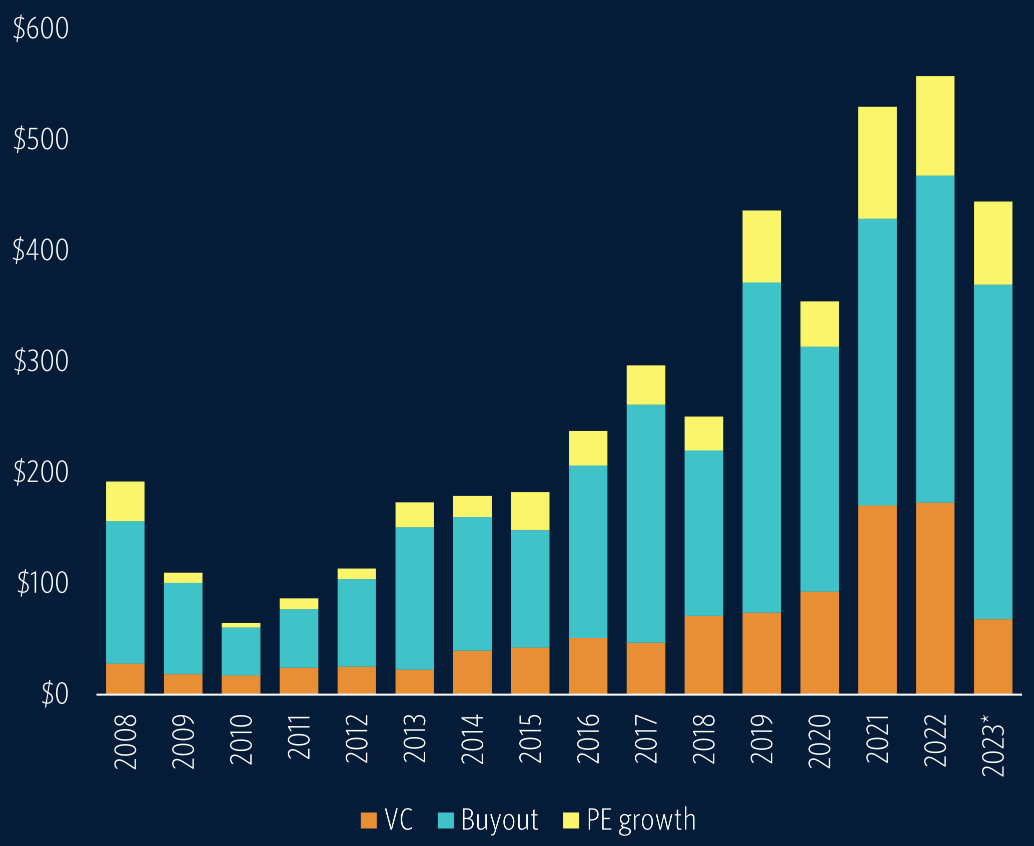
23 firms lost unicorn status or ceased operations in the last two years. Secondary market discounts suggest the herd will be thinning. Patience for an IPO market reopening is waning.



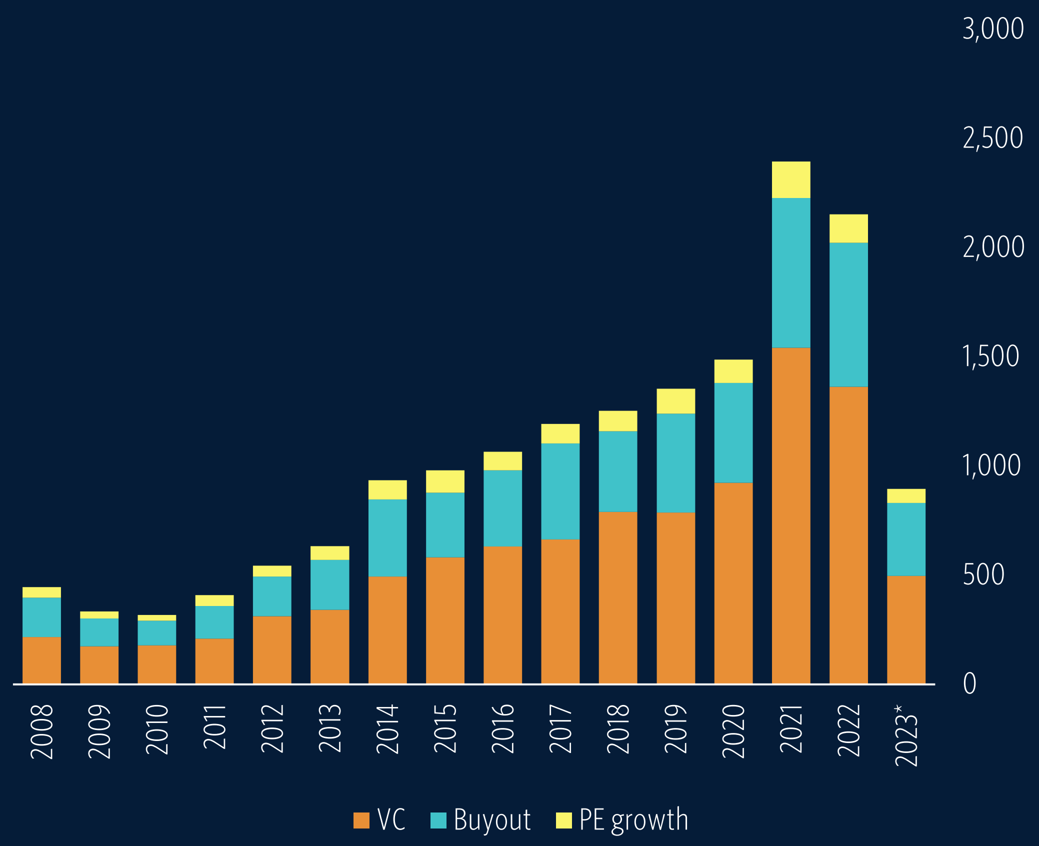
Source: PitchBook · Geography: US · *As of December 31, 2023
Note: "Fallen" unicorns are those that suffered a down round or exit to a valuation less than $1 billion.

2023 fundraising was not as dire as many felt, particularly for buyout funds. VC is well off, however, as LPs evaluate risk/return profiles of different pockets of the market to the detriment of venture.

Capital raised ($B) by select strategies



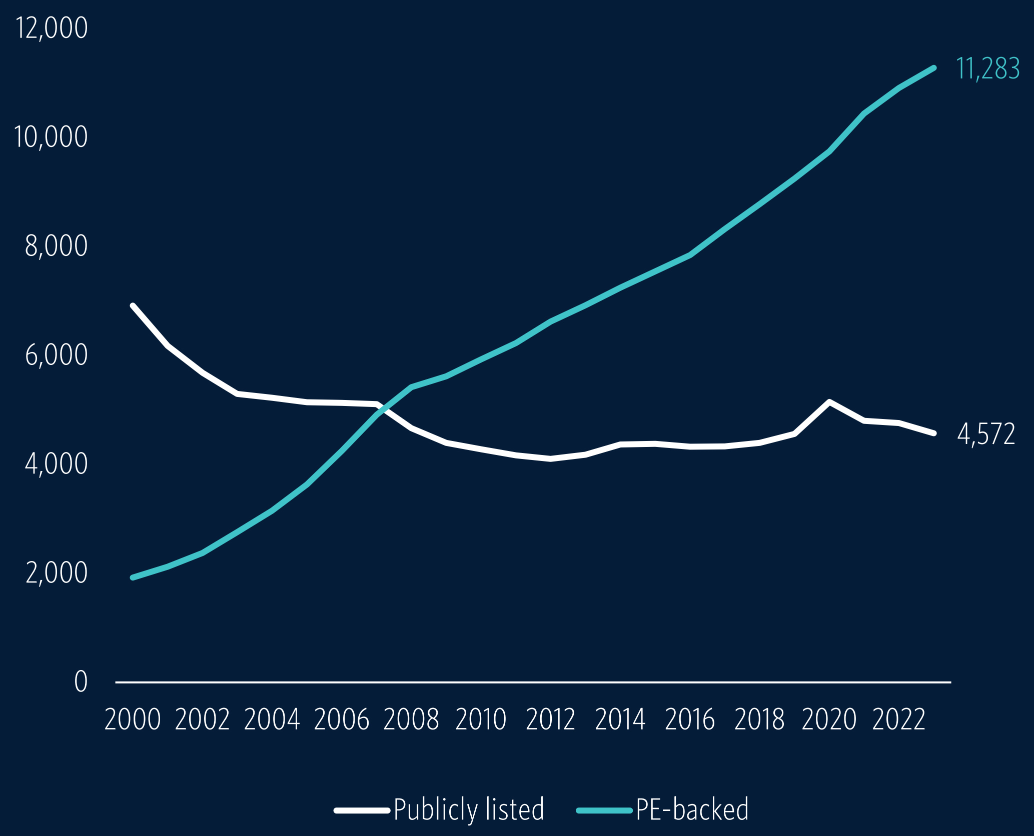
Funds closed by select strategies



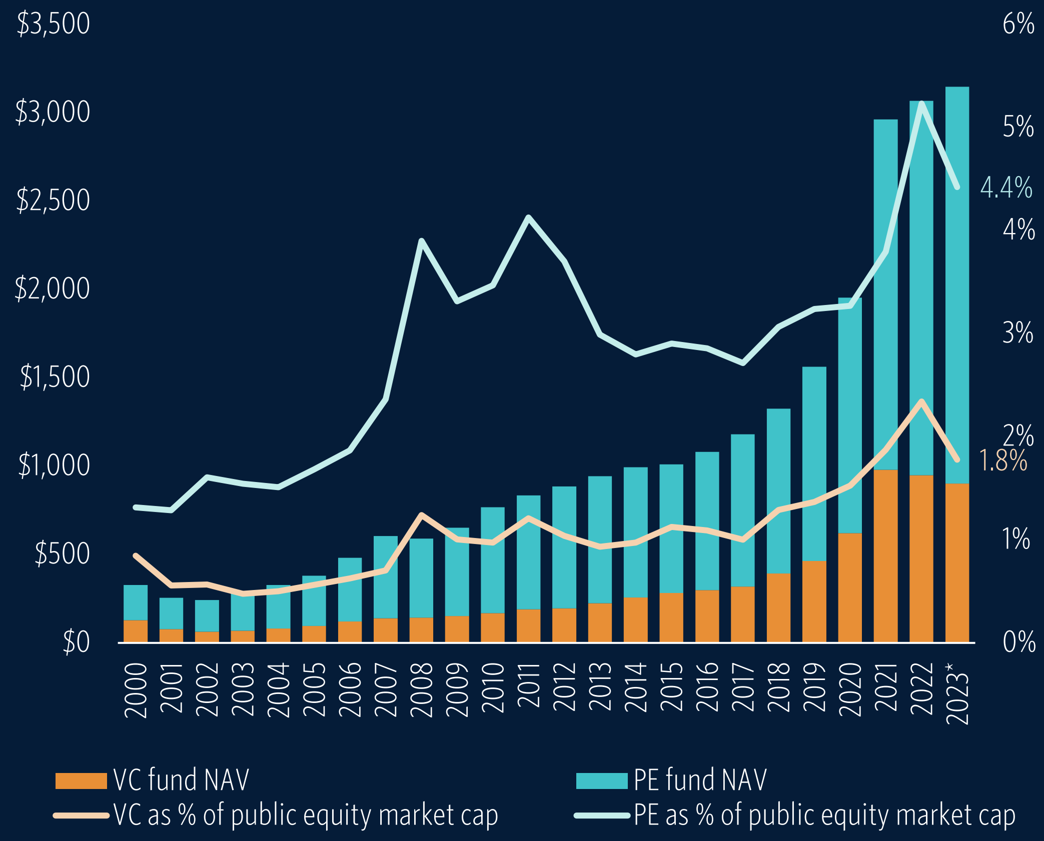
Source: PitchBook · Geography: US · *As of December 31, 2023

One reason retail investors want access to PE is that so many companies are remaining private. Still, PE and VC fund assets are only 6.2% the size of total public equity market capitalization.

PE-backed company count (excludes VC) versus domestic firms publicly listed on NYSE and Nasdaq*



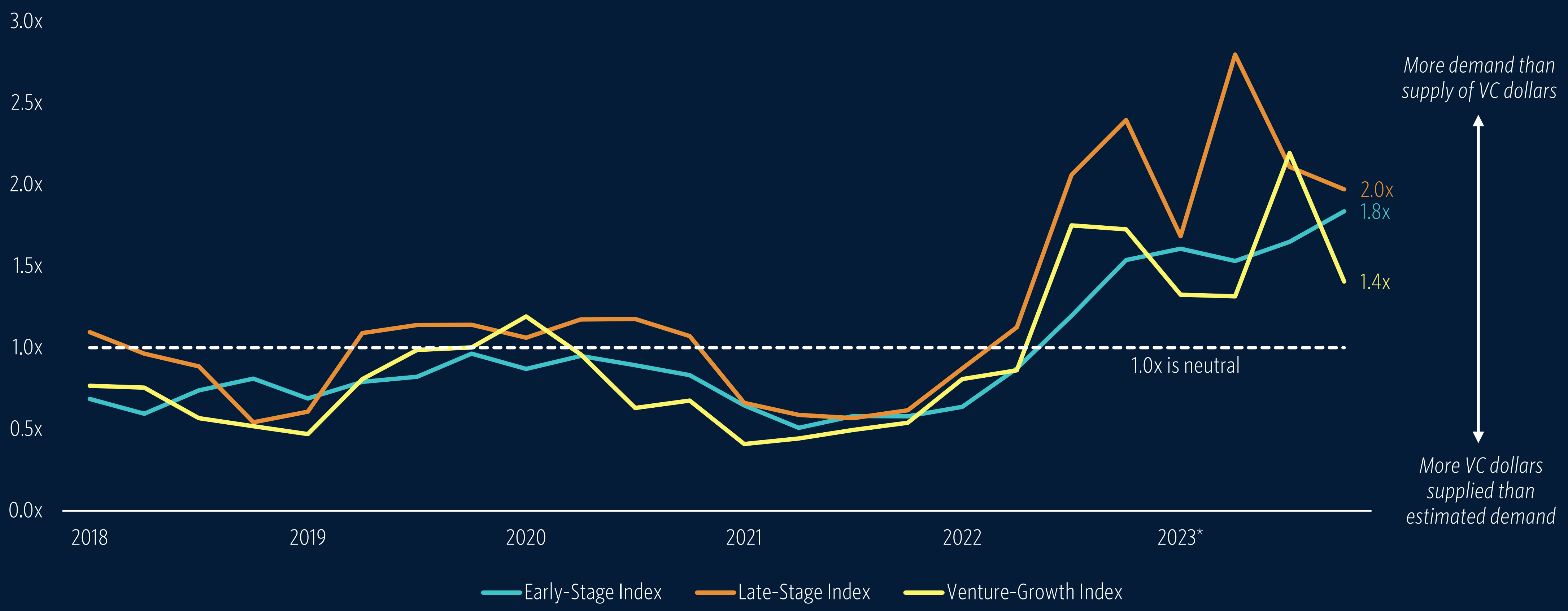
PE and VC fund NAV ($M) as a share of US public equity market cap



Sources: World Bank, Statista, Siblis Research, PitchBook · Geography: US · *As of June 30, 2023; public market cap data as of the end of 2023

The demand for VC dollars is much higher than funding available, as VC deployment has slowed and companies are running out of funding from prior rounds.

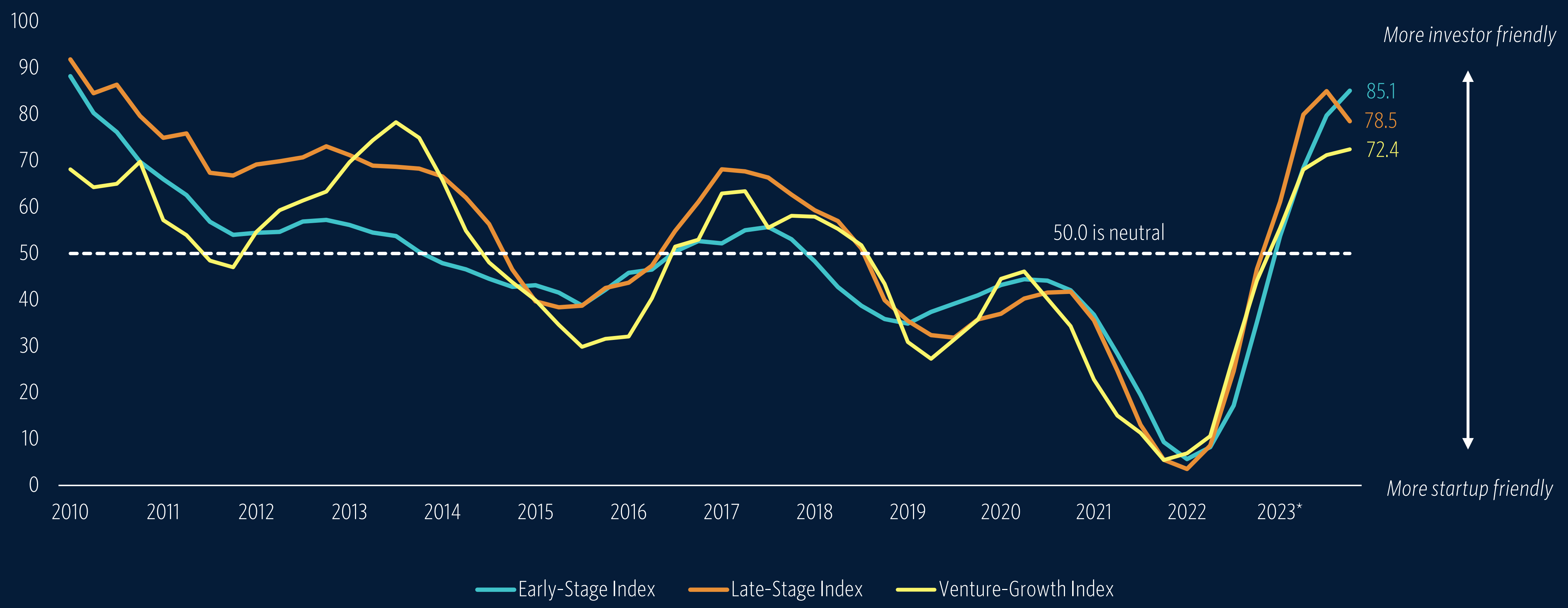
Estimated startup demand for VC investment relative to supply



Source: PitchBook · Geography: US · *As of December 31, 2023

With belts tightening, an upward swing in the quality of deals being funded may come. In addition, VCs are now in their best position in years to influence deal terms.

PitchBook VC Dealmaking Indicator



Source: PitchBook · Geography: US · *As of December 31, 2023

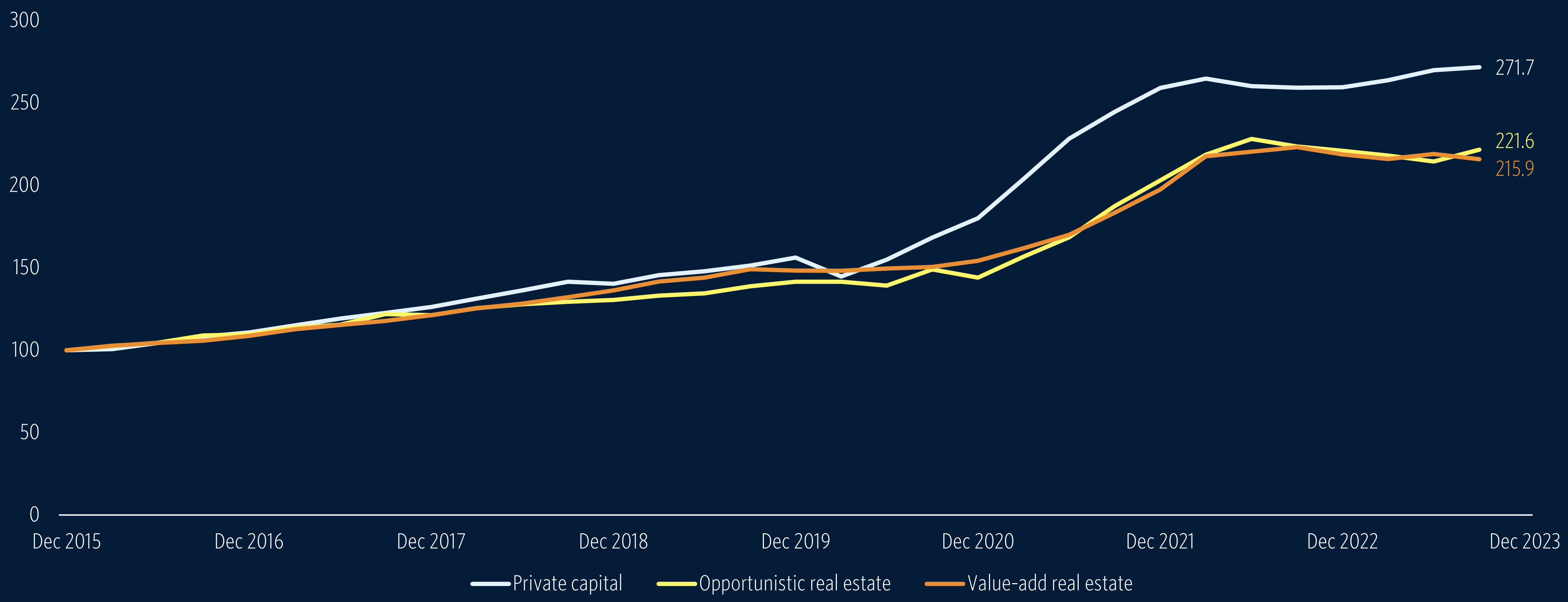
Real estate

Key takeaways

- Fundraising for real estate strategies has come down from 2021 and 2022, but with $74.3 billion in fund closings, there is a good deal of capital available to take advantage of an ongoing repricing in commercial property valuations.
- Fund performance in real estate at the aggregate level has not receded, despite the rising rate and credit markets. Asset mix and sticky valuations are likely playing a role for now. Estimates of market value repricing indicate office values fell 25% in 2023.
- Delinquency rates for commercial mortgage-backed securities (CMBS) ticked up in 2023. Retail continued to suffer, and office saw a jump in delinquencies in 2023 to 5.8% as employers and employees struggled to determine the new normal for office needs.
- Stabilizing—and now falling—mortgage rates may open up residential property markets in 2024. Housing sentiment has bounced up closer to a neutral reading.
- At the same time, new housing starts fell with the higher-interest-rate environment, putting a floor on home values.
- With bank failures and an uncertain economic situation, banks have continued to hold credit standards high, cooperating with rising interest rates to slow capital flows and starve lower-quality borrowers.

While lagging private capital overall since 2015, private real estate was able to hold on to 2021 and 2022 gains. However, overall returns mask vastly different experiences across property sectors.

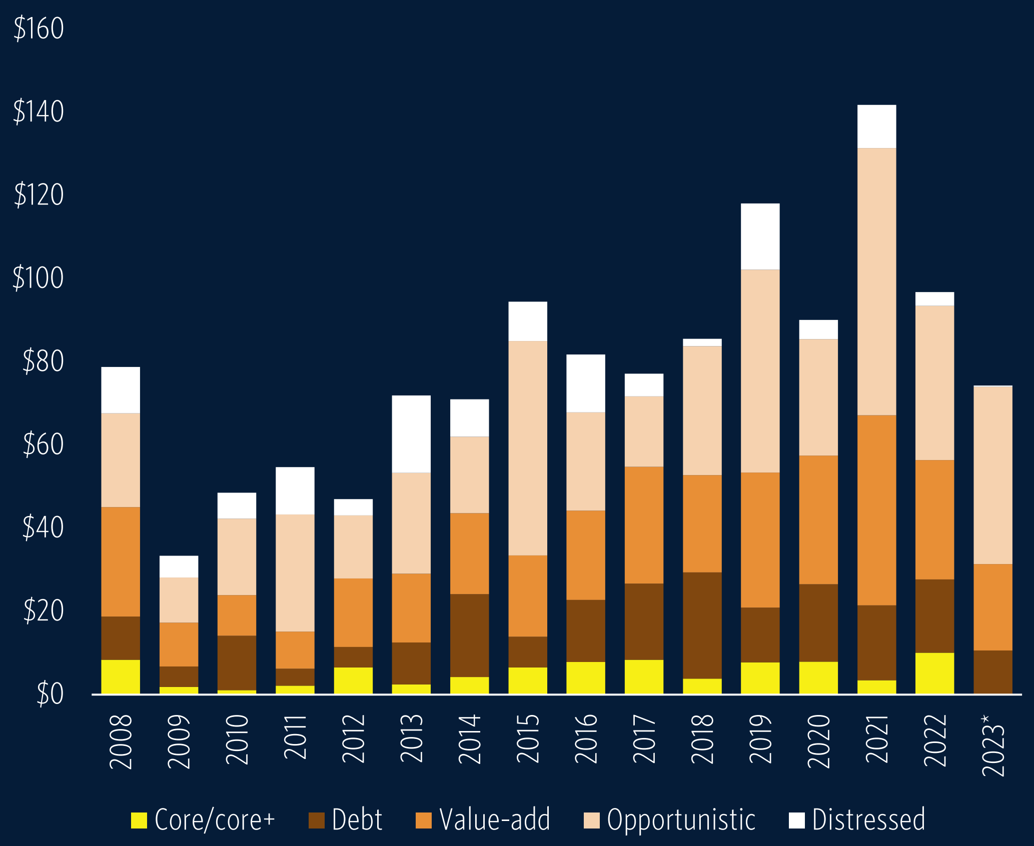
PitchBook US Private Capital Indexes (rebased to 100 in 2015)*



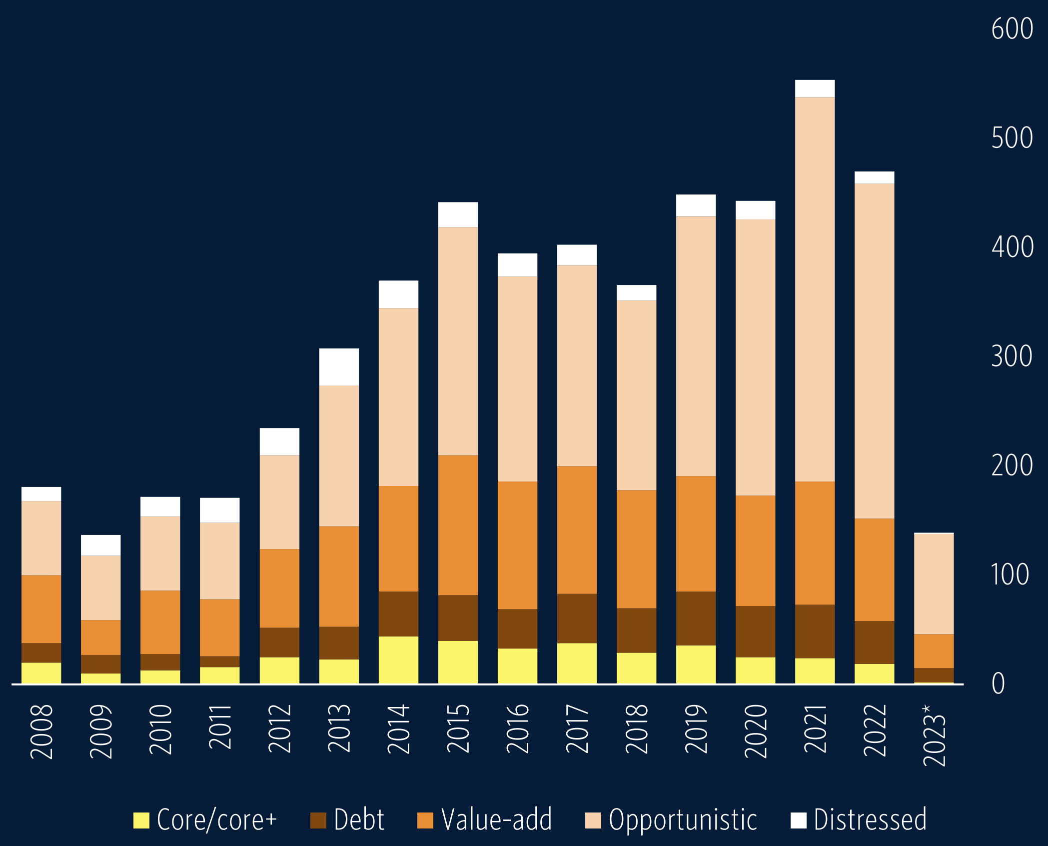
Source: PitchBook · Geography: US · *As of September 30, 2023
Note: Data for Q3 2023 is preliminary.

Fundraising for private fund real estate is well off 2021 figures, in part due to more share going to evergreen structures and rising interest rates deterring commitments to some parts of the market.

Real estate capital raised ($B) by select strategies



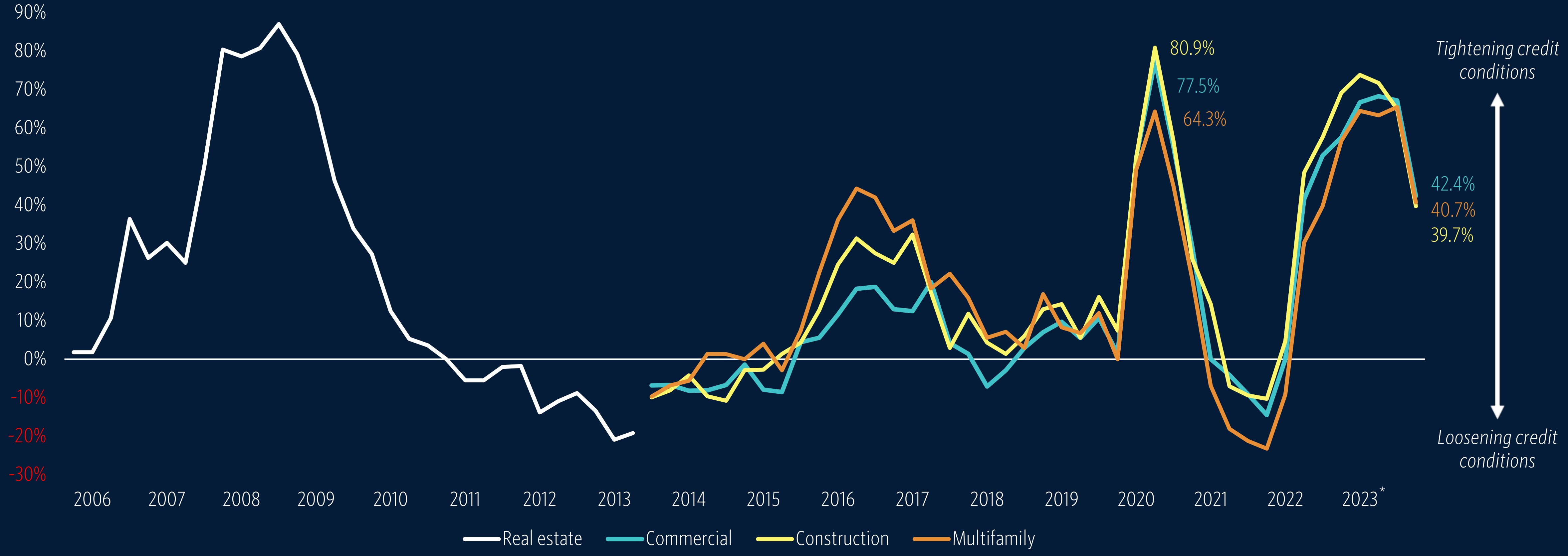
Real estate funds closed by select strategies



Source: PitchBook · Geography: US · *As of December 31, 2023

The higher debt burden on real estate borrowers caused by rising interest rates has led banks to implement tighter credit standards on real estate lending, though that trend has started to recede.

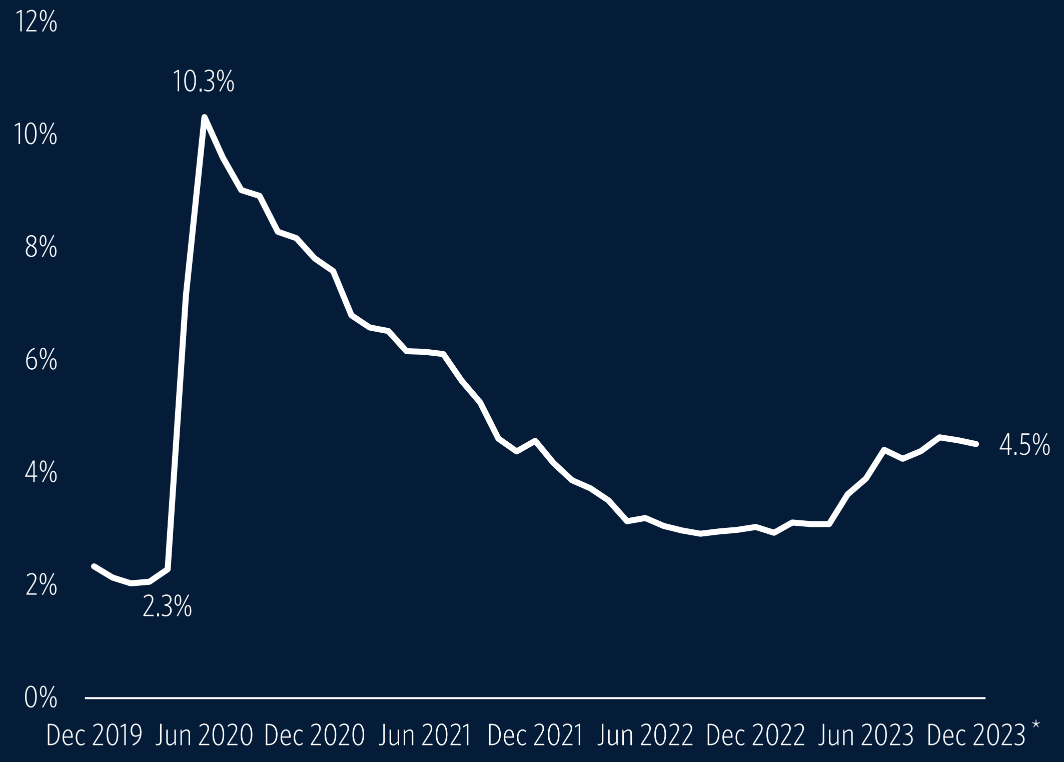
Net share of banks tightening standards on real estate loans by category



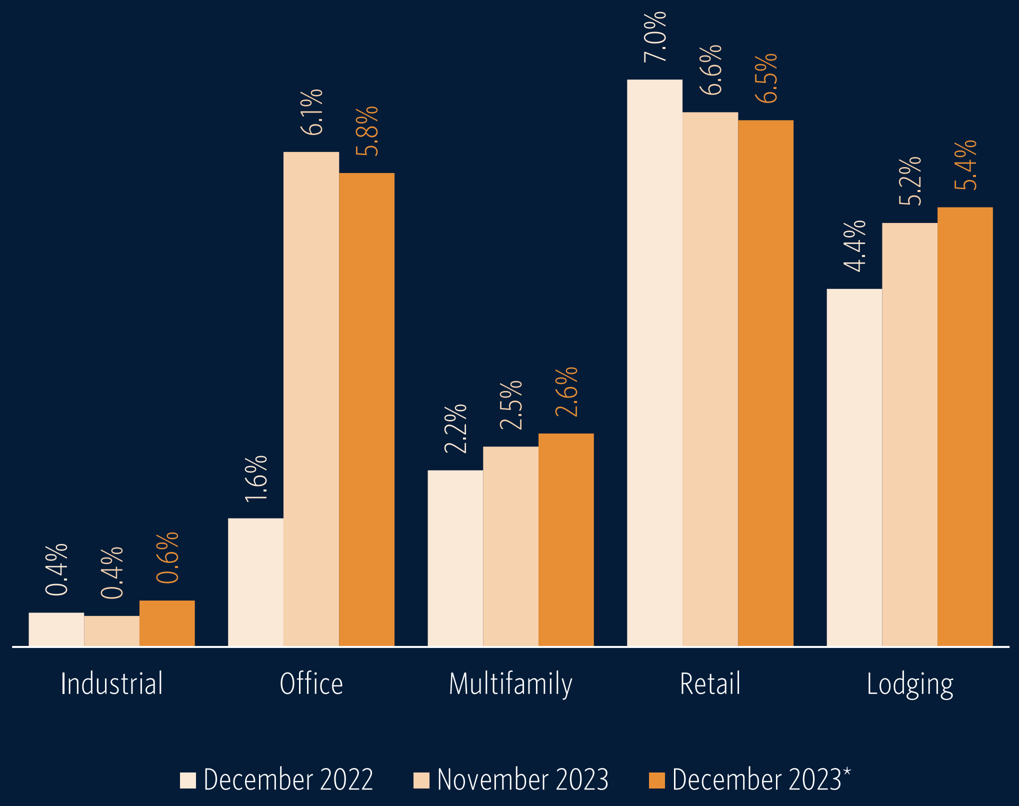
Source: Senior Loan Officer Survey · Geography: US · *As of December 31, 2023
Note: Survey series was split starting in 2014.

Delinquency rates for CMBS rose in 2023. Retail is gradually improving, while office has suffered from prolonged work-from-home flexibility.

CMBS delinquency rates



CMBS delinquency rates by property type

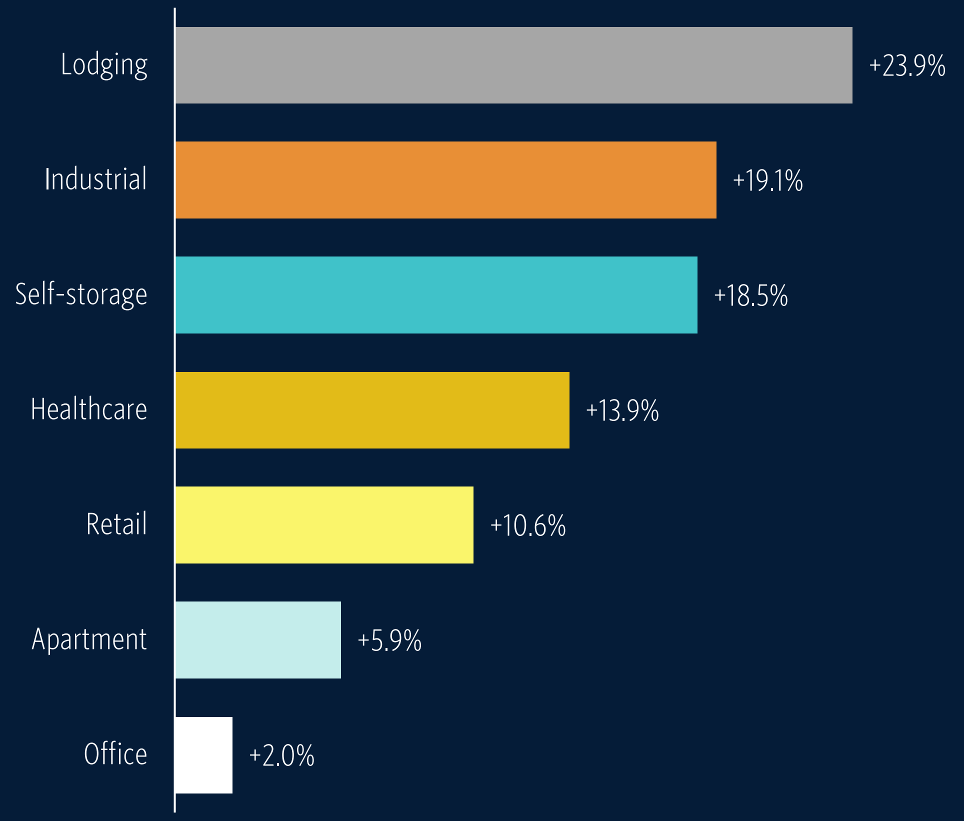


Source: Trepp · Geography: US · *As of December 31, 2023

Since 2015, industrial returns have far outpaced other sectors, though with some periods of significant volatility. Reflecting declining sentiment, office has been the laggard of late...

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

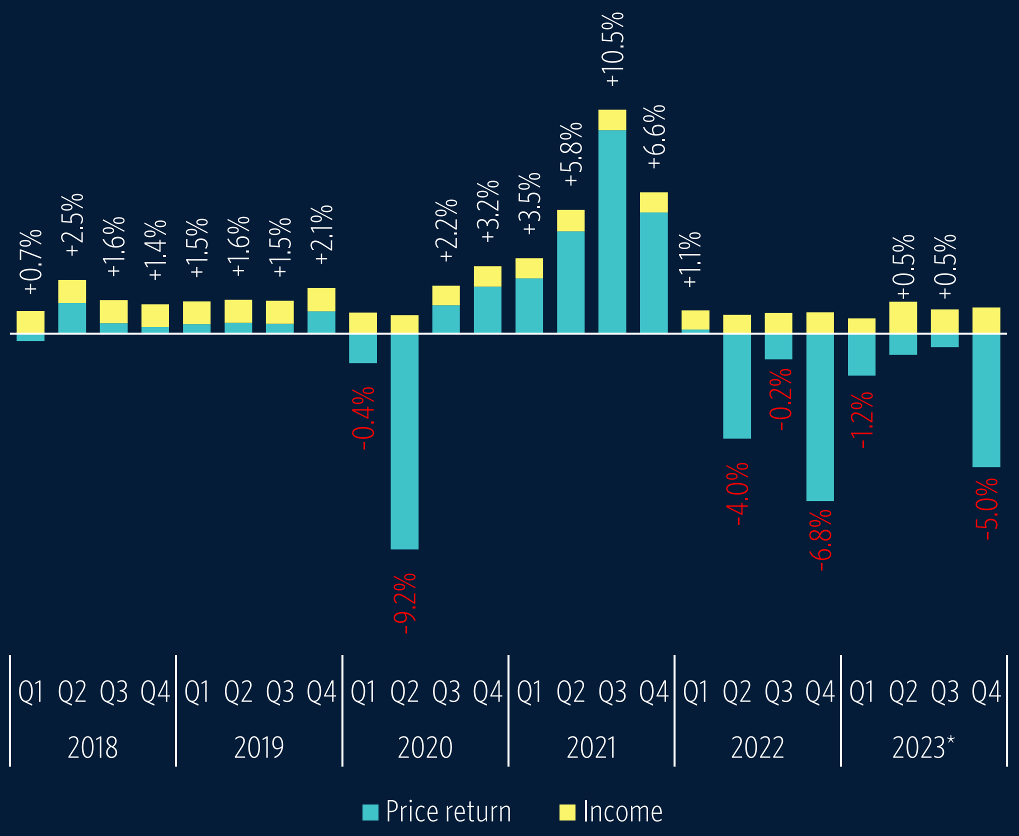
REIT Index returns by sector in 2023*



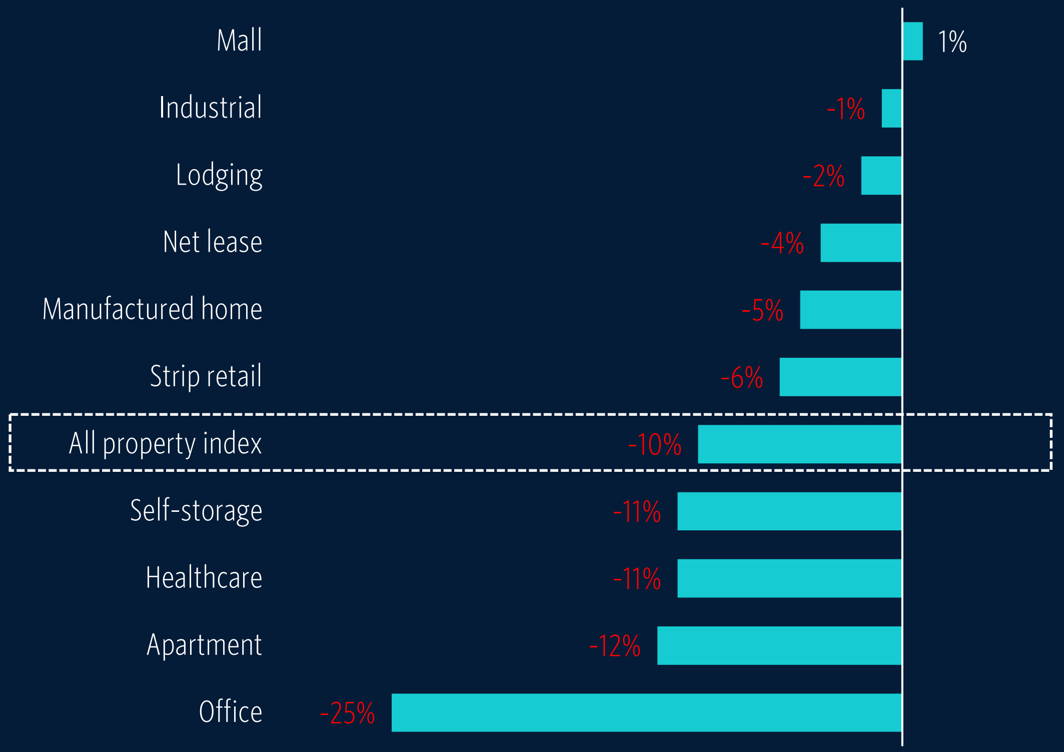
Source: Nareit · Geography: US · *As of December 31, 2023

…which has impacted valuations as well. Price returns have swamped income returns for two years, with office being the main—though not the only—detractor.

Green Street All Property Return Index by quarter



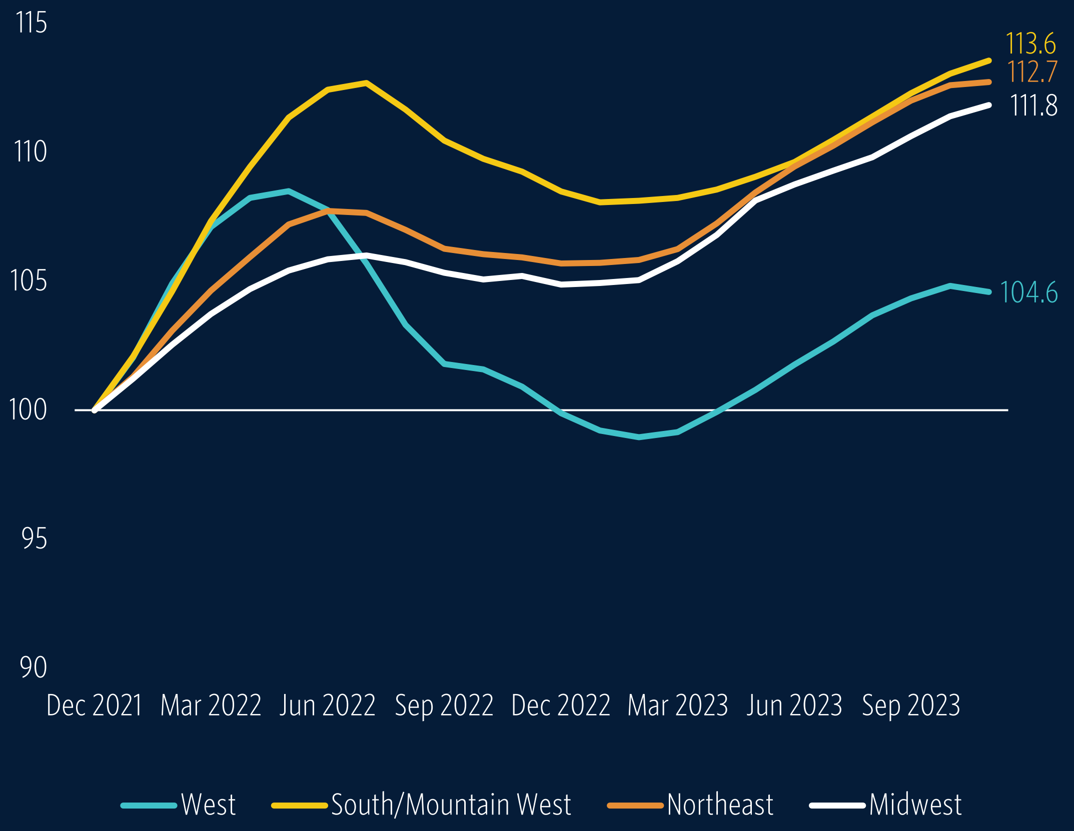
Green Street Price Index one-year price change by property type*



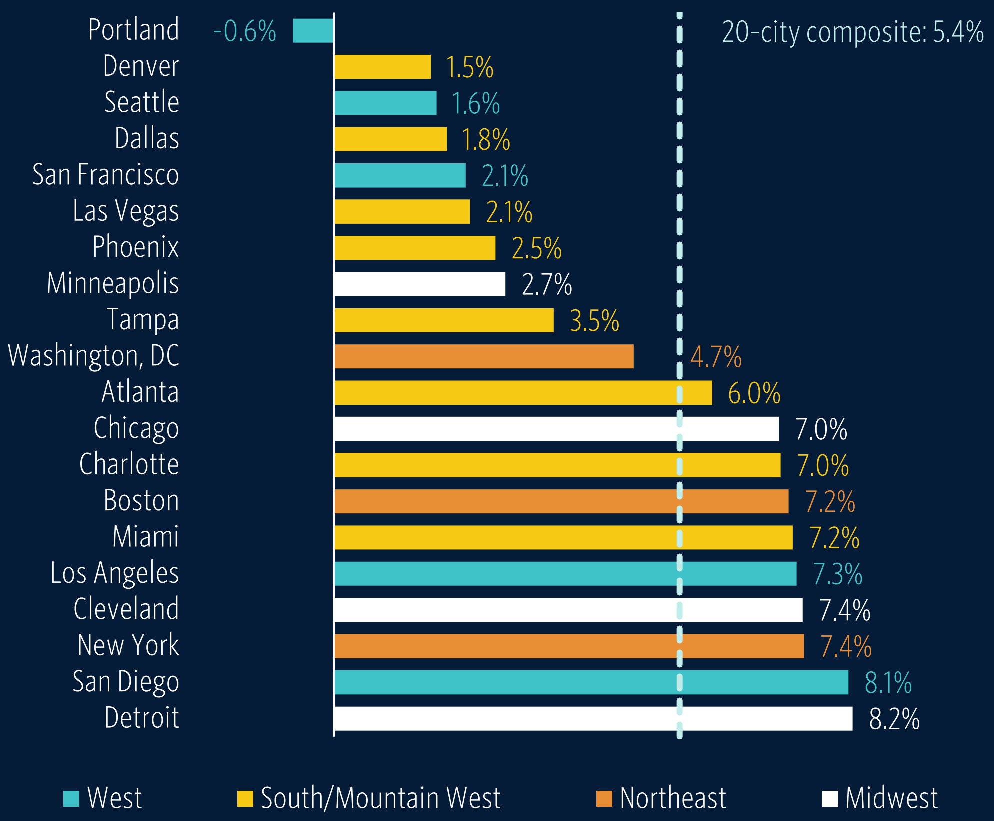
Source: Green Street · Geography: US · *As of December 31, 2023

With remote work, the postpandemic era has seen housing prices rise in many markets that offer a lower cost of living in the South and Midwest. That has come at the expense of the West Coast.

Average home price appreciation across select cities in US regions (rebased to 100 at end of 2021)*



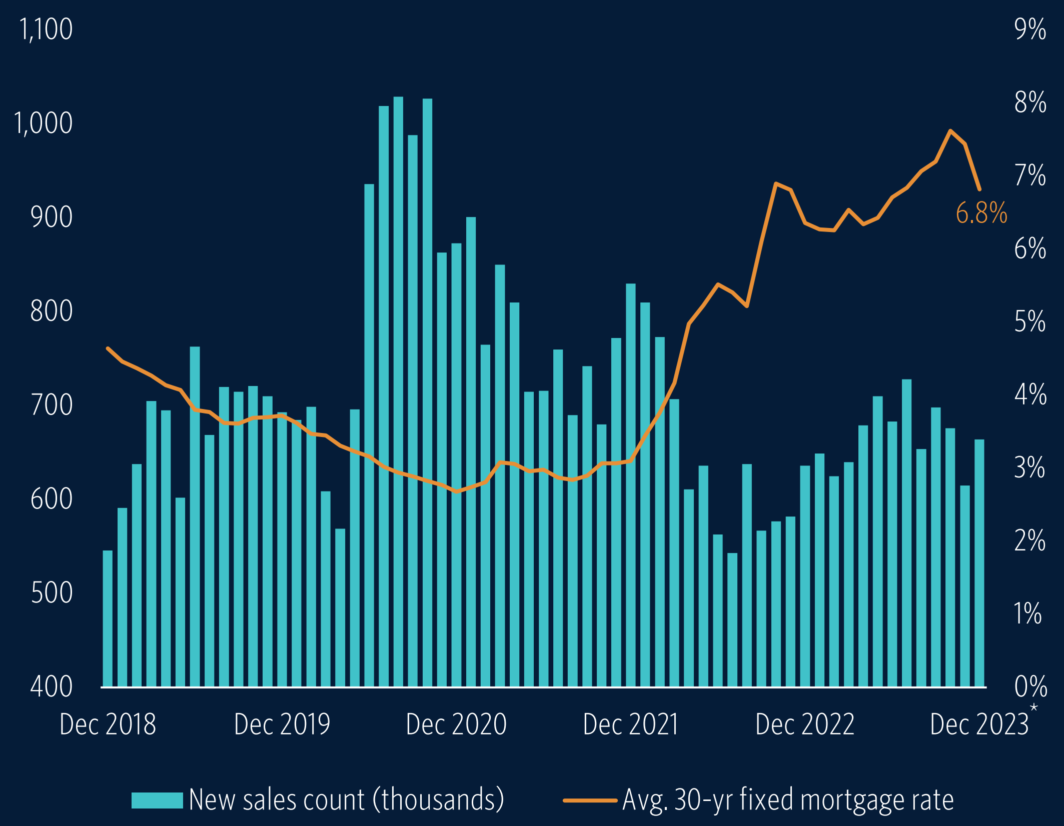
One-year change in home prices by select cities*



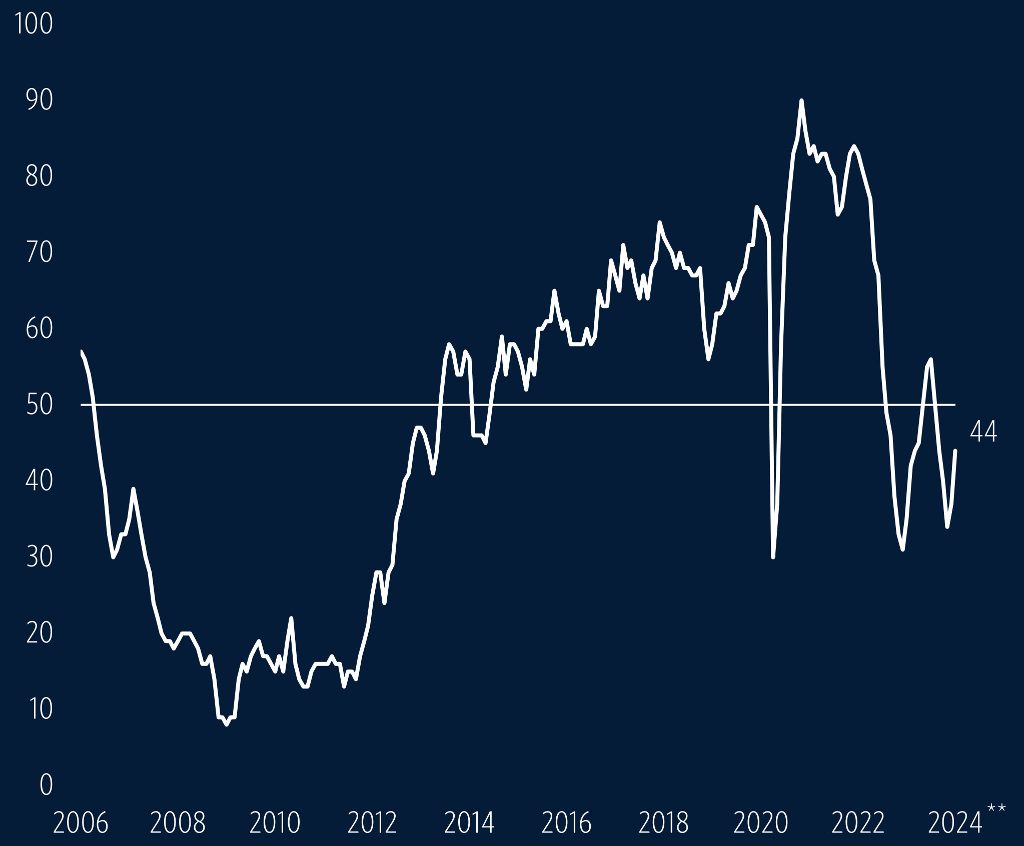
Source: FRED · Geography: US · *As of November 30, 2023

Mortgage rates have begun to taper off, and the NAHB/Wells Fargo Housing Market Index has bounced back, potentially offering a stimulant for the housing market in 2024.

US new single-family home sales and average 30-year fixed mortgage rate



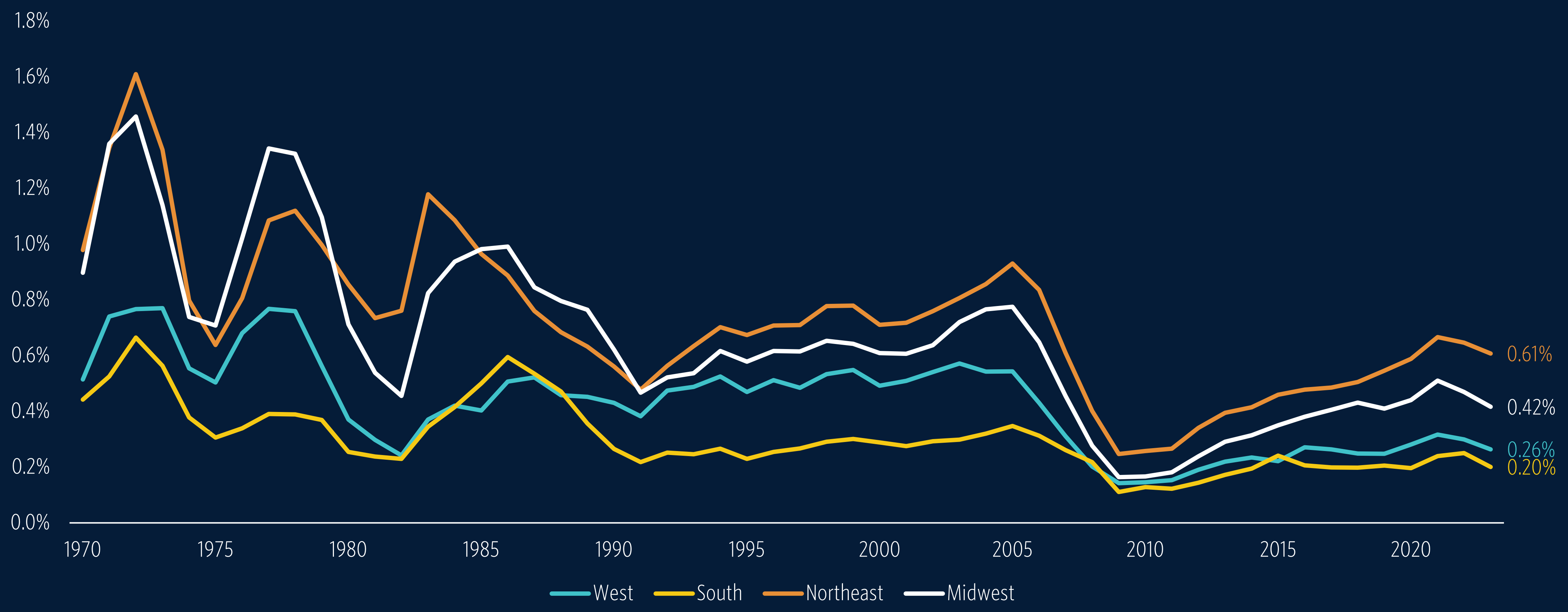
NAHB/Wells Fargo Housing Market Index



Sources: FRED, NAHB/Wells Fargo · Geography: US · *As of December 31, 2023 · **As of January 31, 2024

With rising rates, growth in new home construction has declined. Relatively low inventory growth should support house prices but stall relief for those cities with severe housing shortages.

Housing starts as a share of population by region*



Source: US Census · Geography: US · *As of December 31, 2023

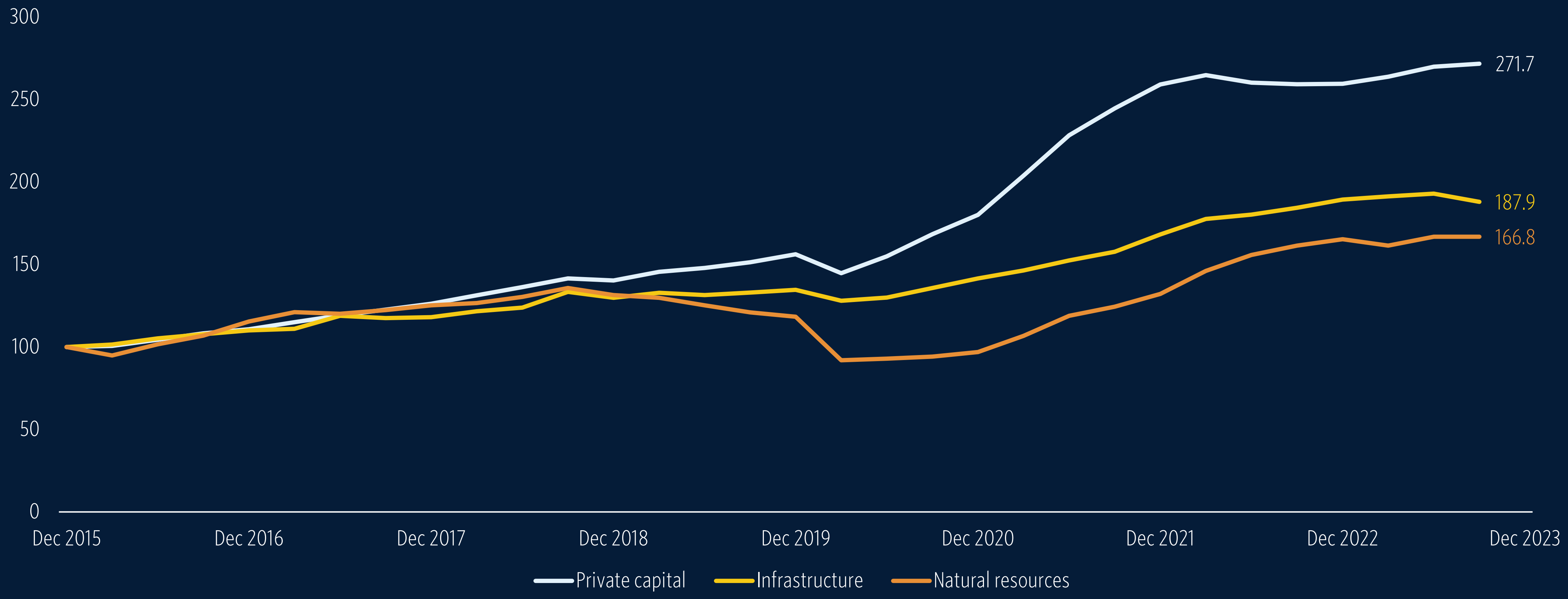
Real assets

Key takeaways

- Infrastructure and natural resources fund performance has lagged the broader private capital markets. Although 2023 was an off year for fundraising, infrastructure has continued to take the majority of capital commitments in real assets.
- Logistics-related indicators provide intel on the pullback in inflation throughout 2023. Over the last year, public equities in real assets sectors have largely traded flat.
- Headlines today detail the turmoil in the Red Sea. However, that has not noticeably affected US shipping costs. Container volumes were down 12.9% YoY at the Port of Los Angeles, indicating there is some slack available to dampen pricing.
- Stabilizing prices in commodities are also welcome for the infrastructure strategies that are heavy consumers of natural resources, though the mix within infrastructure has modernized in recent years to include areas such as data centers, fiber optics, and towers.

Given that infrastructure investment is no longer dominated by natural resource consumption, it has been able to decouple from what had been a natural inverse relationship.

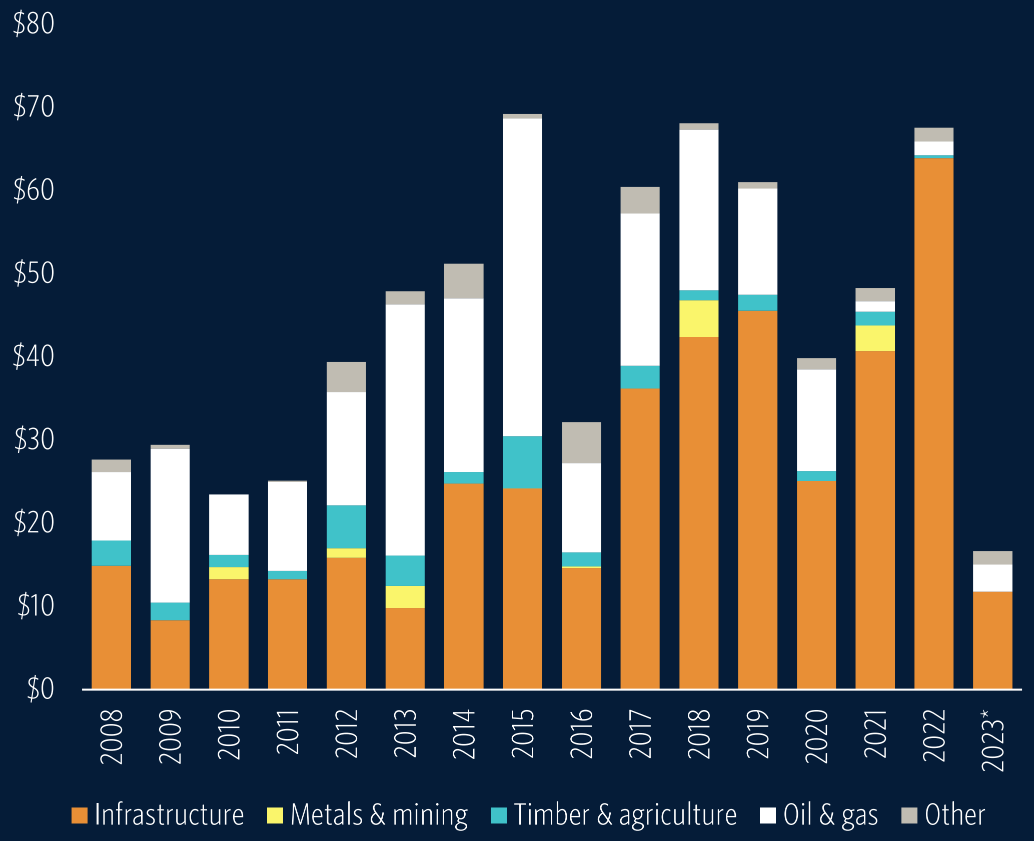
PitchBook US Private Capital Indexes (rebased to 100 in 2015)*



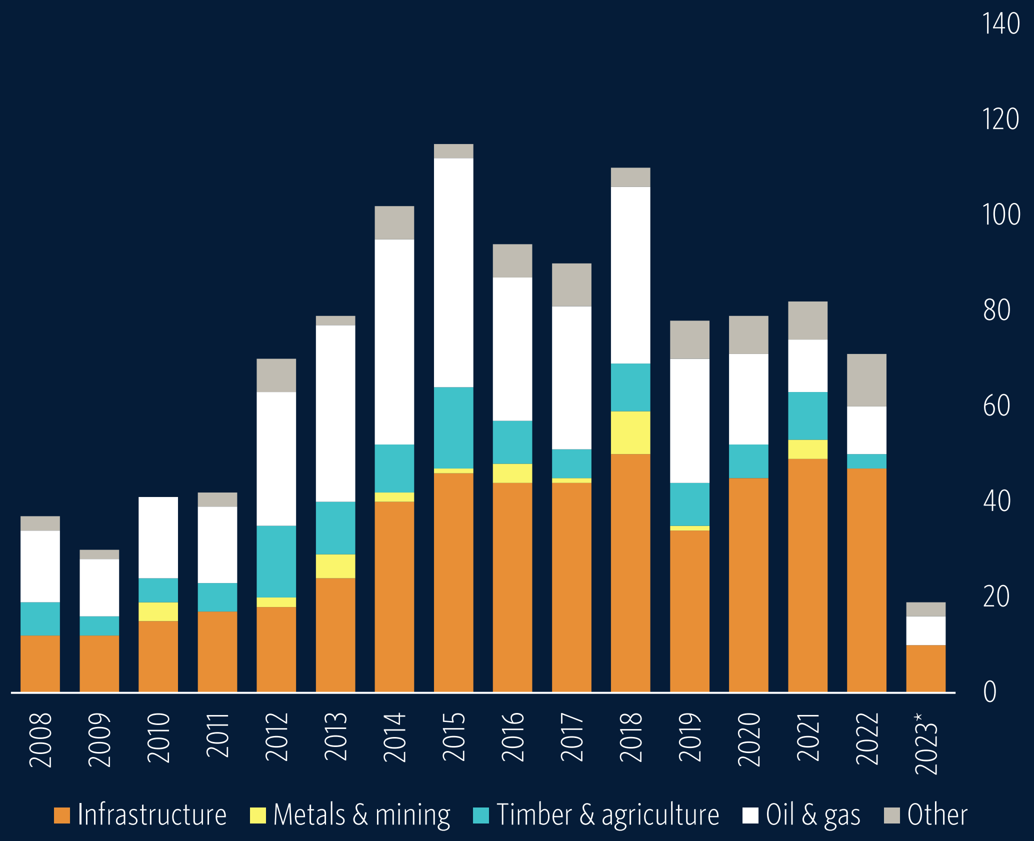
Source: PitchBook · Geography: US · *As of September 30, 2023
Note: Data for Q3 2023 is preliminary.

Infrastructure now dominates real assets fundraising as sustainable energy and digital infrastructure projects draw capital away from the old leader, oil & gas. Large funds in market will boost 2024 figures.

Real assets capital raised ($B) by type



Real assets funds closed by type



Source: PitchBook · Geography: US · *As of December 31, 2023

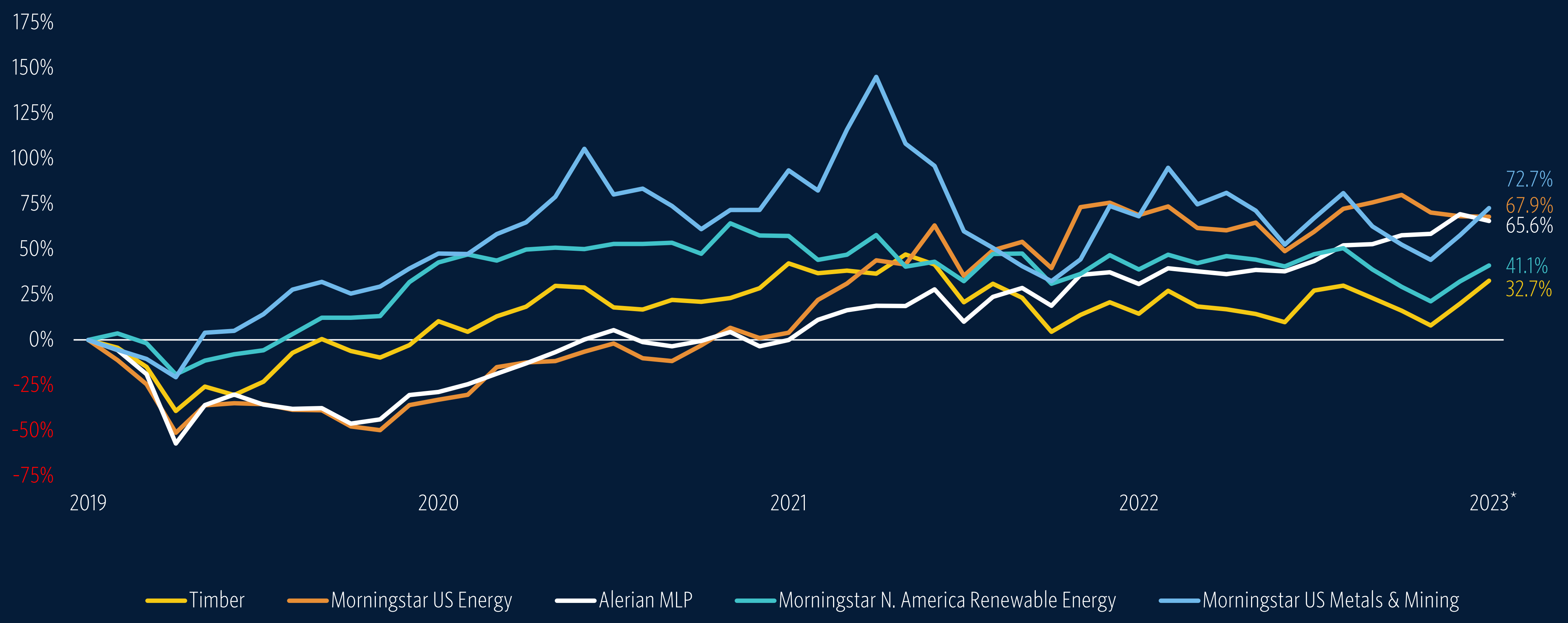
Real assets encompasses both producers and users of commodities. With the users being the larger share of capital raised, it was good news that commodities prices were less volatile in 2023.

Select commodities price performance*

Source: Morningstar · Geography: Global · *As of December 31, 2023

Companies operating in the timber, energy, and metals & mining industries largely traded sideways to up, signaling a level of stability that could comfort markets that had been concerned about inflation.

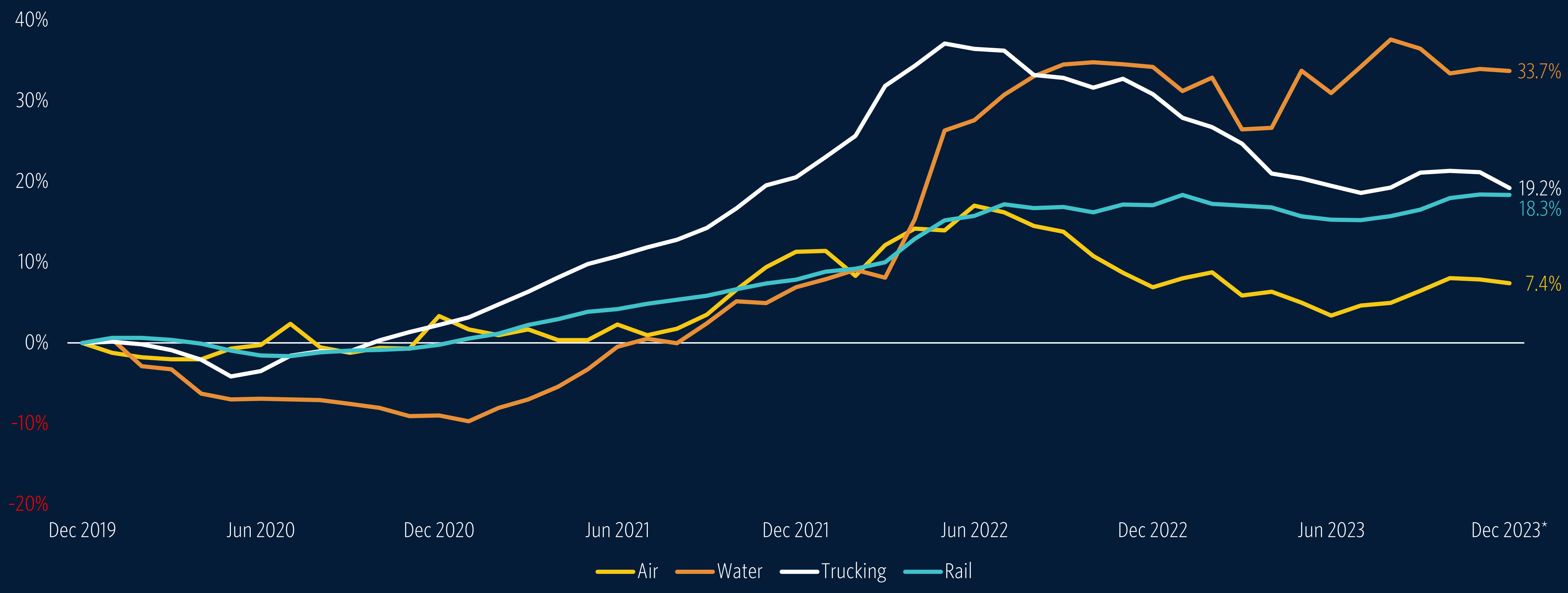
Select real assets public equity returns



Sources: Nareit, Morningstar · Geography: US · *As of December 31, 2023

Another source of comfort in 2023 on the inflation front has been the stabilization of the cost of shipping goods. Unrest in the Red Sea has yet to meaningfully impact US logistics pricing...

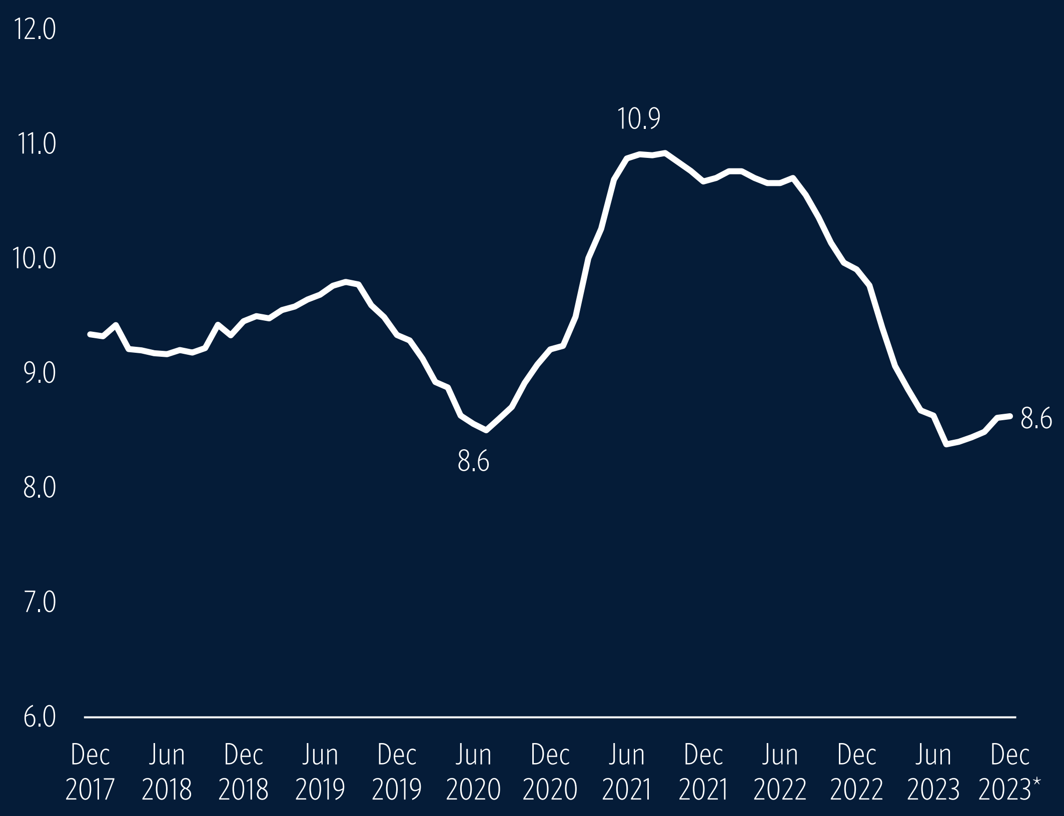
Producer Price Index change since 2019 for freight transportation components



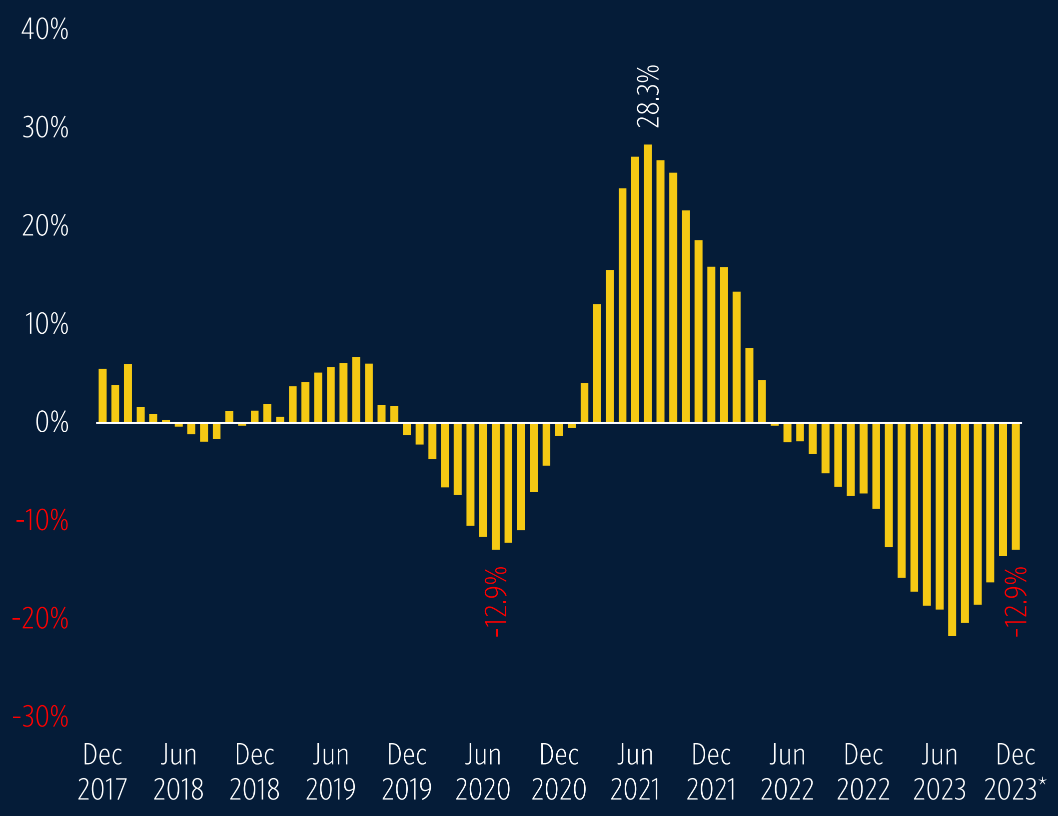
Source: FRED · Geography: US · *As of December 31, 2023

...in part due to lower throughput at US ports, as proxied by Port of Los Angeles container volumes. The 2023 volume of 8.6 million 20-foot equivalent units (TEUs) is a multiyear low.

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



Port of Los Angeles container volume YoY change



Source: Port of Los Angeles · Geography: Los Angeles · *As of December 31, 2023

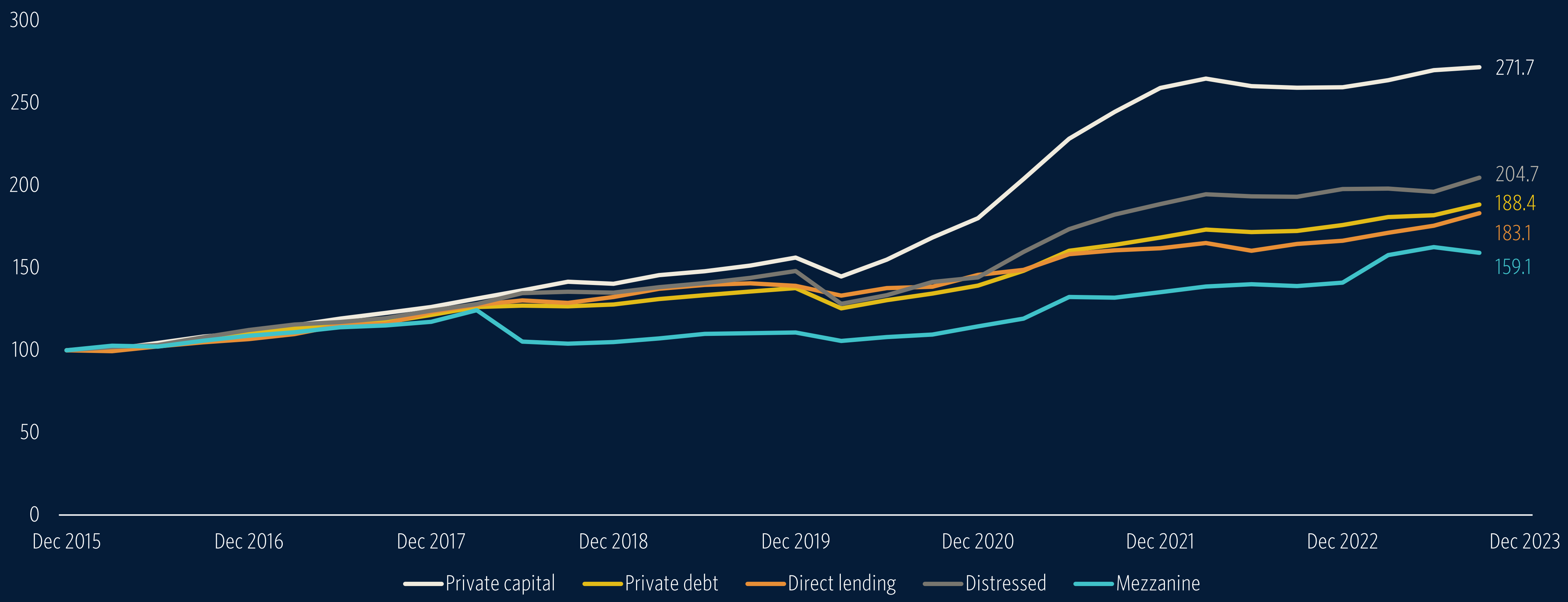
Debt markets

Key takeaways

- Floating-rate loans—the largest component of private debt holdings—had a strong year as proxied by the Morningstar US LSTA Index, up 13.3%. The coupon stream from these products was meaningful and composed almost 75% of the index's returns.
- The dramatic collapse of several banks early in 2023 and subsequent pullback in traditional lender origination provided an opportunity for private debt to take the plunge. Private credit is now the primary partner on the lion's share of LBO deals.
- Private debt fund closings in 2023 surpassed $100 billion for the seventh consecutive year. The median size of a debt fund raised in 2023 was almost twice as large as 2022's median fund size.
- Default rates continue to move up modestly after the lows of 2021. However, an increase in distressed exchanges suggests capital partners are willing to work with borrowers. Similarly, repricings are up as lenders work to reduce reinvestment risk.

Private debt performance has not kept pace with the broader private capital market but would rarely be expected to do so. What allocators tend to value here is the consistent, stable returns over time.

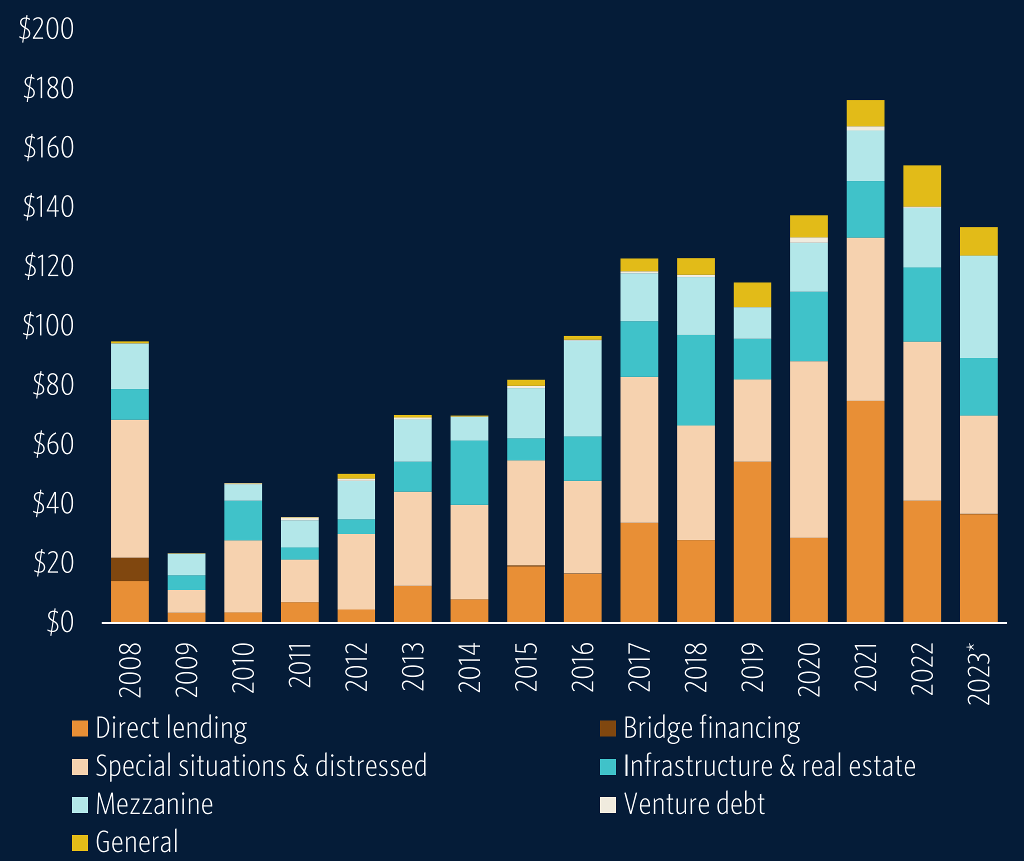
PitchBook US Private Capital Indexes (rebased to 100 in 2015)*



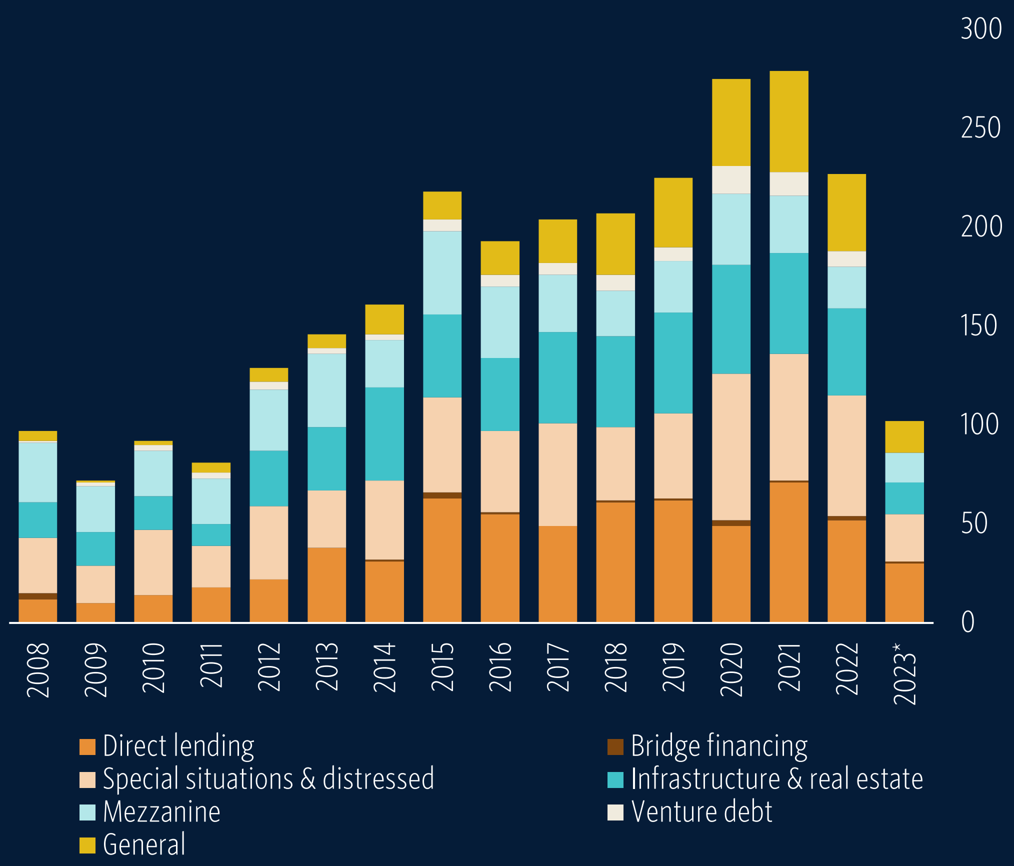
Source: PitchBook · Geography: US · *As of September 30, 2023
Note: Q3 2023 data is preliminary.

Private debt fundraising remained healthy as 2023 became the seventh consecutive year with $100 billion raised. Not captured here are other fund vehicles in evergreen structures.

Private debt capital raised ($B) by type



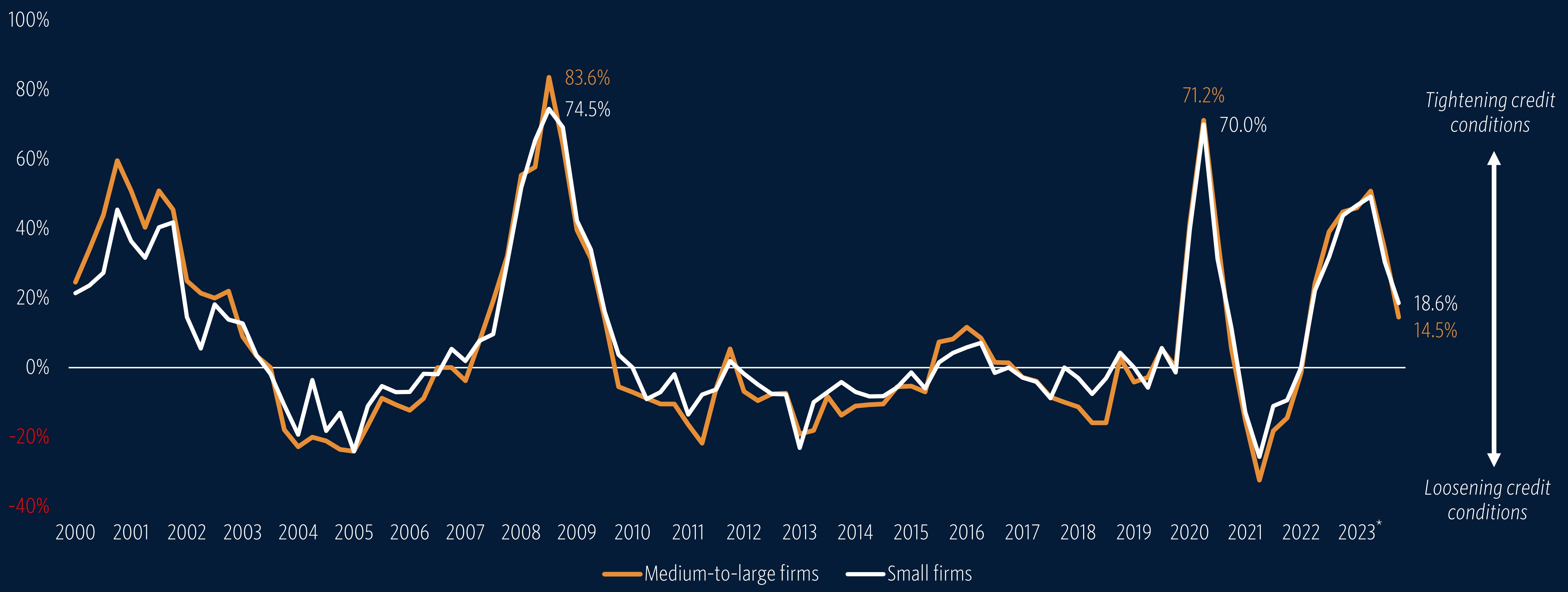
Private debt funds closed by type



Source: PitchBook · Geography: US · *As of December 31, 2023

Credit conditions improved in Q3 2023, but tight bank lending standards have left the door open for private credit...

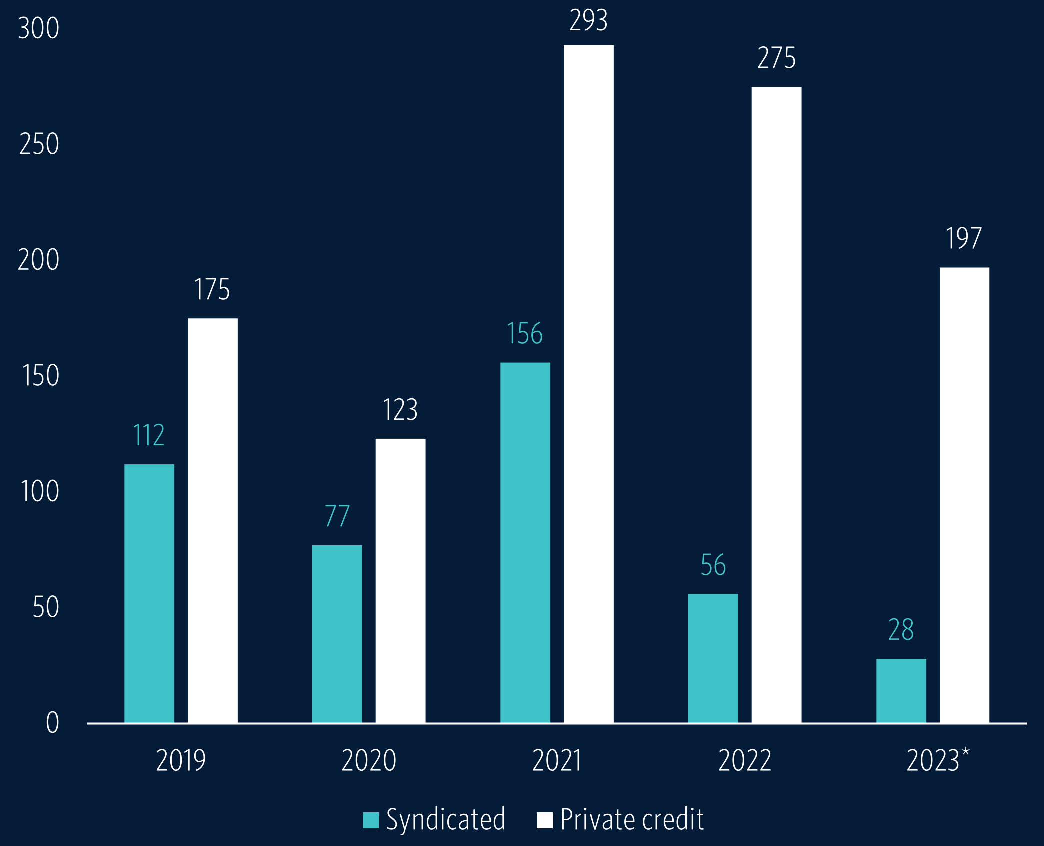
Net share of banks tightening standards on loans to small firms and medium-to-large firms



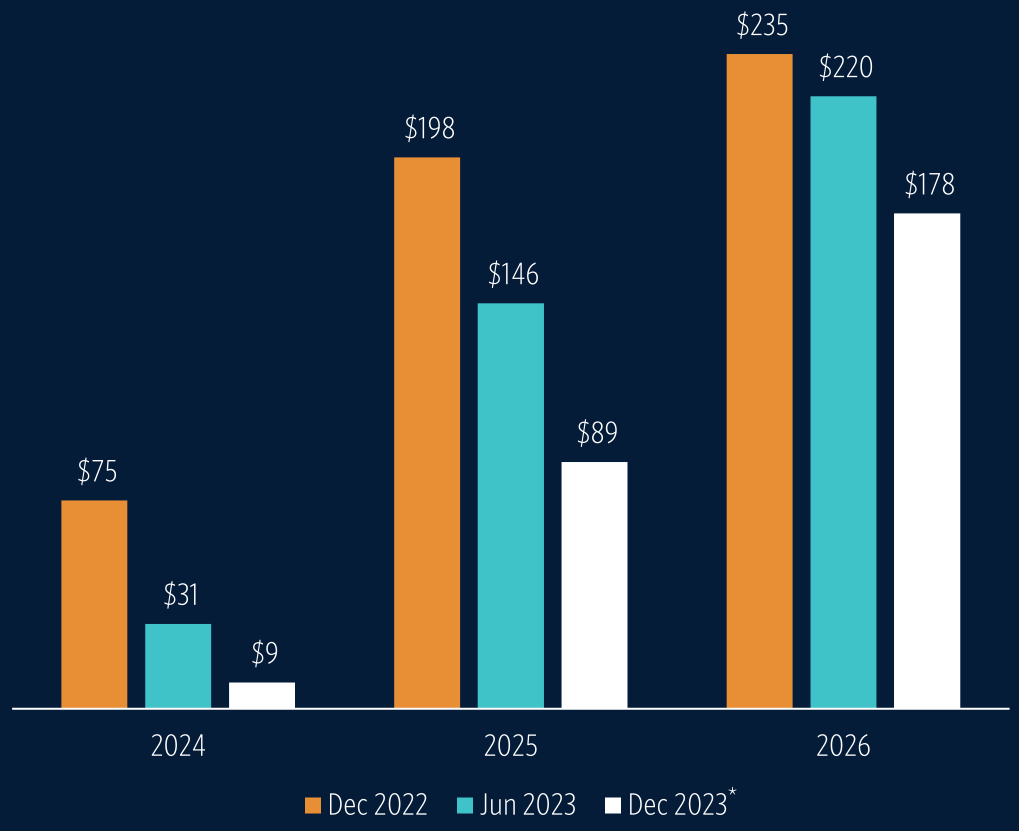
Source: Senior Loan Officer Survey · Geography: US · *As of December 31, 2023

...meaning that the pullback from traditional lenders has allowed private credit to be by far the primary partner for LBO deals. Despite elevated yields, companies have been extending maturities.

Number of LBOs financed in private credit versus syndicated loans



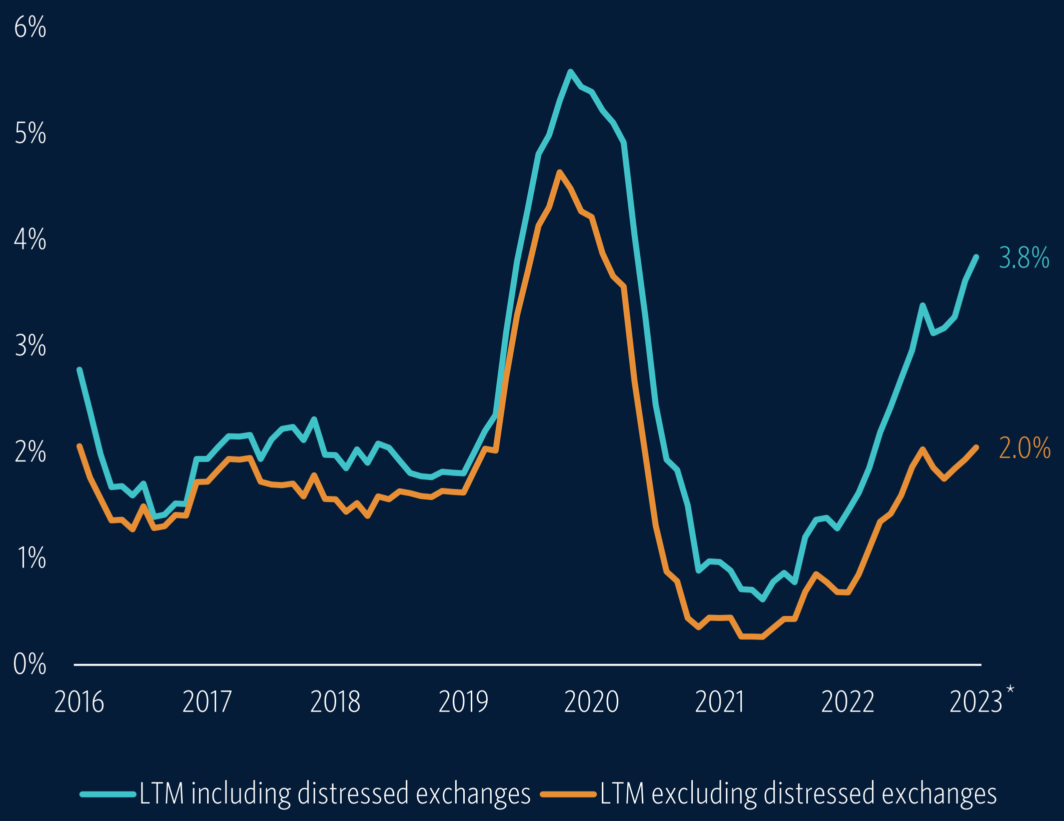
US leveraged loan maturity wall ($B)



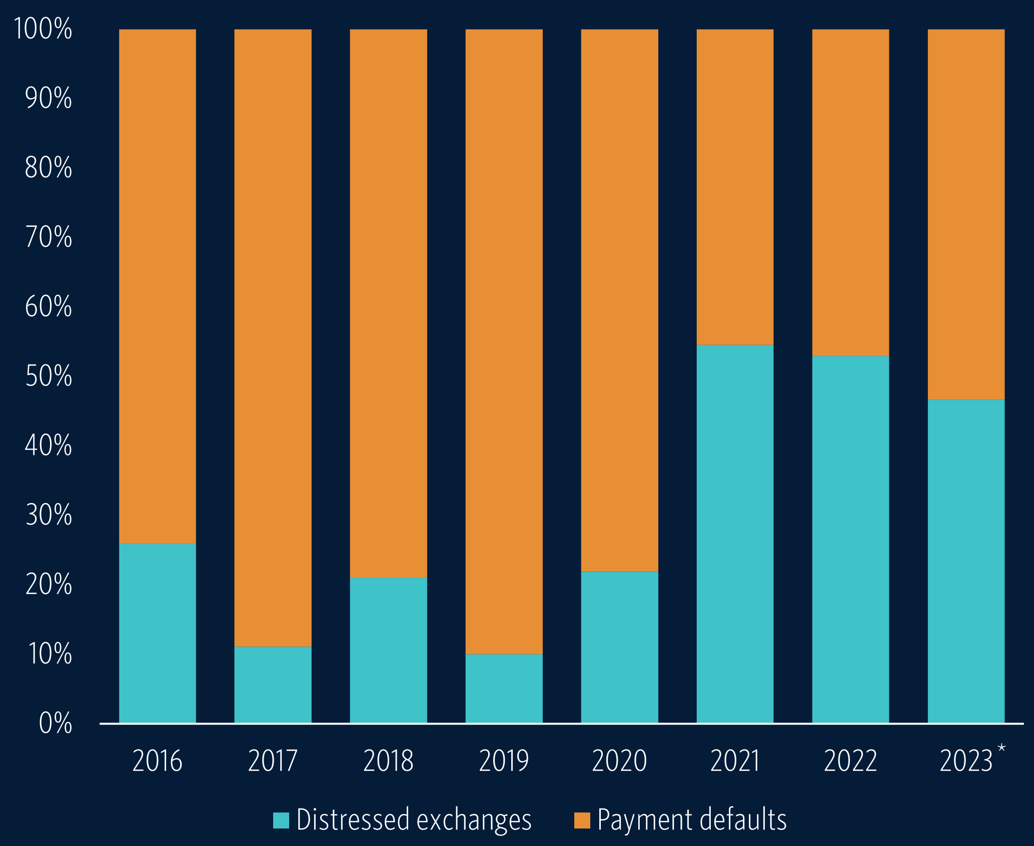
Source: PitchBook | LCD · Geography: US · *As of December 31, 2023

Default rates have ticked up since the lows of 2021. Distressed exchanges compose almost half of tracked credit events as private lenders rework terms in the new rate regime.

Dual-track US loan default rate for issuer count



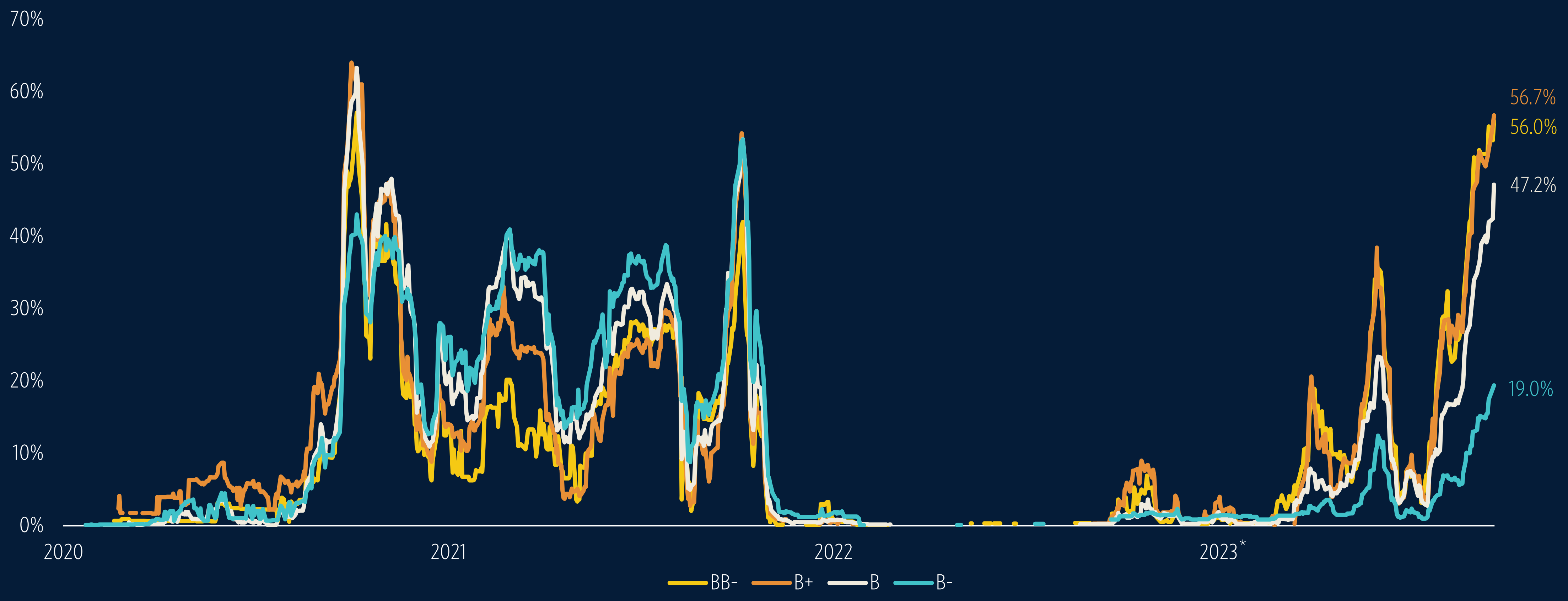
Share of distressed exchanges and payment defaults



Source: PitchBook | LCD · Geography: US · *As of December 31, 2023

Investors are willing to accept repricings (lower returns) to reduce reinvestment risk. Tighter credit conditions and lower risk tolerance is leading to greater dispersion across quality cohorts.

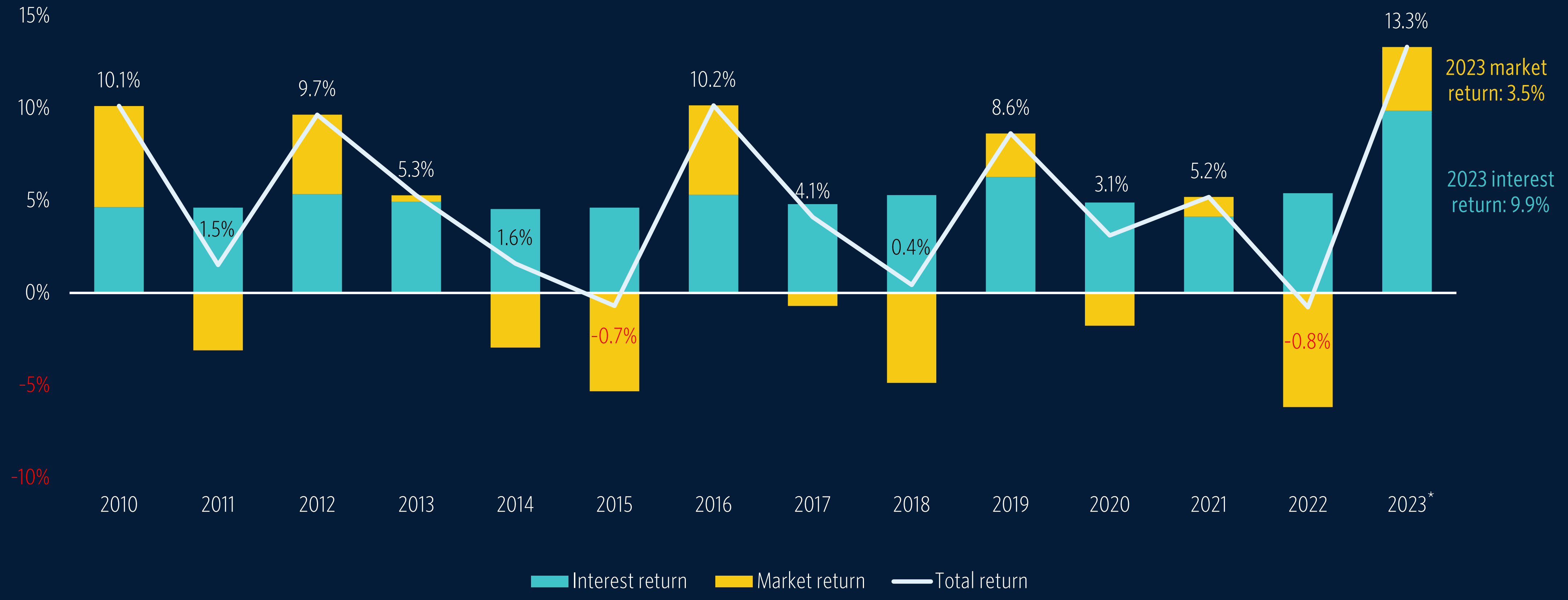
US loans priced at par and above by issuer rating



Source: PitchBook | LCD · Geography: US · *As of December 31, 2023

Higher reference rates led to an impressive annual interest income of almost 10% on leveraged loans in 2023. In comparison, the median interest income from 2010 to 2022 was 4.9%.

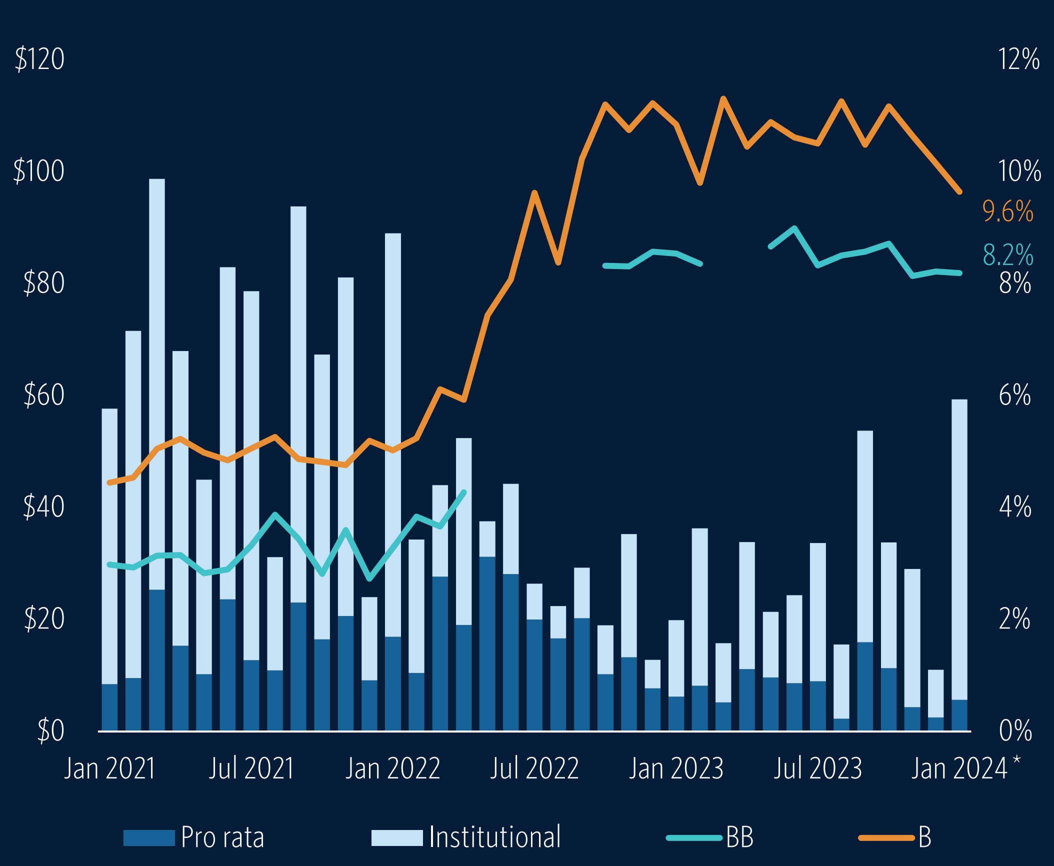
US leveraged loans returns by source



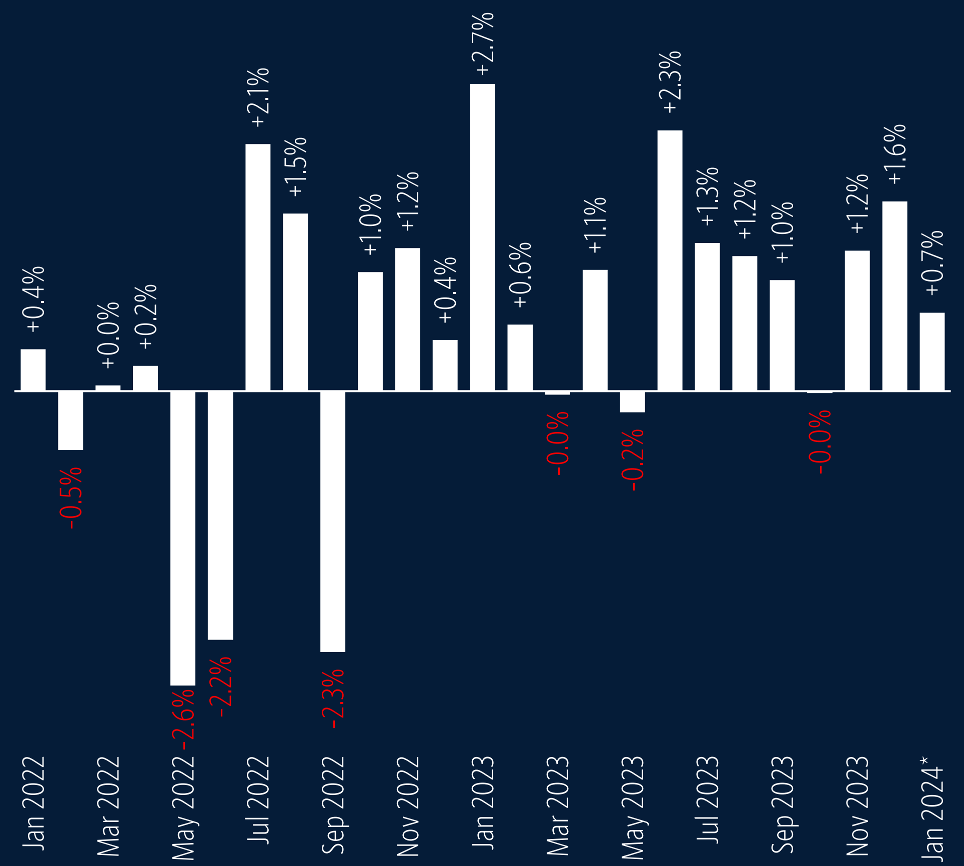
Source: PitchBook | LCD · Geography: US · *As of December 31, 2023

Leveraged loan volume and yields have stabilized since 2021. The LSTA US Leveraged Loan Index returns illustrate the attractiveness of floating-rate income streams.

Leveraged loan volume ($B) and yields



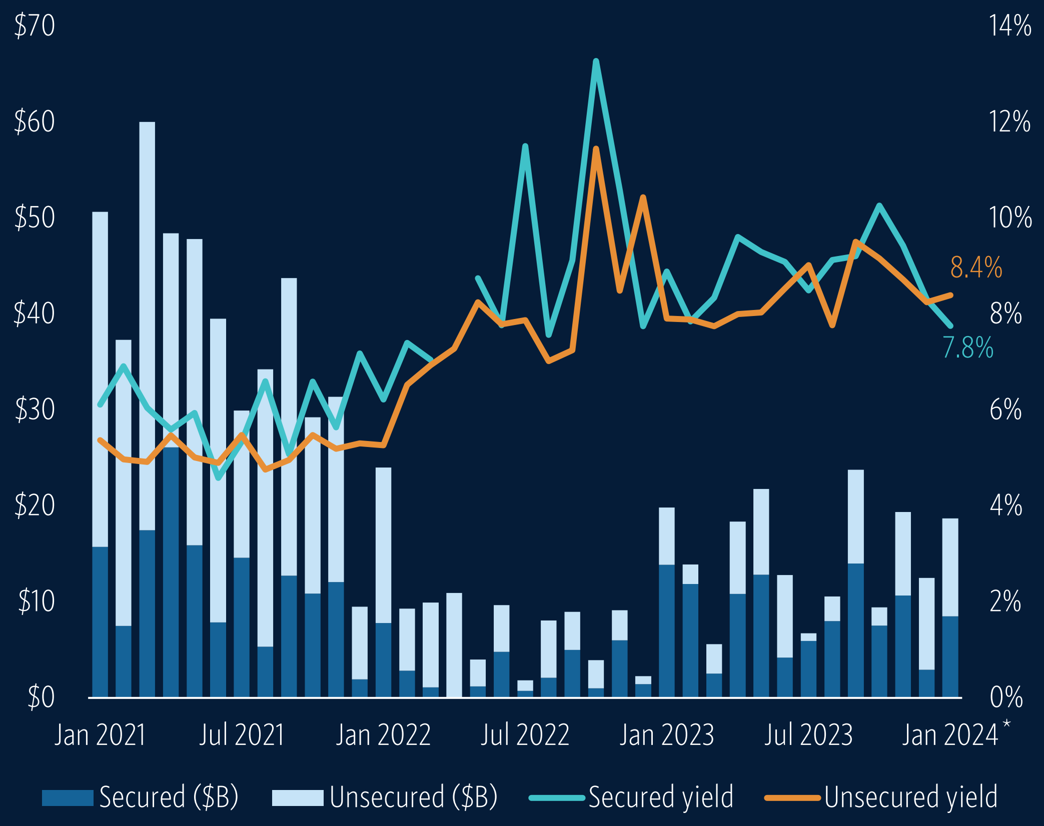
Morningstar LSTA US Leveraged Loan Index monthly returns



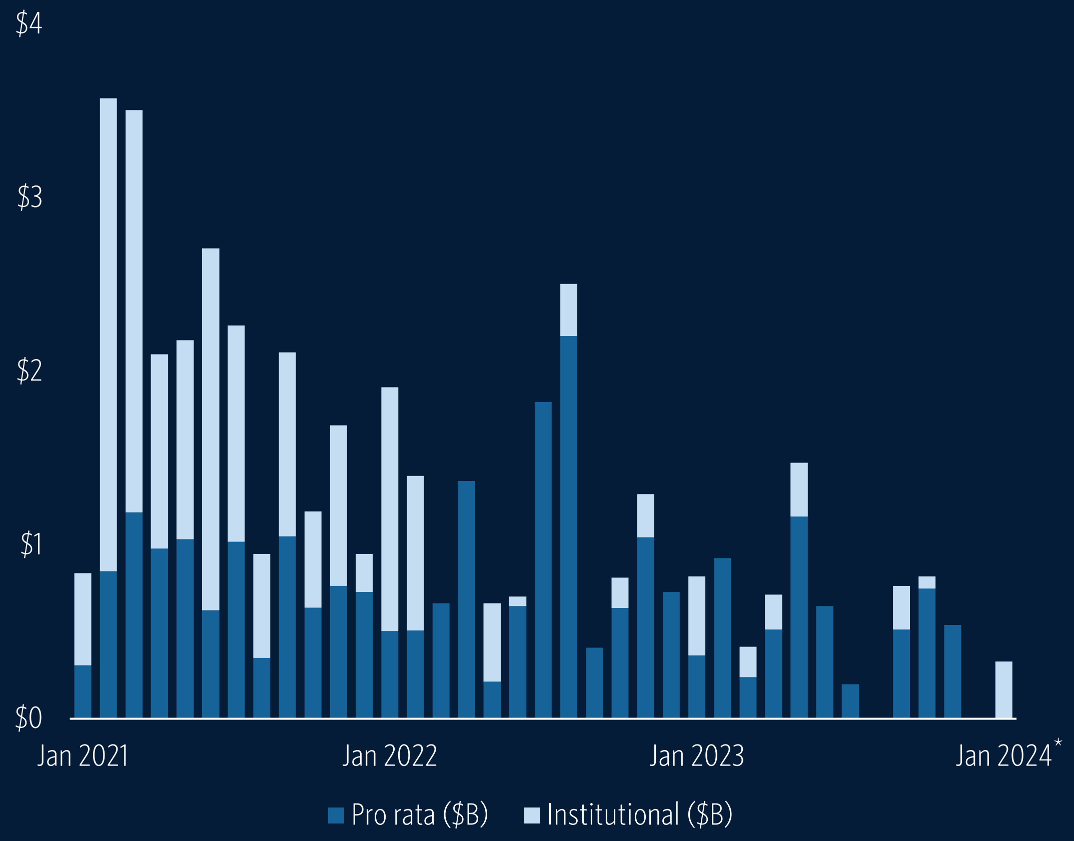
Source: PitchBook | LCD · Geography: US · *As of January 31, 2024
Note: BB has some periods where yield data counts are too low for inclusion.

High-yield bond issuance ticked up in 2023 after minimal issuance in 2022. Middle-market issuance remained muted, but there is anticipation of deal resurgence in 2024.

High-yield bond volumes and yields



Middle-market loan volume



Source: PitchBook | LCD · Geography: US · *As of January 31, 2024

Additional research

Market updates

Q1 2024 Analyst Note: US VC Fundraising From an LP Perspective

Download the report *here*

Q3 2023 PitchBook Private Capital Indexes

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Q2 2023 Global Fund Performance Report (with preliminary Q3 2023 data)

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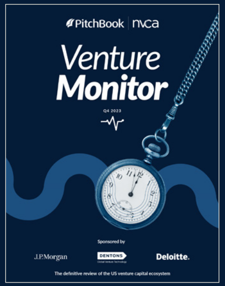
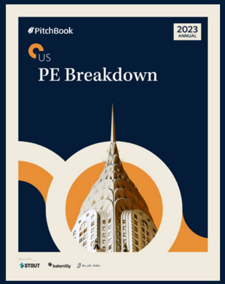


Q4 2023 PitchBook-NVCA Venture Monitor

Download the report here



2023 Annual US PE Breakdown

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Q2 2023 PitchBook Benchmarks (with preliminary Q3 2023 data)

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