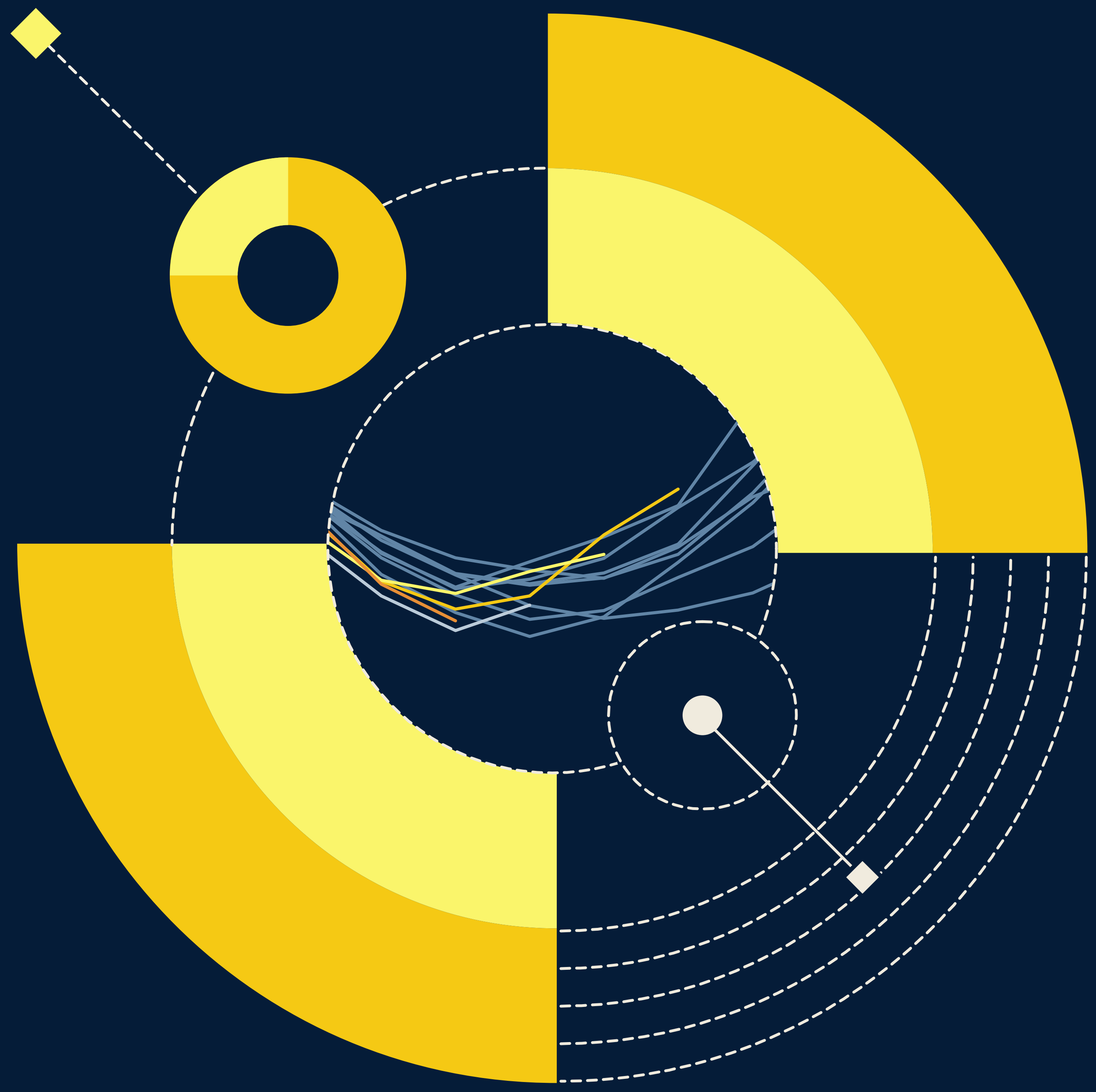
PitchBook

QUANT RESEARCH

A New Regime Begins

A QUANTITATIVE PERSPECTIVE ON VENTURE CAPITAL

Q3 2024



Introduction

Optimism and activity in venture capital saw slight improvements through the midway point of the year. Despite strong public index performances, public listings have yet to see a significant inflection point, resulting in $2.5 trillion of paper valuations tied up in private market unicorns. As the exit drought continues, investors are turning to alternative liquidity solutions, such as secondaries and continuation vehicles. Yet these options are not widespread or substantial enough to effectively address the overall liquidity issue.

Heightened interest rates have been a major roadblock for VC-backed exit opportunities because of the higher cost of capital. Additionally, more liquid, lower-risk investments have become more attractive, as higher interest rates typically lead to higher yields on these investments. With inflation showing signs of slowing and moving toward the Federal Reserve's (the Fed's) inflation target of 2.0%, the long-anticipated 50-basis-point cut in September is seen by surveyed VC investors as one of the most important factors to cracking open the IPO market and providing some long-awaited liquidity.

However, shifts will not happen overnight. The tight capital supply is being carefully allocated, with investors conducting thorough due diligence to invest in high-quality companies. Similarly, limited partners (LPs) are adopting a more disciplined and prudent approach to capital allocations, paying closer attention to GP portfolio constructions and distributions-to-paid-in (DPI) ratios.

Despite the challenging investment environment, historical data shows that some of the highest returns were achieved in vintages following difficult macroeconomic conditions. Vintage year diversification can help mitigate downside risk by offsetting overexposure from poor vintages, offering a potential long-term buffer against current market challenges.

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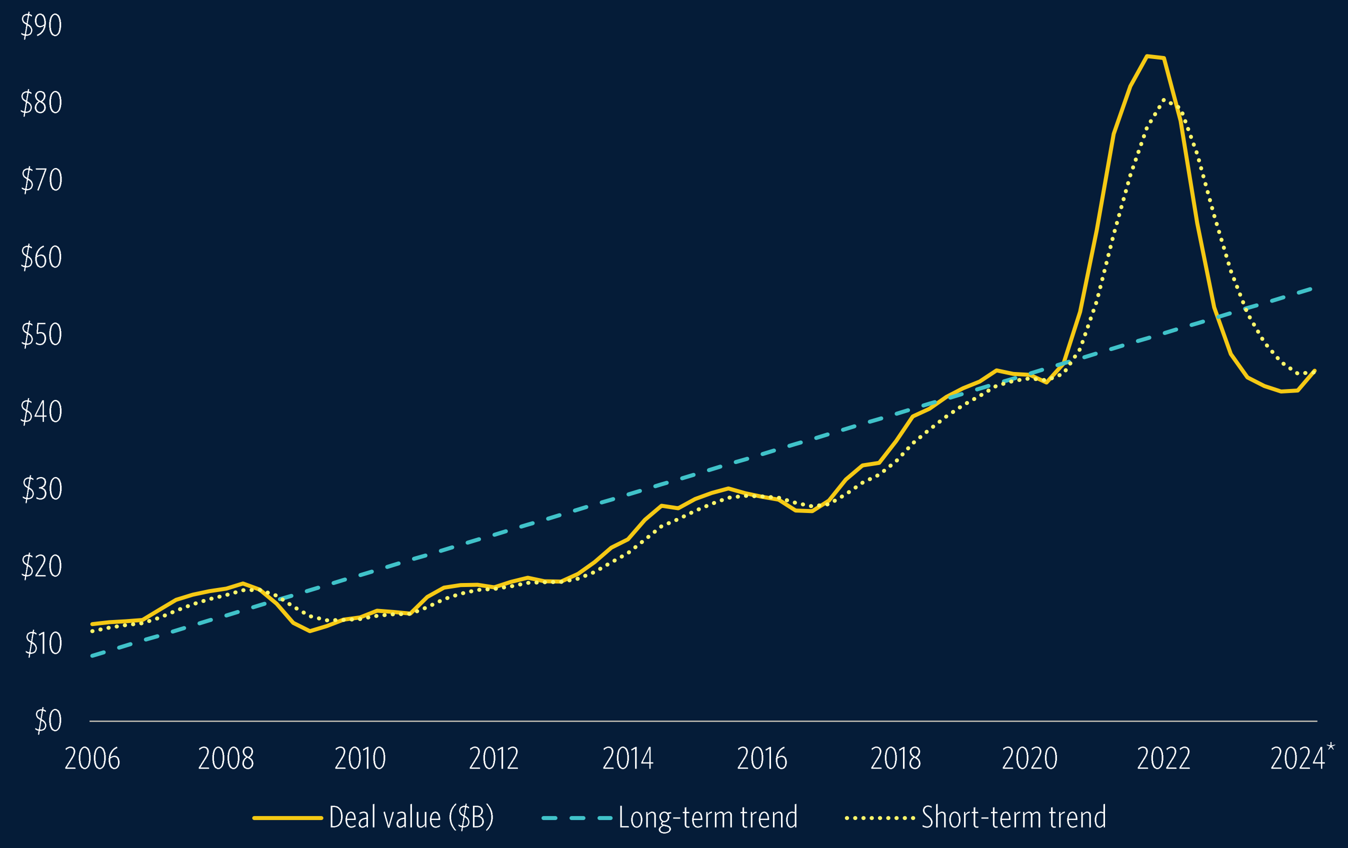
Key takeaways

- VC deals and exits have seen an inflection in their short-term trends, yet they are still well behind their long-term trends primarily due to macroeconomic-related concerns. The effects can be observed in valuations, fundraising, and returns, leading to woes for both GPs and LPs.
- Following a decline in inflation and a rise in unemployment, the Fed cut rates by 50 basis points in September from their 23-year high. VC investors view a decline in interest rates as the most significant factor in driving an increase in IPO activity.
- While waiting for lower rates, the exit environment has remained constrained, with ongoing difficulties in public listings pushing more VC-backed companies to pursue additional growth rounds. Although alternative liquidity options, such as continuation vehicles and secondary transactions, have been explored, they have yet to deliver substantial relief for LPs.
- The exit drought has locked over $2.5 trillion in value in unicorns, which have been discouraged from exiting due to a less accommodating public investor crowd. Private market valuations have slightly recovered since their post-2021 drop, largely driven by investor interest in AI.
- The slowdown in exits has reduced distributions, delaying LPs from reinvesting into new funds. This has led to more disciplined capital deployment and longer gaps between VC funds raising fresh dry powder. As a result, we expect aggregate VC AUM to grow at a slower pace over the next few years.
- As LPs consider committing new capital to VC, they should be mindful of portfolio construction. Historically, emerging managers have offered higher upside, albeit lower downside, and vintage-year diversification can protect against further downside exposure.

End of an era

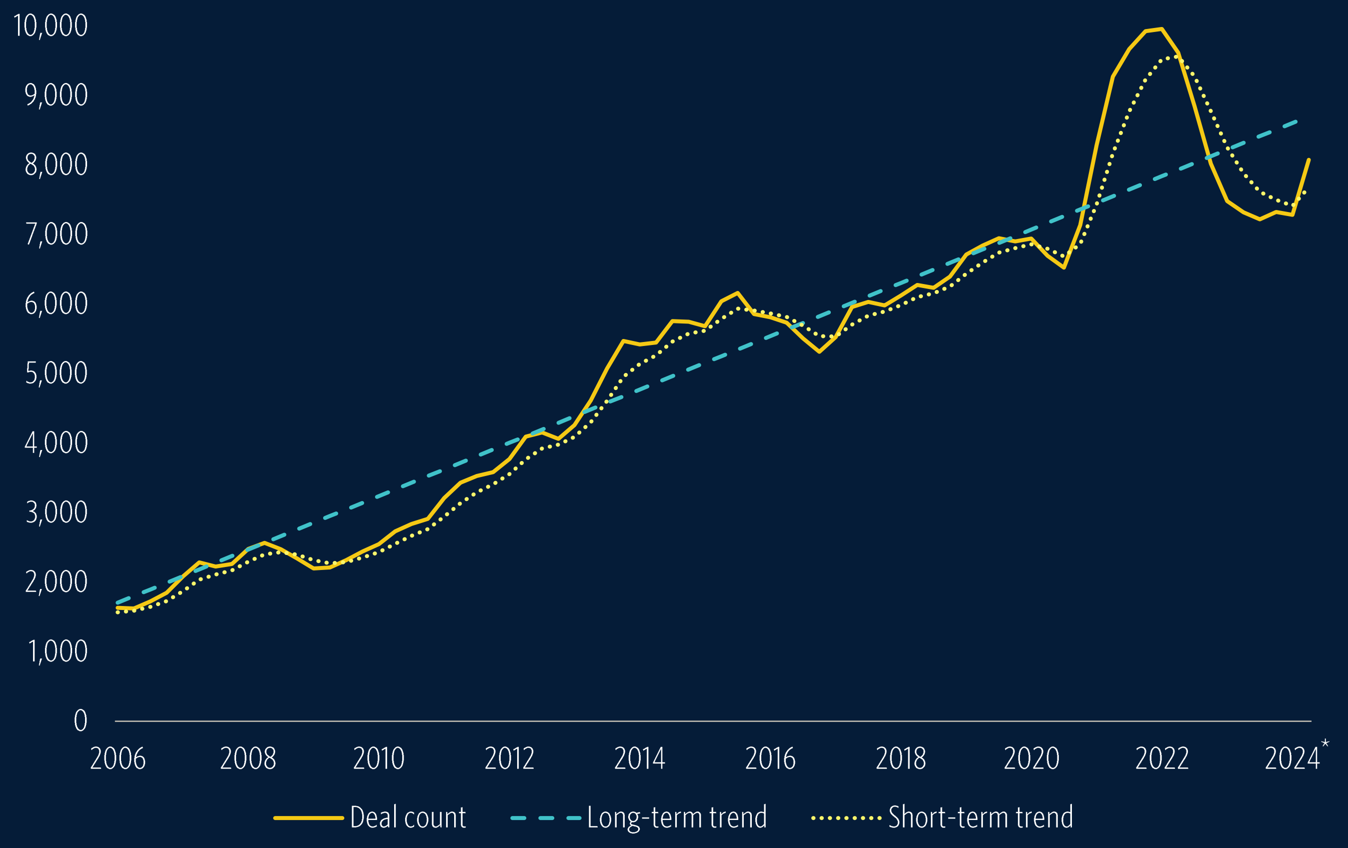
Although VC deal activity saw an inflection point at the end of 2023, the current dealmaking environment remains well below long-term trends.

Figure 1 ▸ VC deal value short- and long-term trends



Source: PitchBook • Geography: US • *As of July 31, 2024

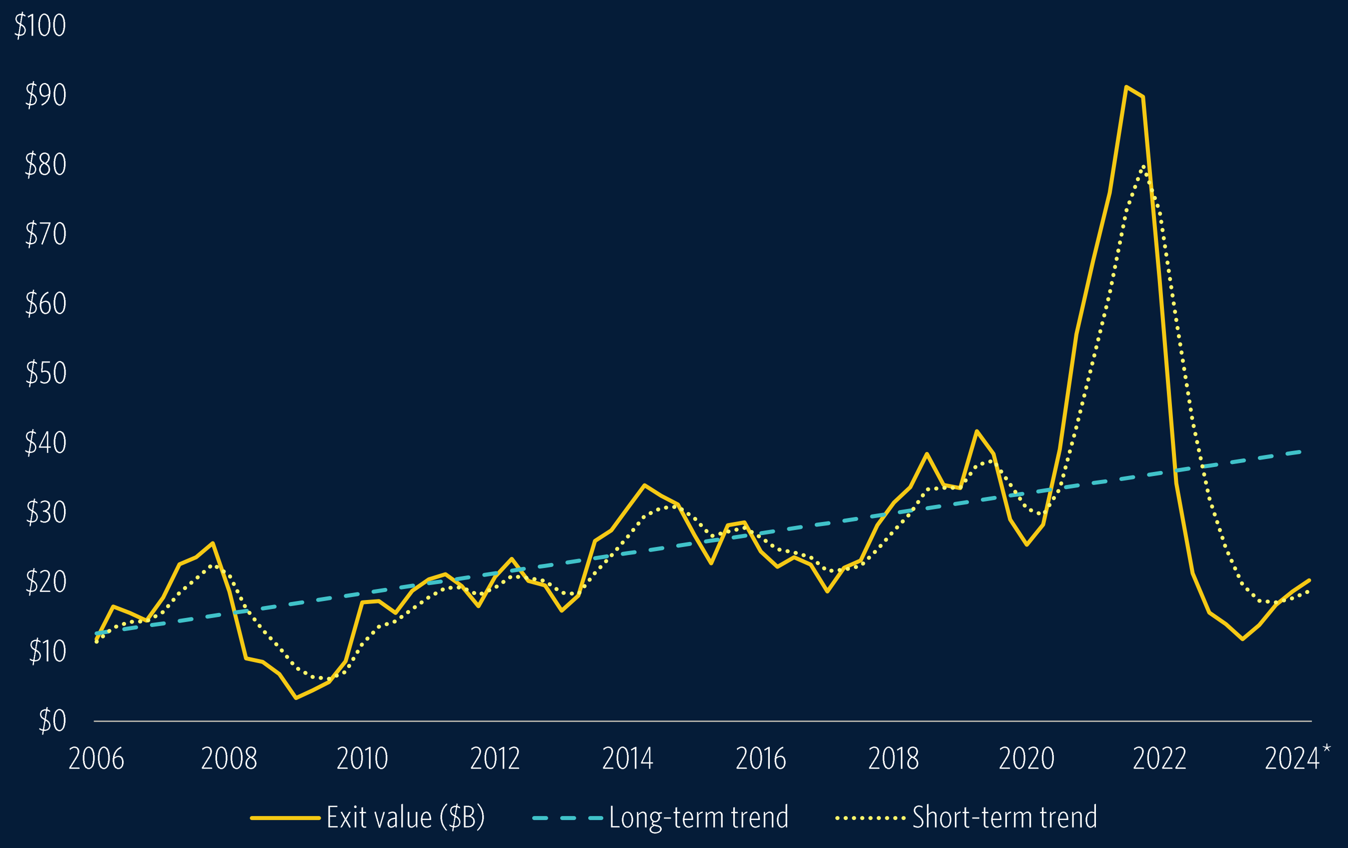
Figure 2 ▸ VC deal count short- and long-term trends



Source: PitchBook • Geography: US • *As of July 31, 2024

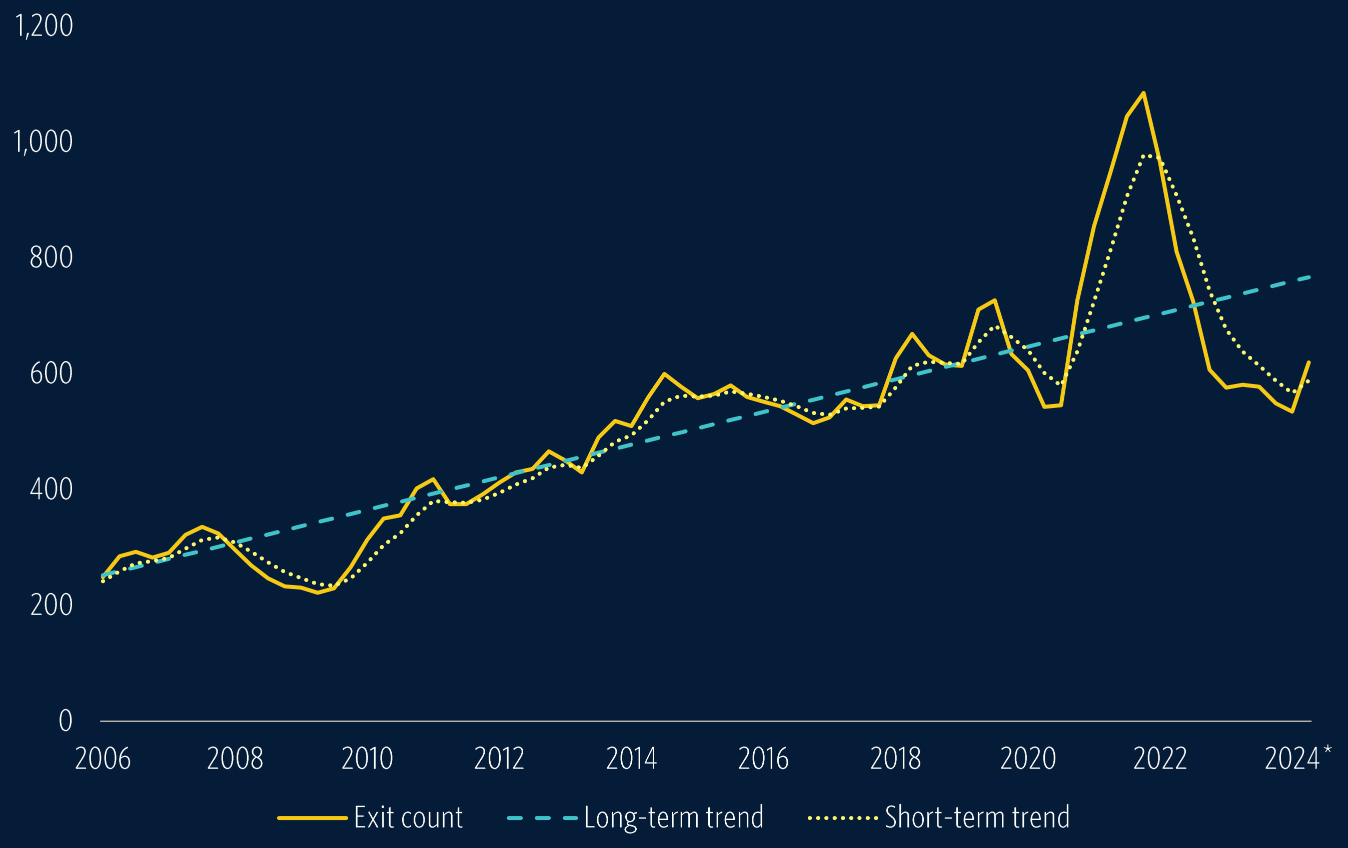
Similarly, VC-backed exits continue to be lackluster. The recent peak of exit activity in 2021 and trough of 2023 are showcasing greater divergence from the long-term trend.

Figure 3 ▸ **VC exit value short- and long-term trends**



Source: PitchBook • Geography: US • *As of July 31, 2024

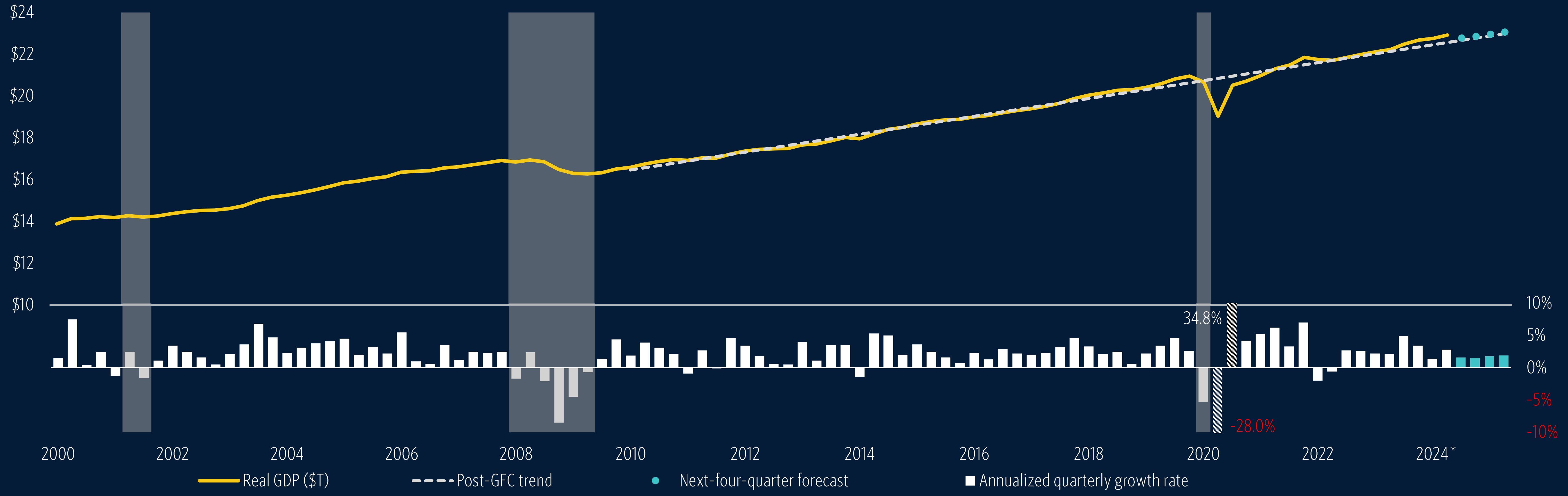
Figure 4 ▸ **VC exit count short- and long-term trends**



Source: PitchBook • Geography: US • *As of July 31, 2024

Deal and exit activity have fallen despite the US economy continuing to grow steadily. Expectations of a recession are still low in the near to medium term…

Figure 5 ▸ **Real GDP growth compared with post-global-financial-crisis (GFC) trend**



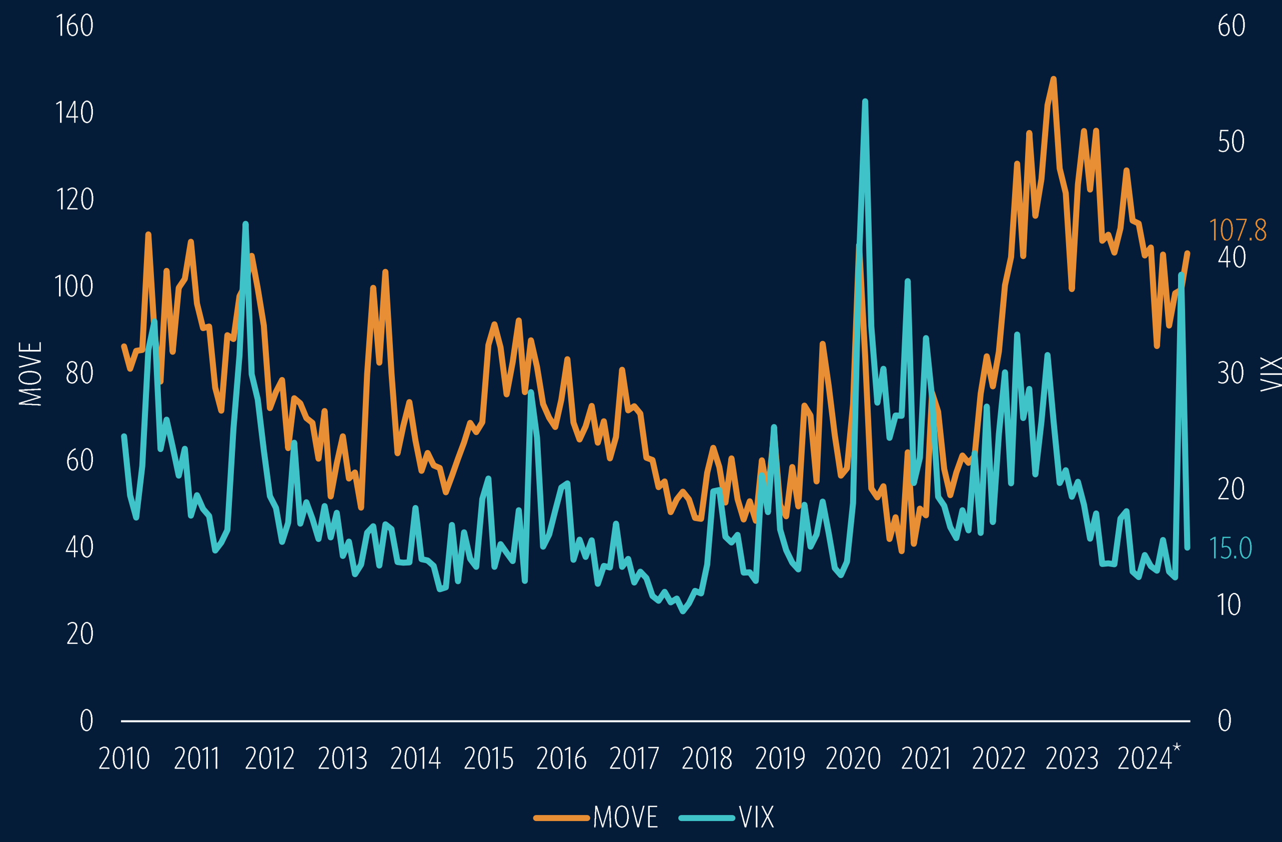
Sources: Bureau of Economic Analysis, The Wall Street Journal Economic Forecasting Survey • Geography: US • *As of June 30, 2024

...and despite an early-August jump in equity volatility and bond spreads, equity and debt markets have been largely risk-on.

Figure 6 ▸ **US High Yield Bond Index Option-Adjusted Spread (OAS)***

Source: ICE Data Indices • Geography: US • *As of August 31, 2024

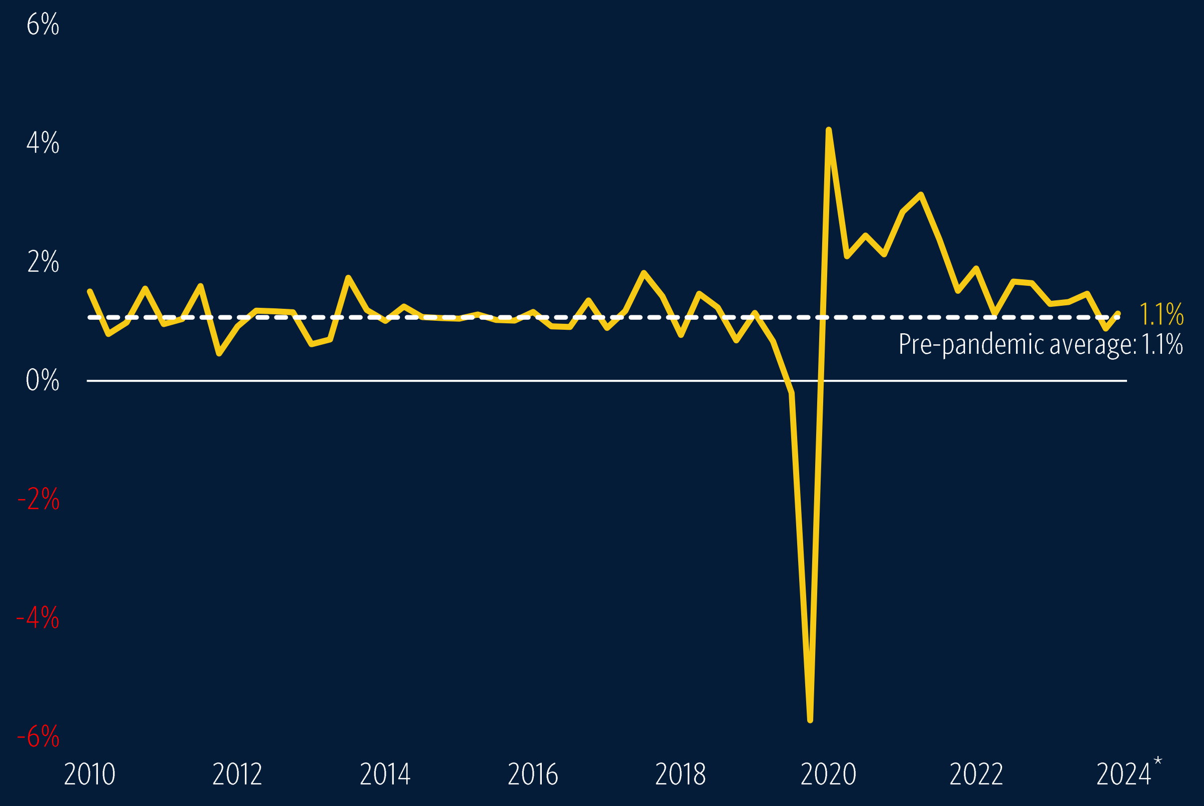
Figure 7 ▸ **MOVE and VIX Indexes**



Sources: ICE Data Indices, Cboe • Geography: US • *As of August 31, 2024

However, recent data hints at a softening of the labor market as job creation fell below the pre-pandemic average and the unemployment rate ticked up to 4.2%, the highest it has been in three years.

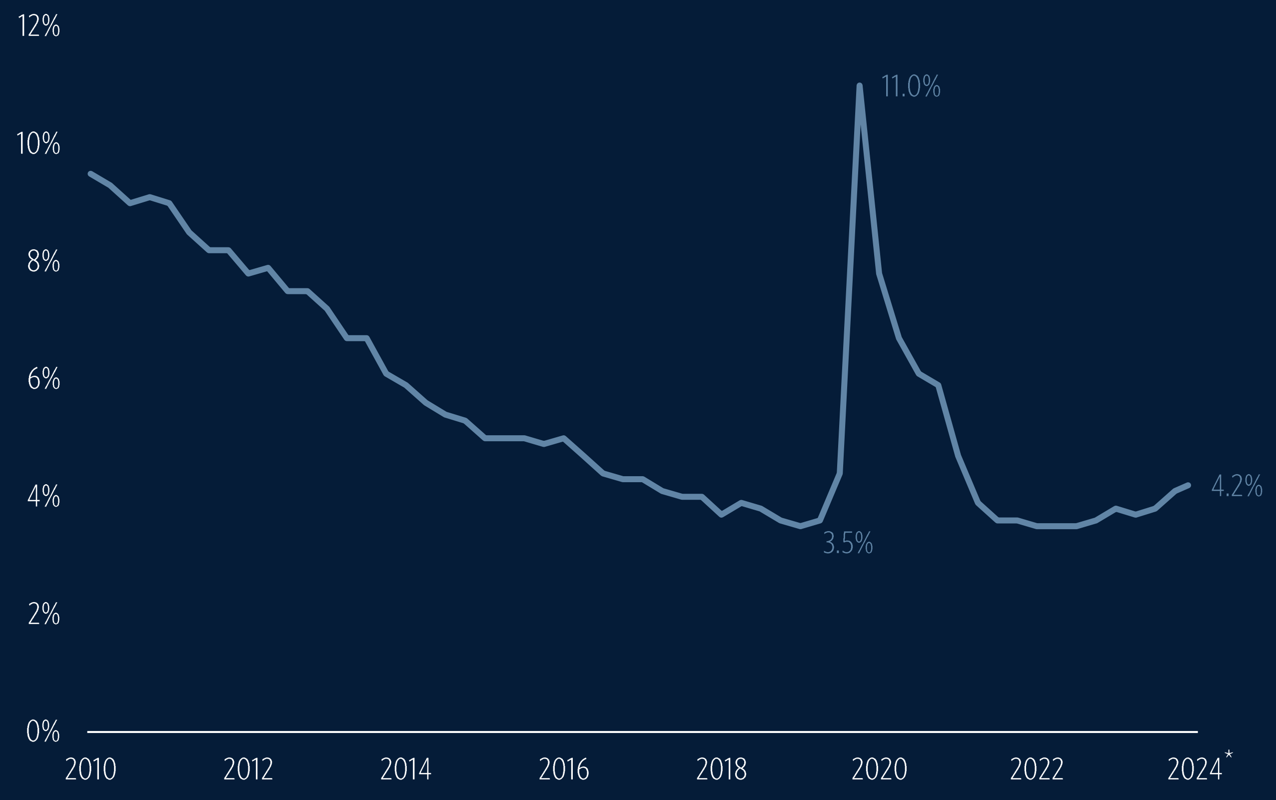
Figure 8 ▸ **Quarter-over-quarter payroll change**



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

Note: The August value is the three-month change in the Indexes of Aggregate Weekly Payrolls as of August 31, 2024.

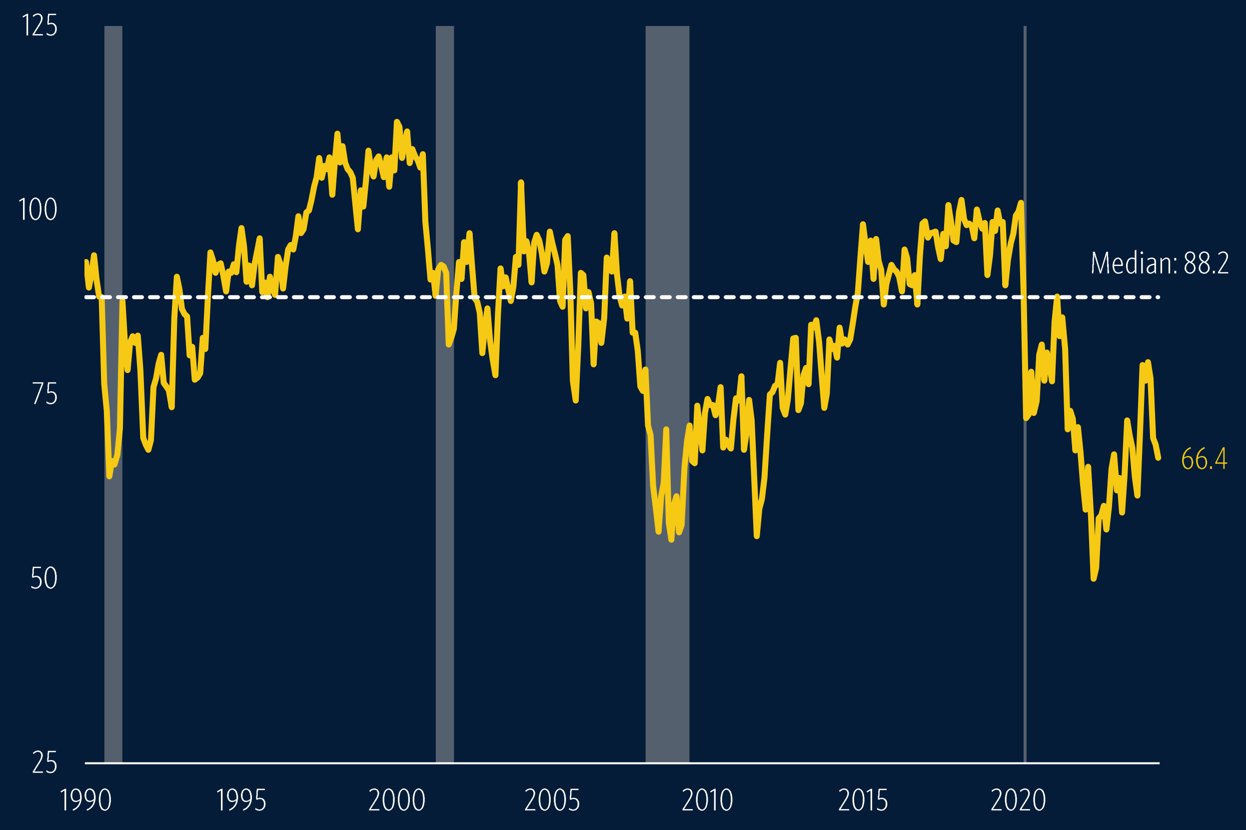
Figure 9 ▸ **Unemployment rate**



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

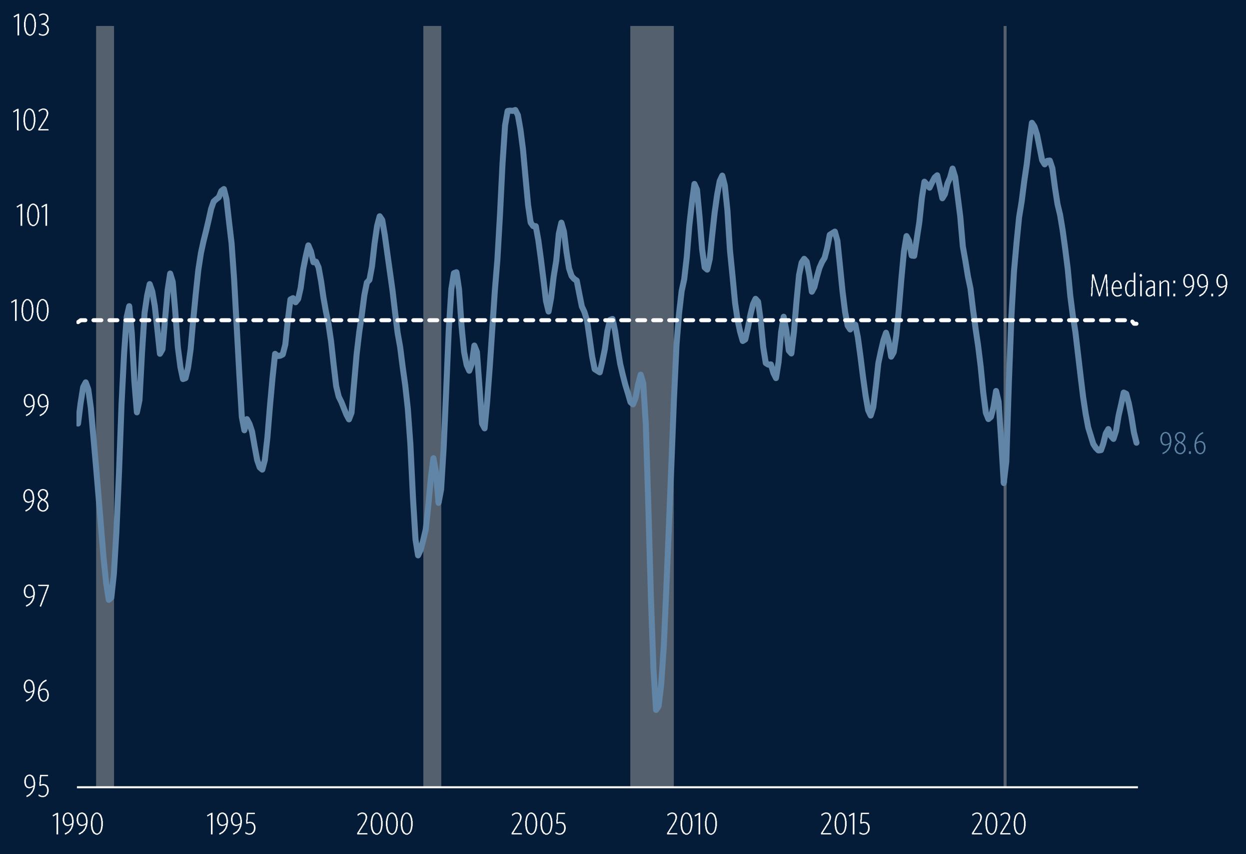
Consumers and businesses maintain a cautious outlook for a hard landing. Elevated price levels remain a priority for consumers, but the Fed's inflation fighting has worked so far…

Figure 10 ▸ **University of Michigan Consumer Sentiment Index***



Source: University of Michigan • Geography: US • *As of July 31, 2024

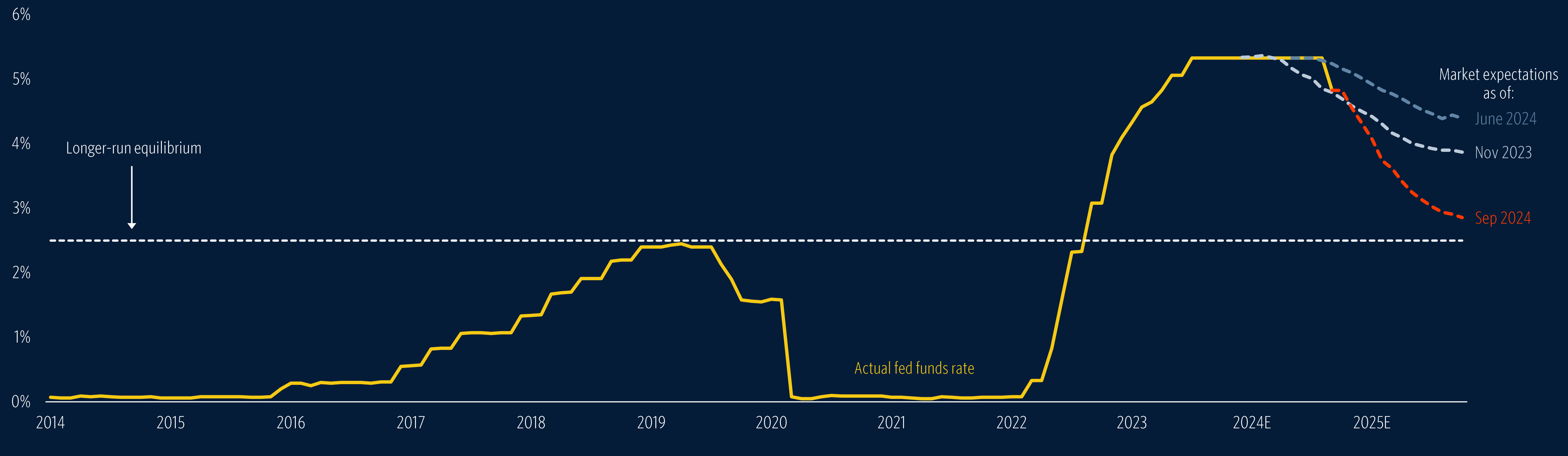
Figure 11 ▸ **US Business Confidence Index***



Source: OECD • Geography: US • *As of July 31, 2024

…which has turned the "higher for longer" narrative into a focus on the Fed pivot. With a 50-basis-point cut in September, the central bank ended its tight policy-rate regime that began in early 2022. Many are hopeful of a recovery in VC returns.

Figure 12 ▸ **Federal funds rate with forward market expectations***

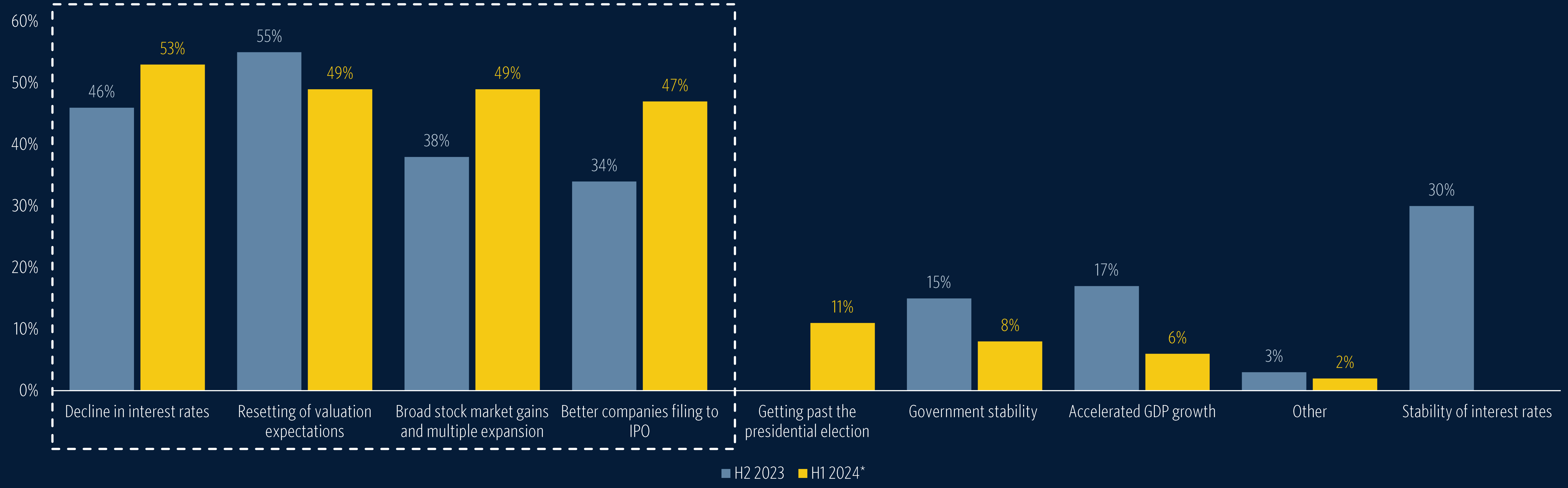


Sources: Federal Reserve, CME Group • Geography: US • *As of September 18, 2024

Rates reign

A decline in rates is welcome news for VC investors. 53% of the firms surveyed in our H1 2024 VC Tech Survey view rate cuts as a leading driver for a potential reignition of the VC exit environment.

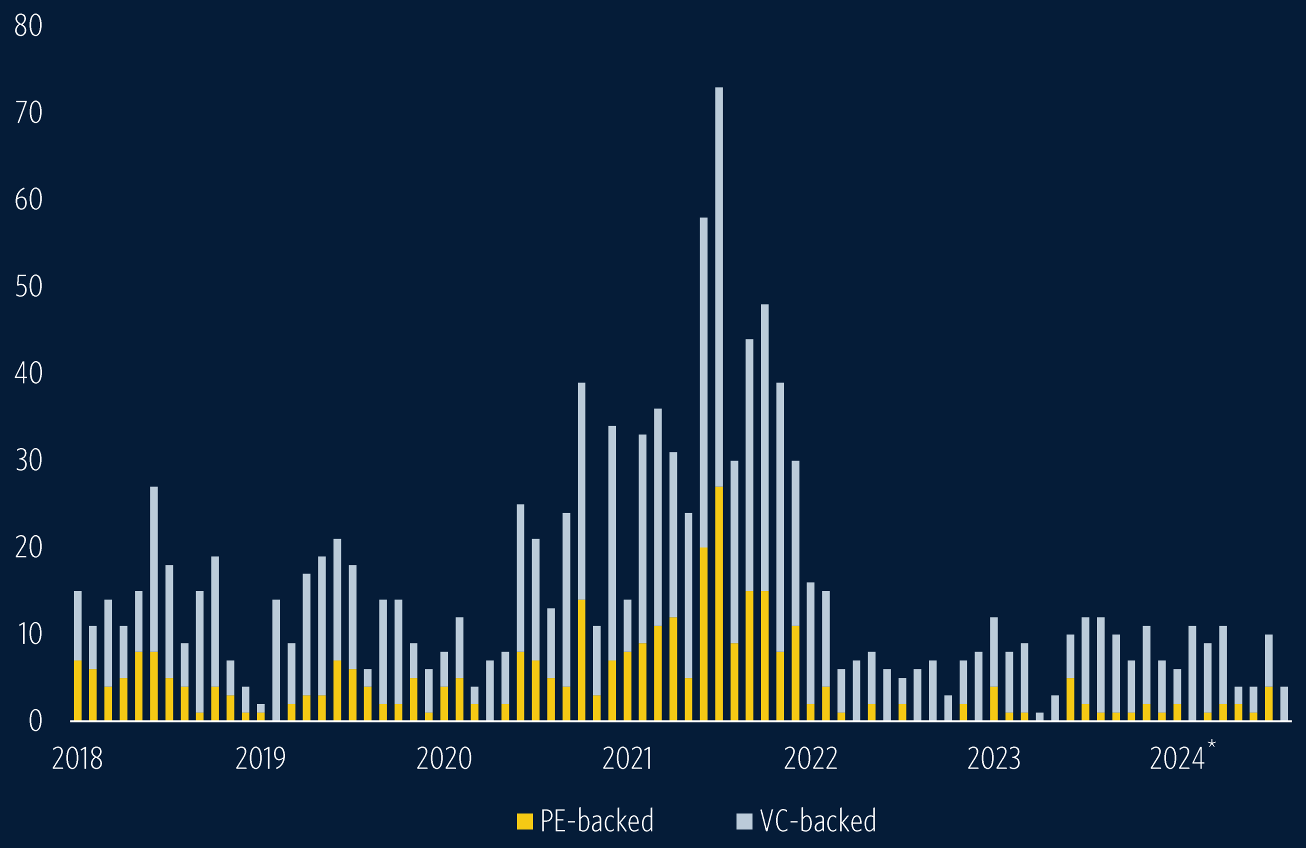
Figure 13 ▶ **Factors viewed as most important to driving an increase in IPO activity**



Source: PitchBook • Geography: Global • *As of May 13, 2024

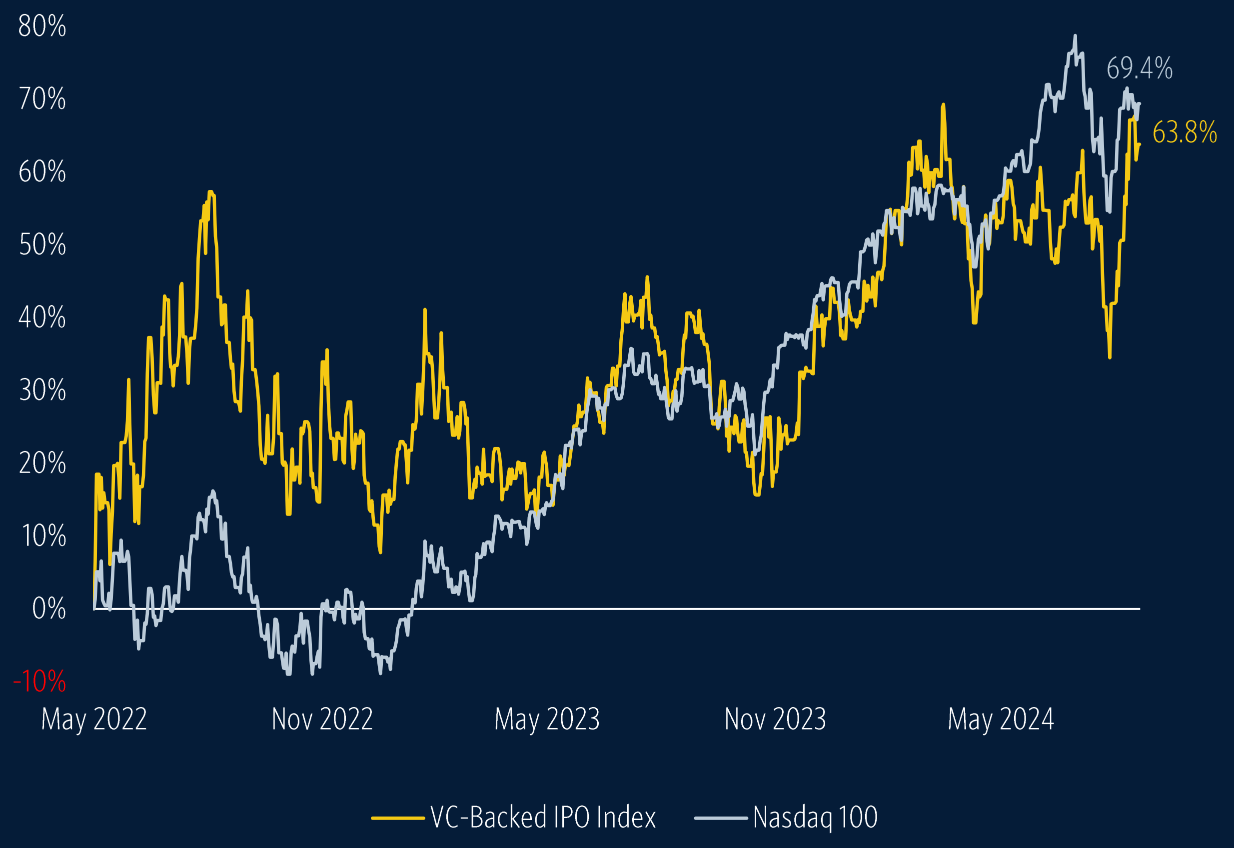
Despite the bounceback in public index performances, public listings have yet to experience a significant inflection point since our VC-Backed IPO Index's nadir in 2022. With now-falling rates, fortunes may turn.

Figure 14 **Monthly PE- and VC-backed public listing count**



Source: PitchBook • Geography: US • *As of August 31, 2024

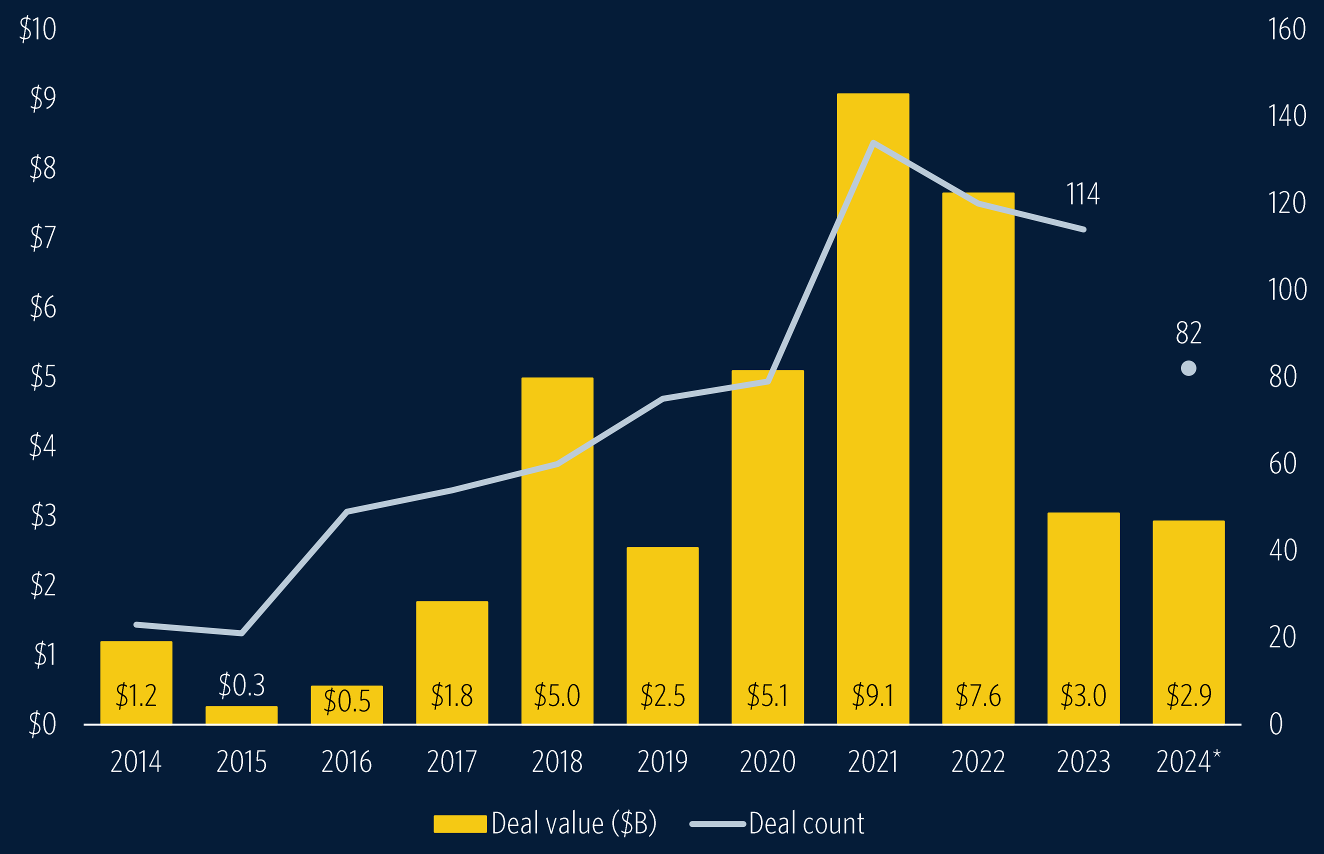
Figure 15 **PitchBook VC-Backed IPO Index return since trough in 2022***



Source: PitchBook • Geography: US • *As of August 31, 2024

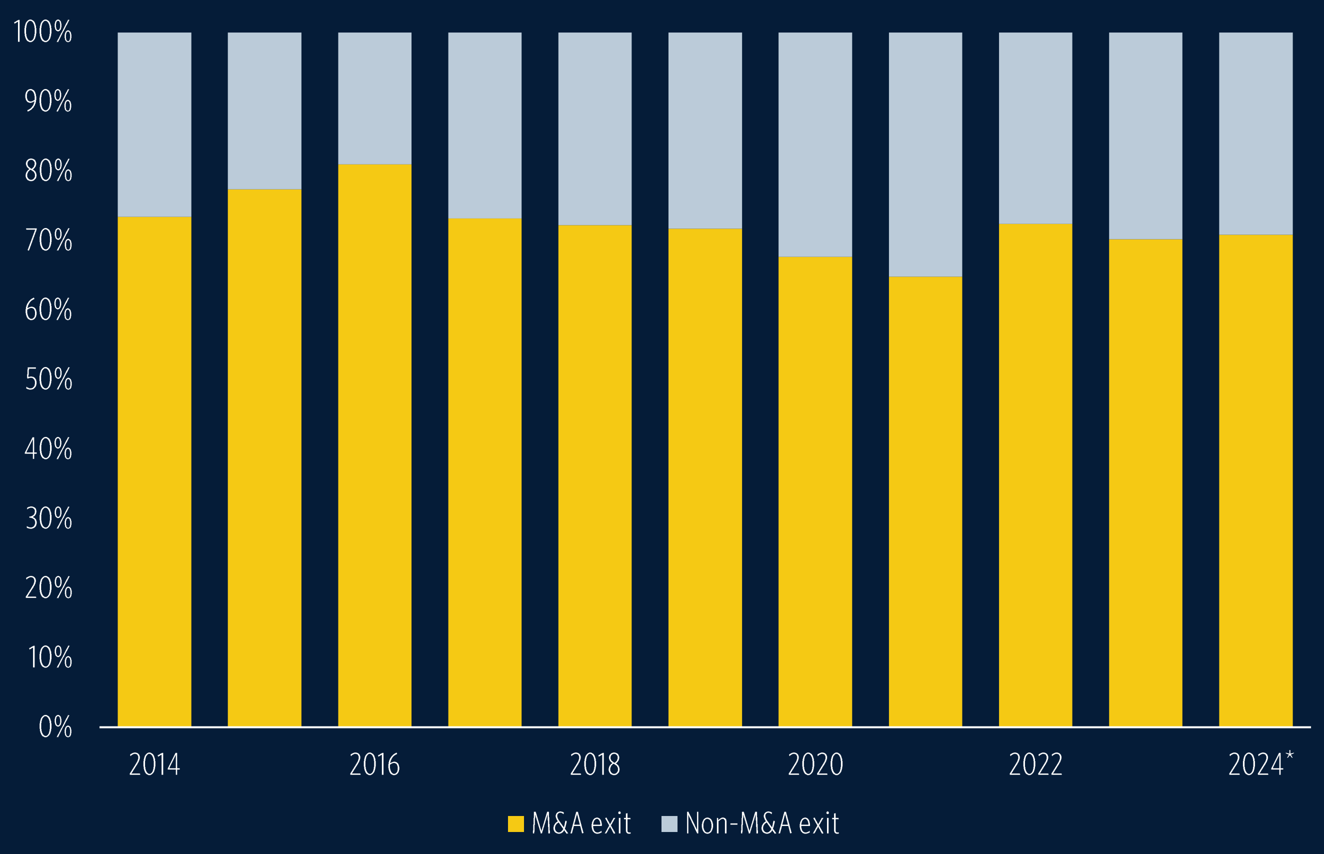
We have also seen 82 PE growth deals involving VC-backed companies through August, already surpassing the 79 seen in all of 2020 as firms seek new funding sources. With IPO markets shut, M&A continues to dominate the share of exits.

Figure 16 ▸ PE growth activity in VC-backed companies



Source: PitchBook • Geography: US • *As of August 31, 2024

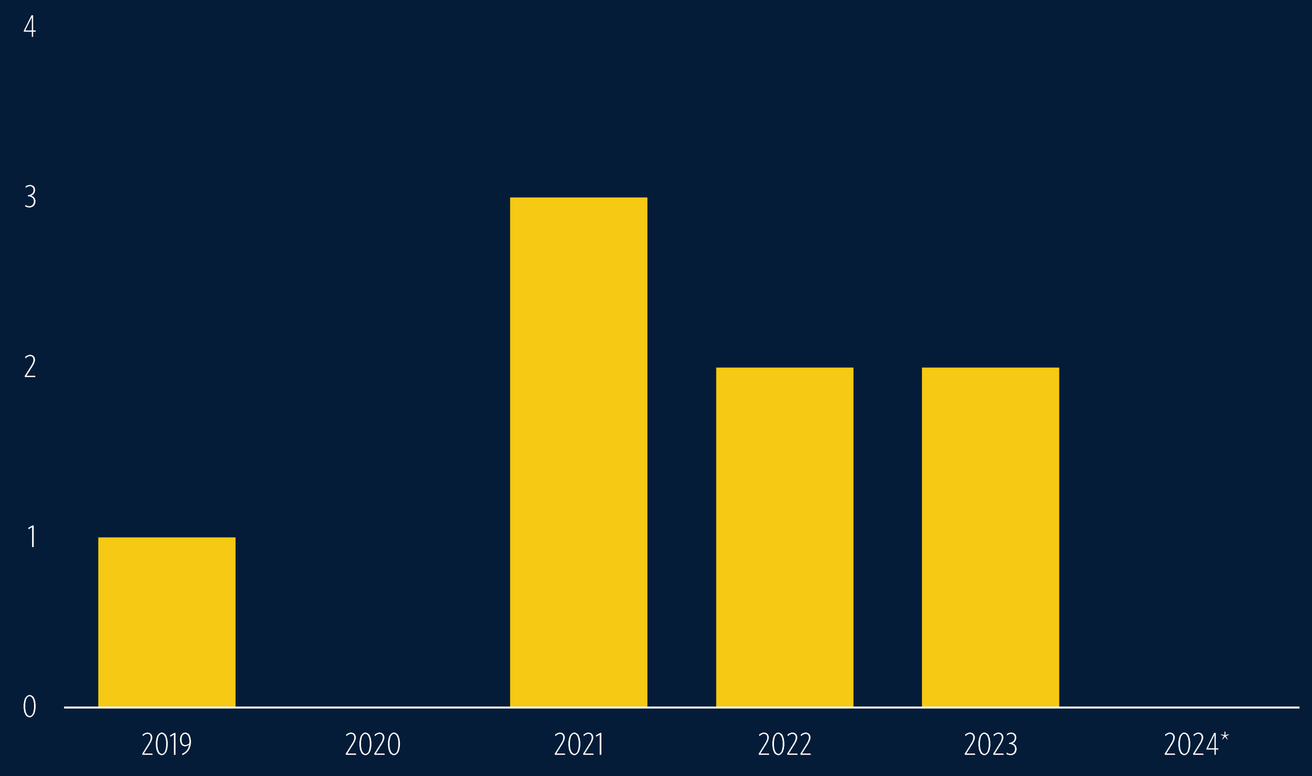
Figure 17 ▸ Share of VC exit count by type



Source: PitchBook • Geography: US • *As of August 31, 2024

Continuation vehicles have become a liquidity solution for some VC funds. However, based on the fund size and maturity of high-conviction portfolio companies, we estimate less than 5% of funds fit the parameters for a continuation fund process.

Figure 18 **VC continuation fund transaction count by close year**



Source: PitchBook • Geography: US • *As of July 1, 2024

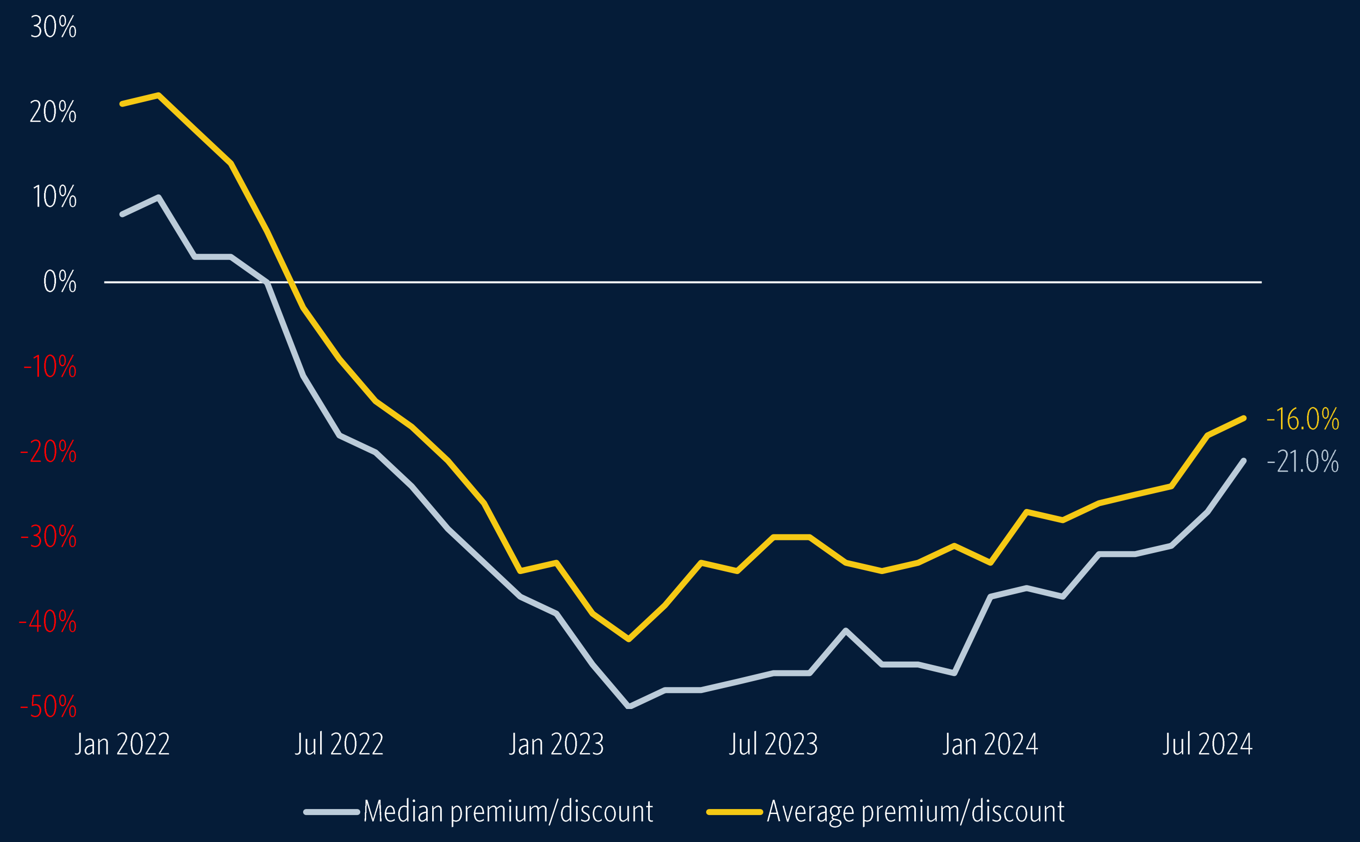
Figure 19 **Select VC continuation funds***

Fund	Investor	Original fund's vintage year	Fund value ($M)
DFJ Fund IX Continuation	Draper Fisher Jurvetson Management	2007	$527.1
Altos Ventures IV (Recapitalized)	Altos Ventures	2008	$457.5
Core Capital Partners II CF	Core Capital Partners	2015	$250.0
Upfront Continuation Fund I	Upfront Ventures	N/A	$176.5
RockPort Capital Partners III Continuation Fund	RockPort Capital Partners	2008	$19.2

Source: PitchBook • Geography: US • *As of July 1, 2024

Secondary pricing discounts have recovered from recent lows seen in March 2023. Several secondaries funds have been raised to take advantage of the slow exit environment and cheaply purchase attractive stakes from LPs and GPs.

Figure 20 ▸ Median and average secondary premium/discount to last VC round*



Source: Zanbato • Geography: Global • *As of August 31, 2024

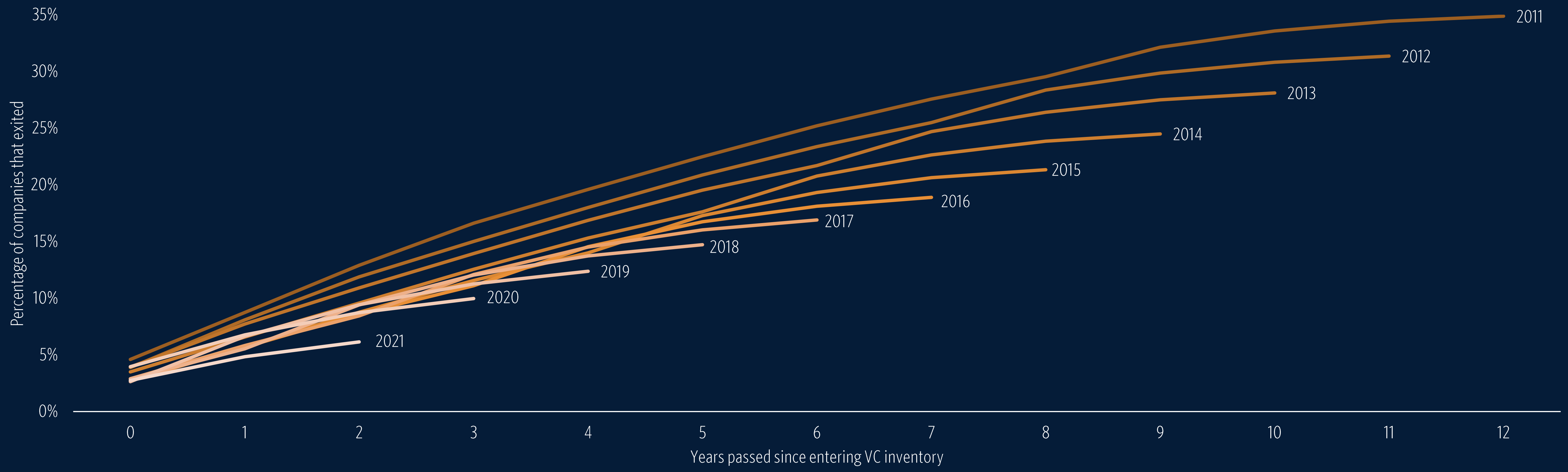
Figure 21 ▸ Select VC secondary funds*

Investor	Fund	Vintage year	Fund value ($M)
Upfront Ventures	Upfront Secondary II	2024	N/A
New Enterprise Associates	NEA Secondary Opportunity Fund	2024	$468.2
StepStone Group	StepStone VC Secondaries Fund VI	2024	$3,300.0
TrueBridge Capital Partners	TrueBridge Secondaries I	2024	$230.0
Cendana Capital	Kline Hill Cendana Partners Fund	2024	$105.0

Source: PitchBook • Geography: US • *As of July 1, 2024

As GPs explore these alternative liquidity opportunities, the lackluster exit environment has depressed the proportion of VC-backed companies exiting within a given time frame...

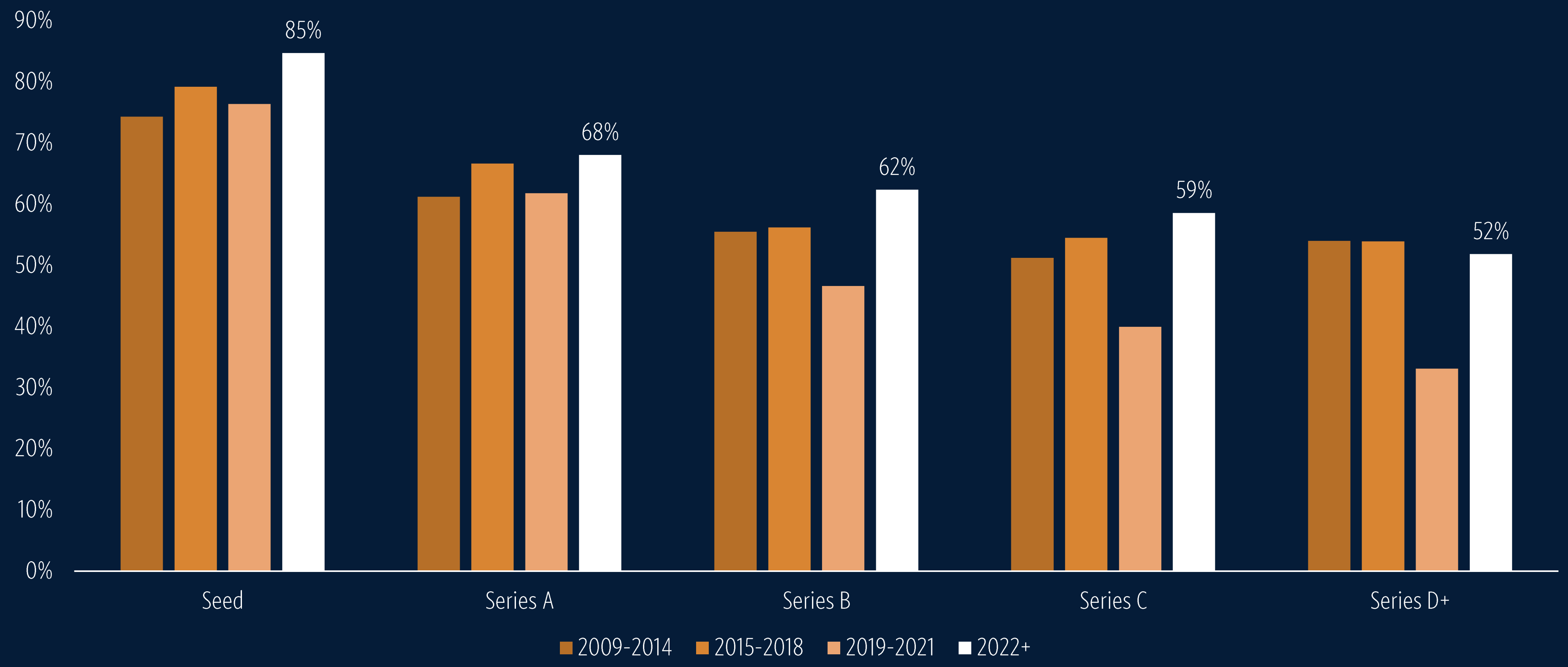
Figure 22 **Share of VC company inventory that exited by years active***



Source: PitchBook • Geography: US • *As of August 31, 2024

…and the lack of exits is impacting loss ratios across stages. 85% of exits from the seed stage are at a loss, while Series D+ losses have jumped back to pre-pandemic norms.

Figure 23 **Proportion of deals with 0x-1x MOIC by exit year cohort***



Source: PitchBook • Geography: US • *As of August 30, 2024

Methodology

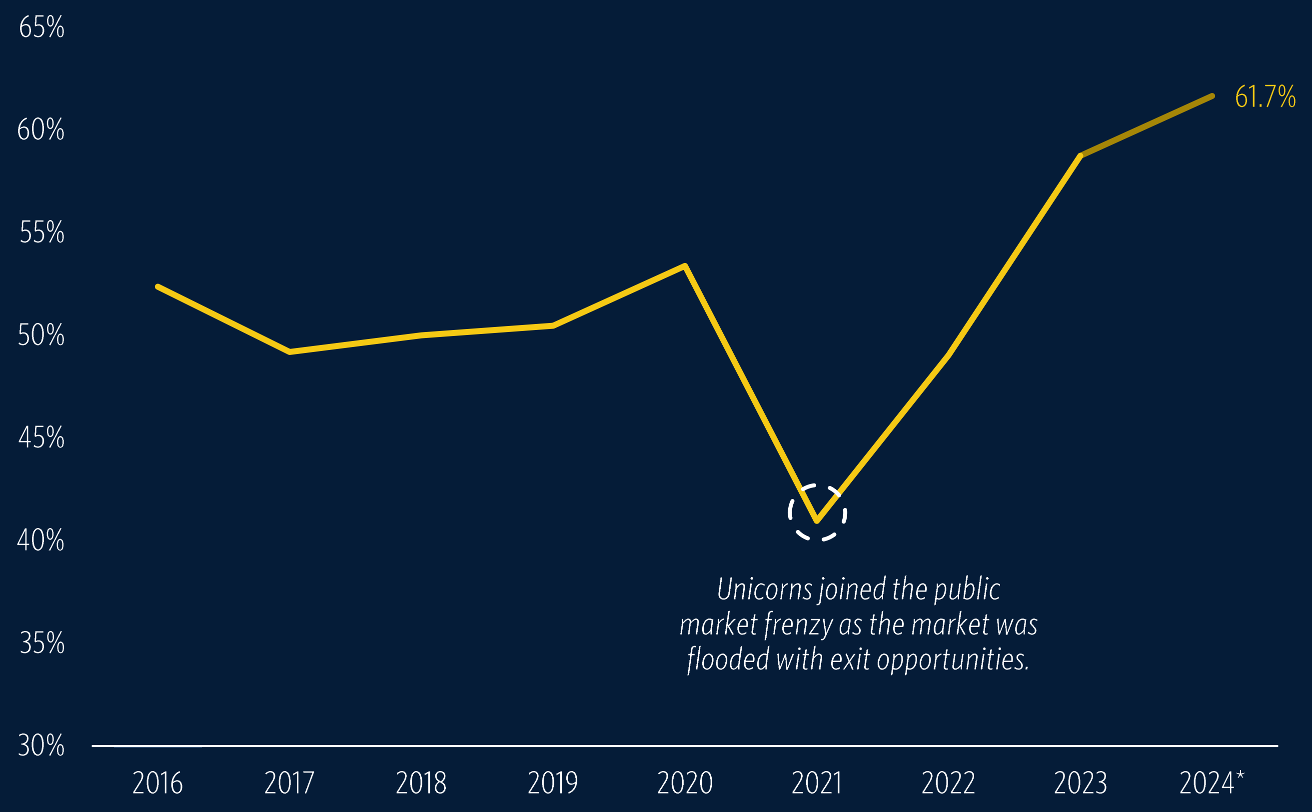
Our "return by series" analysis explores the relationship between the investors' entry point and eventual returns, measured by known exit values, through deal-level data.

Early-stage investments are more likely to go out of business or suspend operations, resulting in a higher proportion of returns under 1x multiple on invested capital (MOIC) compared with later-stage deals.

For more on the return by series methodology and dataset, read our Q3 2024 PitchBook Analyst Note: VC Returns by Series: Part IV.

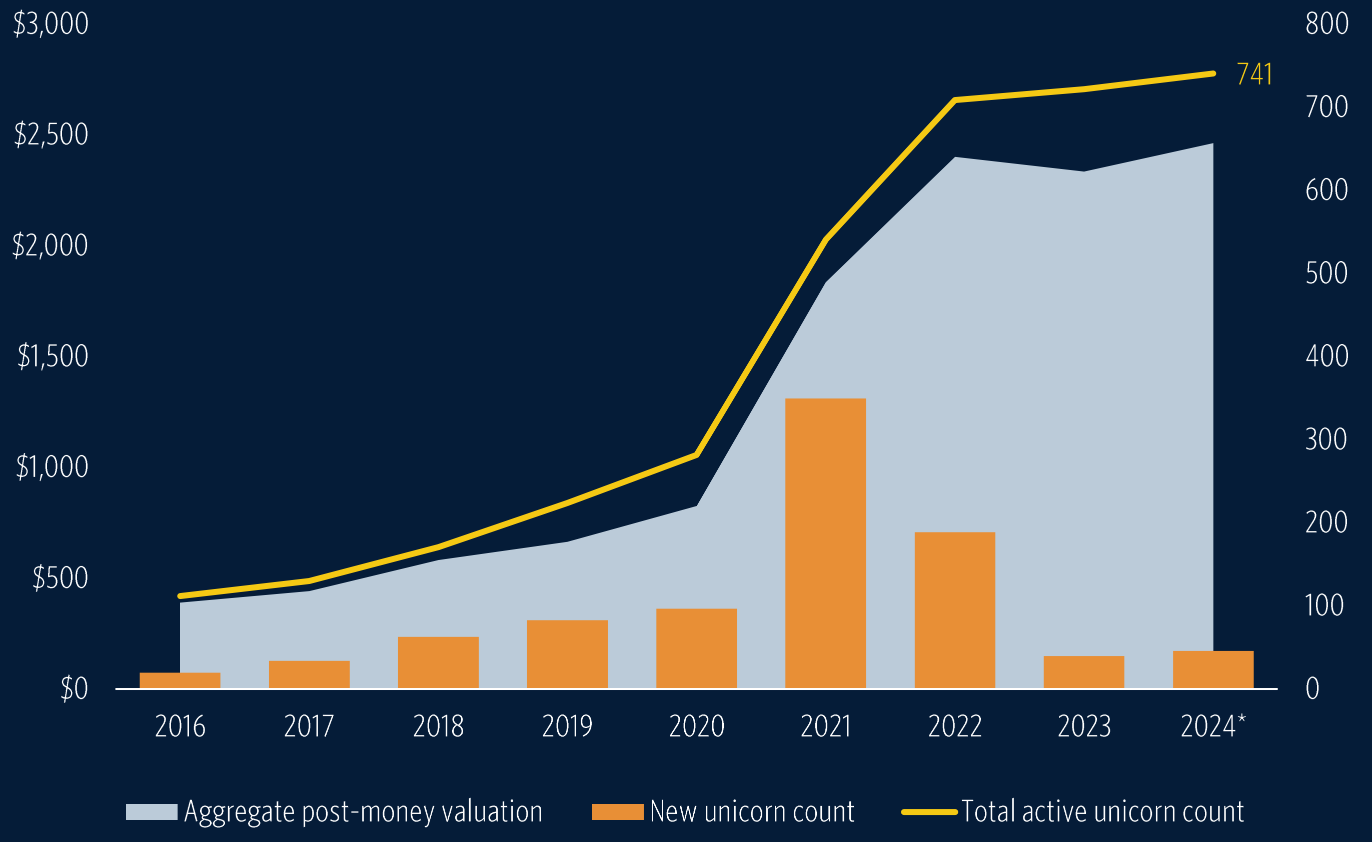
The herd of VC-backed unicorns has aged considerably since 2021. The proportion of active unicorns that are seven years or older has reached an all-time peak, translating to a buildup of $2.5 trillion locked up in unicorn valuations…

Figure 24 ▸ Share of active unicorns that raised their first VC round at least seven years ago



Source: PitchBook • Geography: US • *As of August 31, 2024

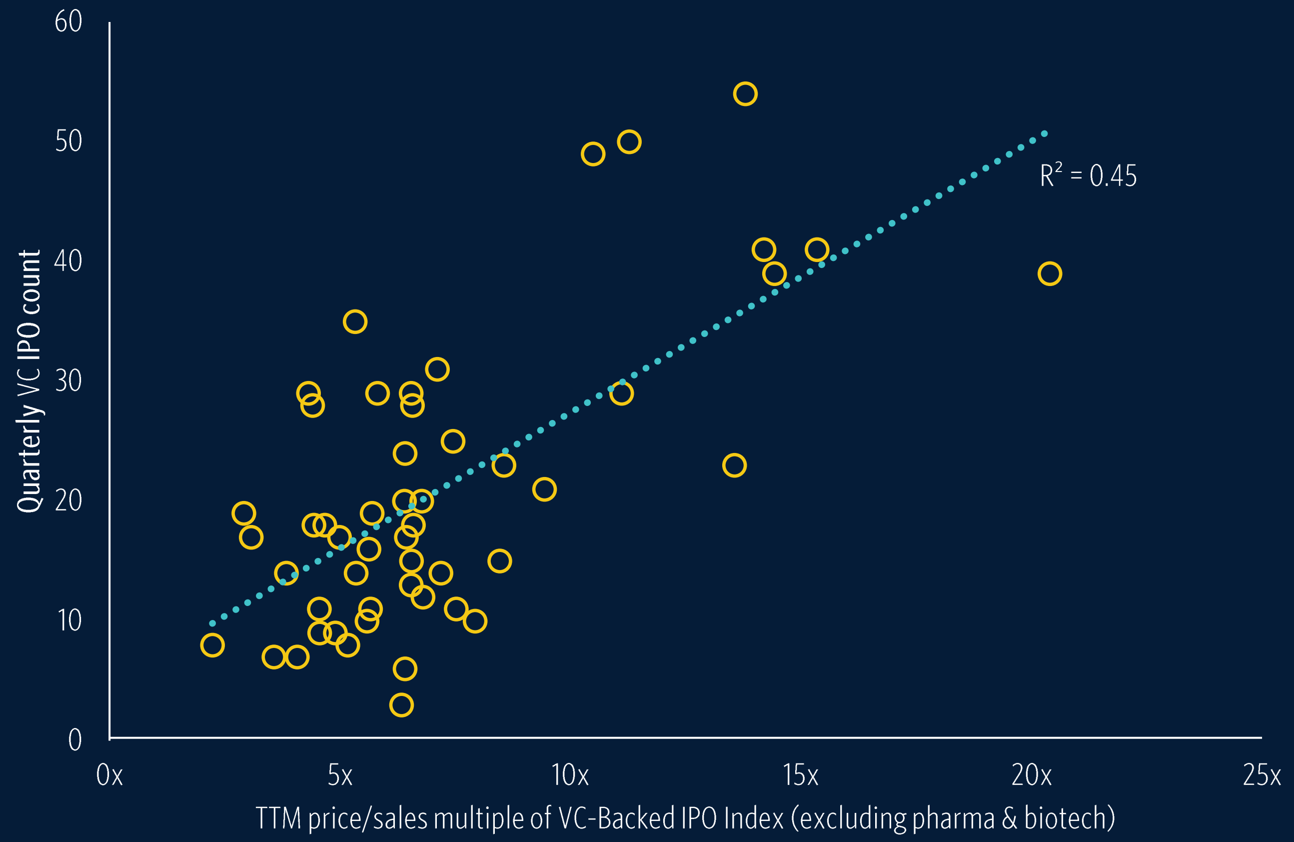
Figure 25 ▸ Unicorn count and aggregate post-money valuation ($B)



Source: PitchBook • Geography: US • *As of August 31, 2024

...as low price/sales multiples discourage startups from exiting via the public markets. The two-year median shows a multiple of 5.1x, a significant drop from the 12.5x median seen in 2020 and 2021. Similarly, private market valuations...

Figure 26 ▸ **Trailing 12-month (TTM) price/sales multiple of VC-Backed IPO Index (exc. pharma & biotech) and quarterly VC IPO count since 2012***



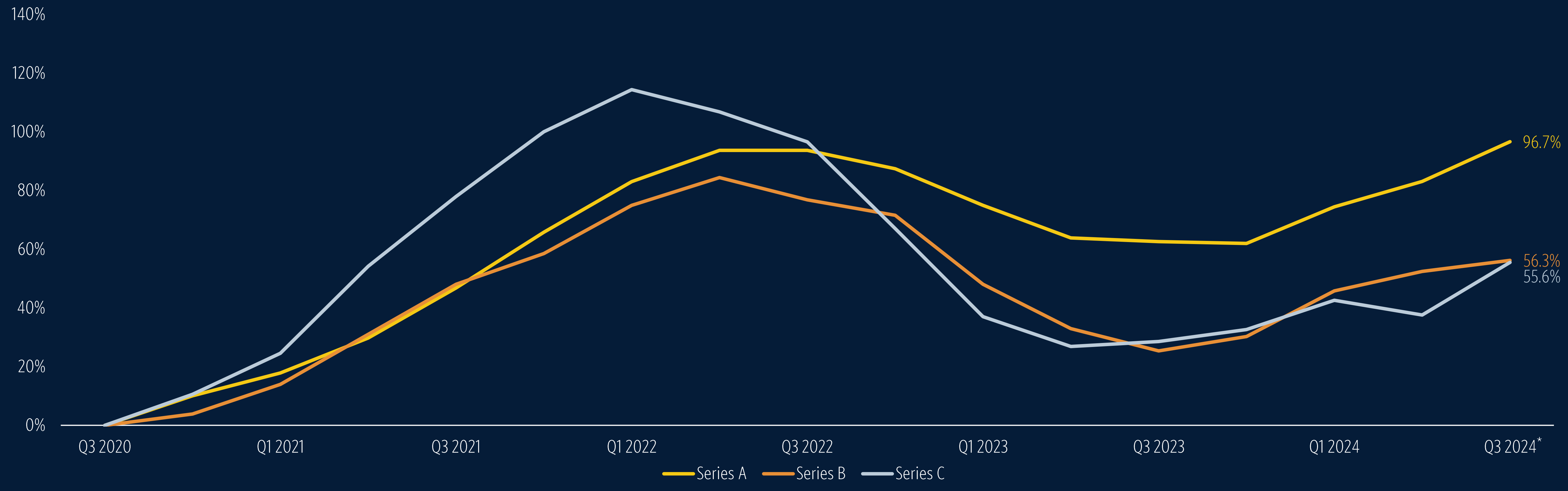
Source: PitchBook • Geography: US • *As of August 23, 2024

Figure 27 ▸ **TTM price/sales multiple of VC-Backed IPO Index (exc. pharma & biotech)**

Source: PitchBook • Geography: US • *As of August 23, 2024

...have slightly recovered since their post-2021 plunge as the gap between expected and actual valuations has narrowed. The uptick seen YTD may be due to investors' preference for quality companies and heightened interest in AI.

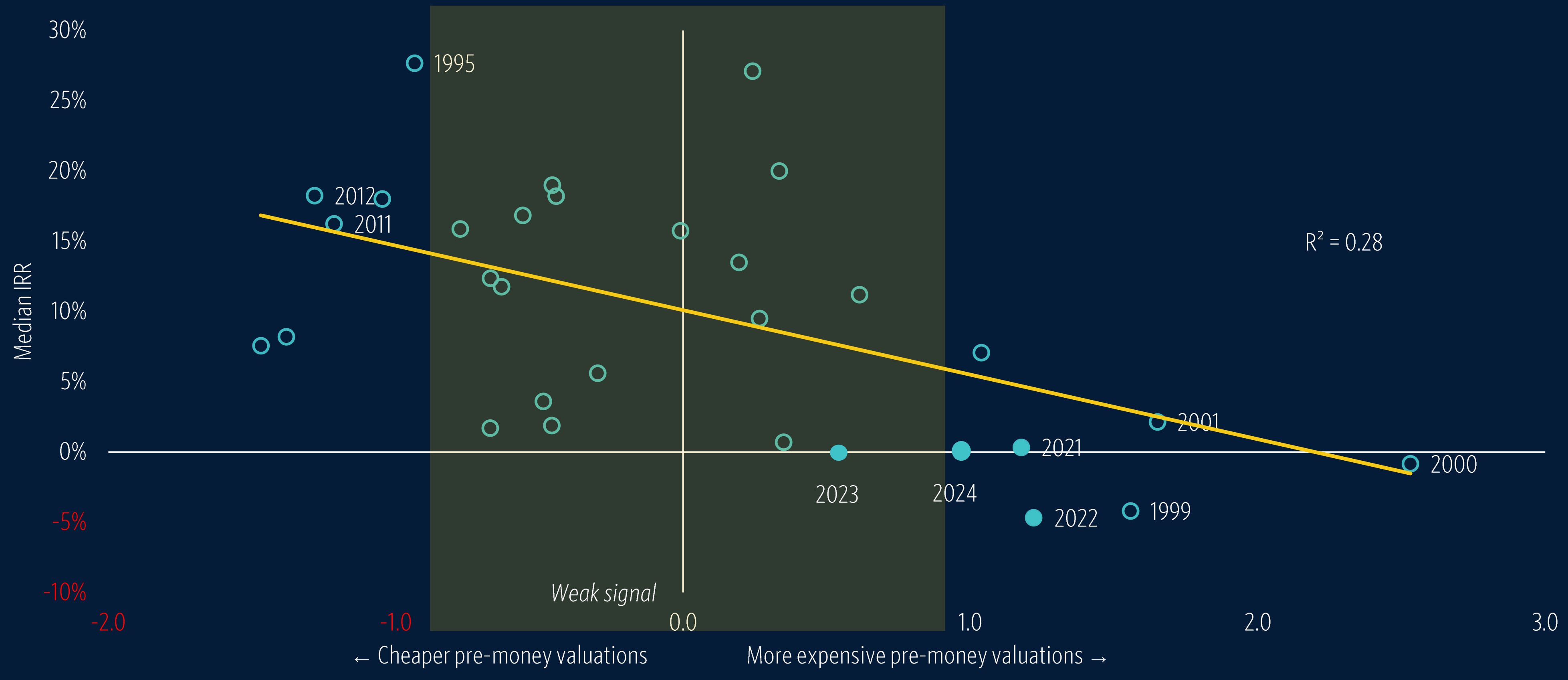
Figure 28 ▸ **Smoothed quarterly growth in median VC pre-money valuation by series (rebased at start of Q1 2020)**



Source: PitchBook • Geography: US • *As of August 31, 2024
Note: Smoothing was performed through a rolling four-quarter average.

Pre-money valuations softened in 2023 and 2024, and median fund IRRs tend to improve when deals are done at less expensive valuations.

Figure 29 **Average early-stage VC pre-money valuation Z-score versus median VC fund IRRs by vintage***



Source: PitchBook • Geography: US • *Pre-money valuations as of August 28, 2024; fund returns as of December 31, 2023

Relative pre-money valuations

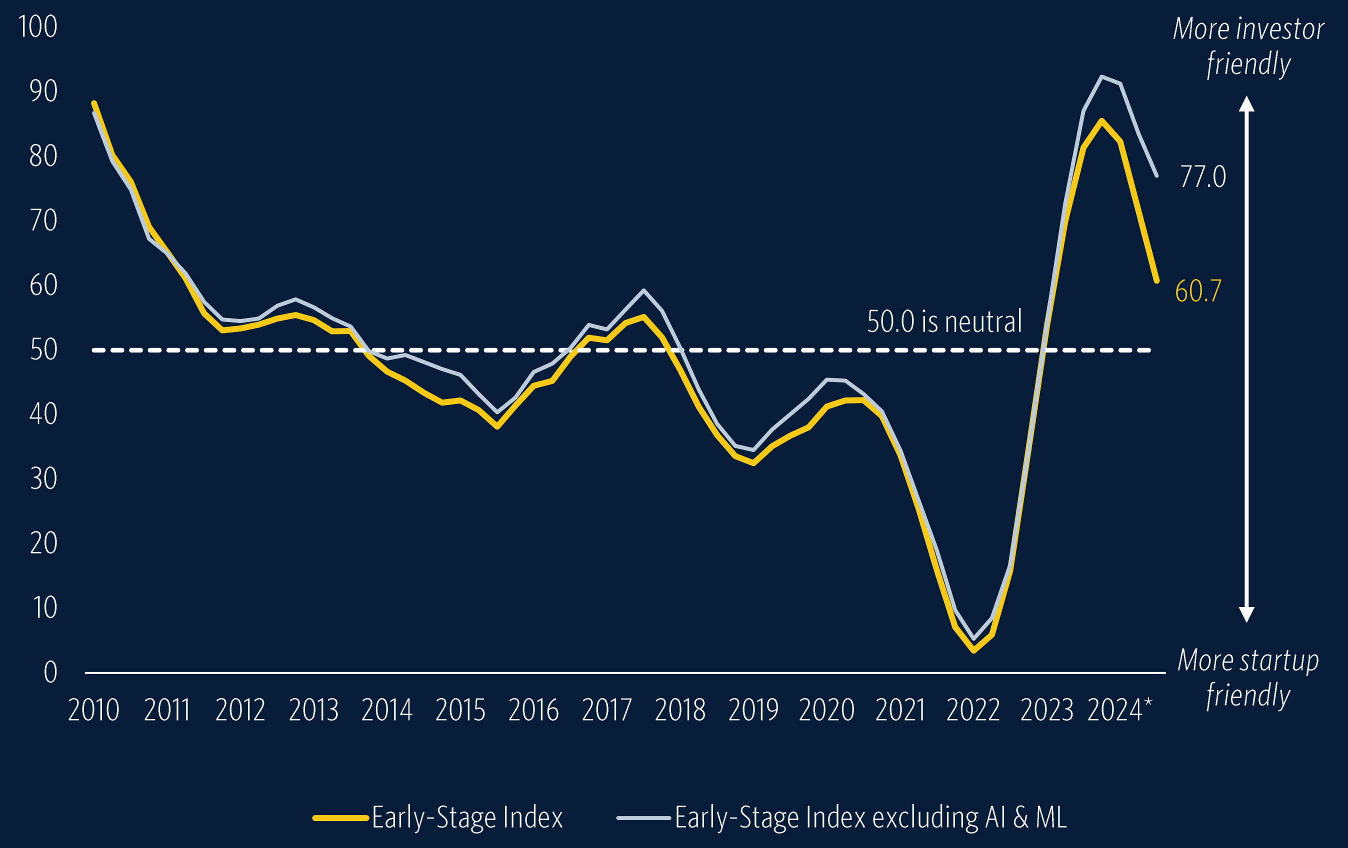
To measure how relatively cheap or expensive the median deal looks historically, for our analysis, we took pre-money valuations, log-transformed them, and then compared them to a linear trend. Simply put, we compared pre-money valuations since 1994, taking into account the fact that valuations tend to increase over time.

While fund performance for 2021 and 2022 vintages are highlighted, these have a long way to go before funds fully realize their returns. However, relative startup valuations were the worst since the 1999-2001 cohorts.

For more on our views of the VC market, read our Q2 2024 Allocator Solutions: Private Market Opportunities Midyear Update and our 2024 US Venture Capital Outlook: Midyear Update.

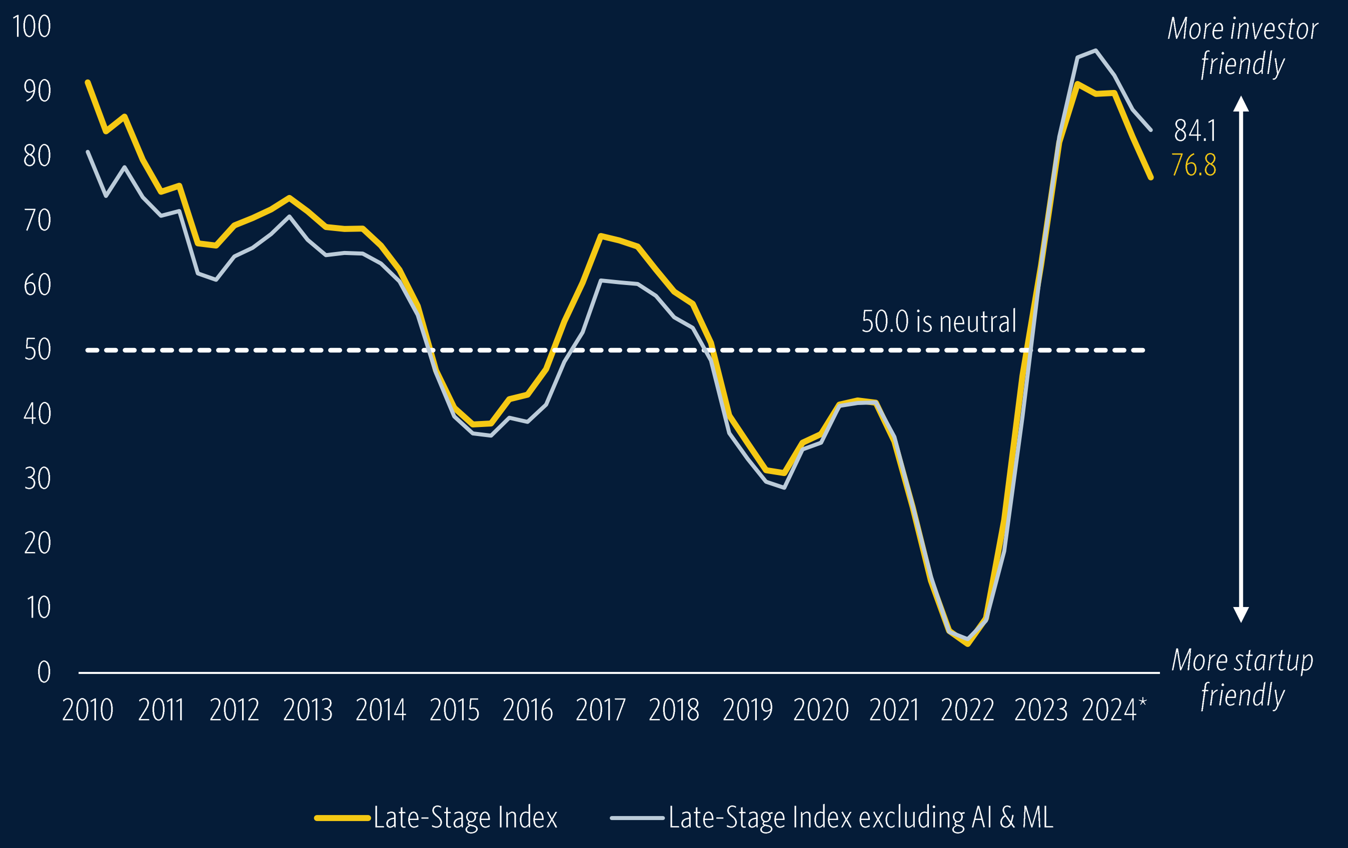
As AI & ML startups dominate the VC market, our VC Dealmaking Indicator highlights their impact on early-stage founder-friendliness, with better deal terms and increased investor interest moving the barometer closer to neutral territory.

Figure 30 ▸ **Early-Stage VC Dealmaking Indicator**



Source: PitchBook • Geography: US • *As of August 31, 2024

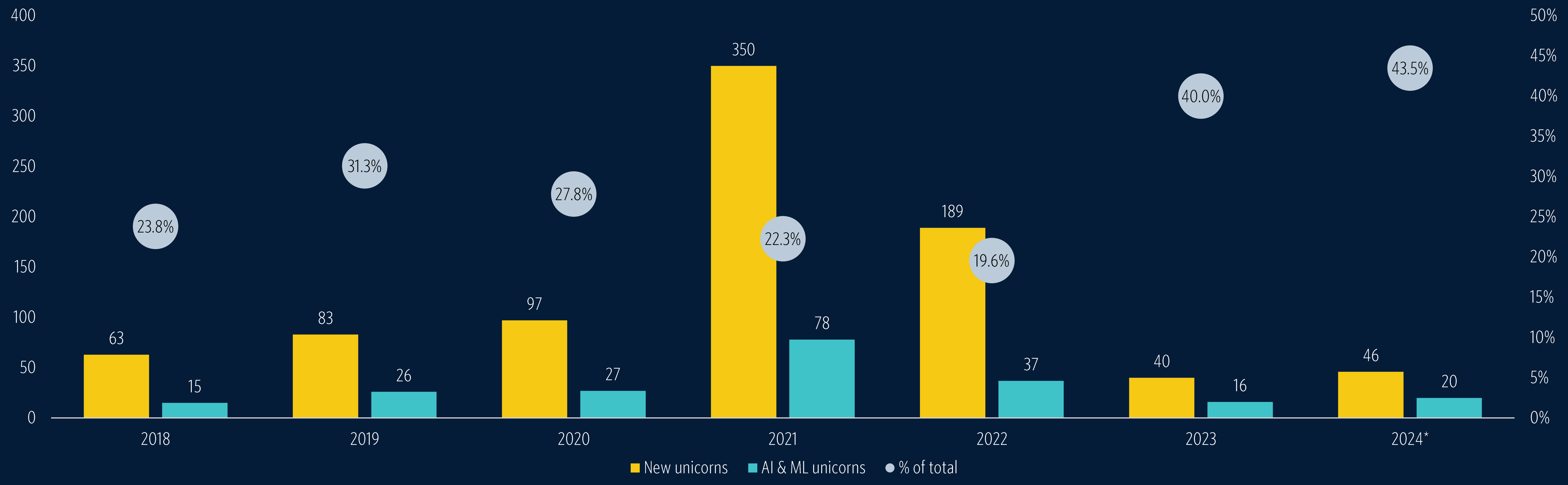
Figure 31 ▸ **Late-Stage VC Dealmaking Indicator**



Source: PitchBook • Geography: US • *As of August 31, 2024

Despite the slowdown in the number of privately held startups reaching unicorn status, most newly minted unicorns are AI & ML companies, doubling their proportion since 2021.

Figure 32 ▸ **AI & ML unicorns as a share of all new unicorns**

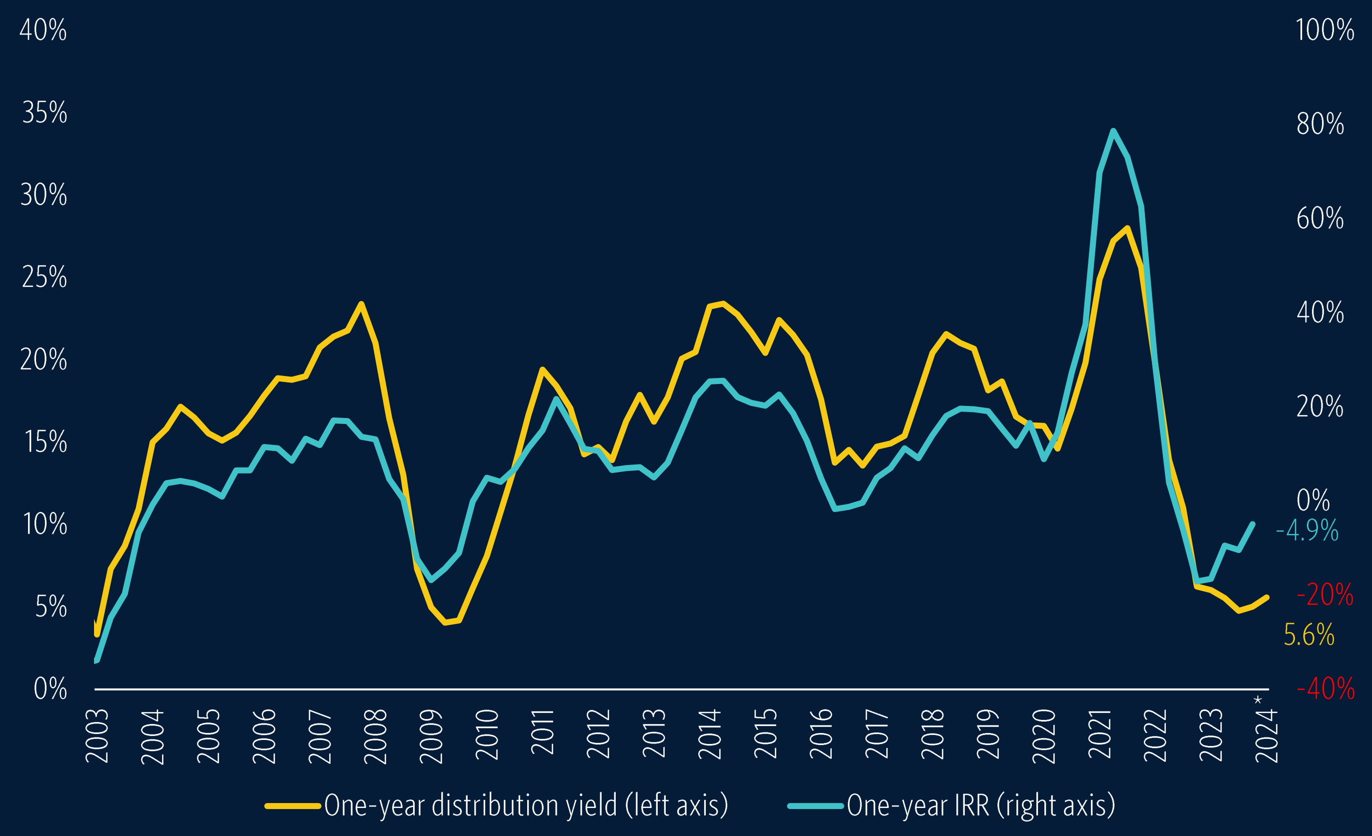


Source: PitchBook • Geography: US • *As of August 31, 2024

DPI is king

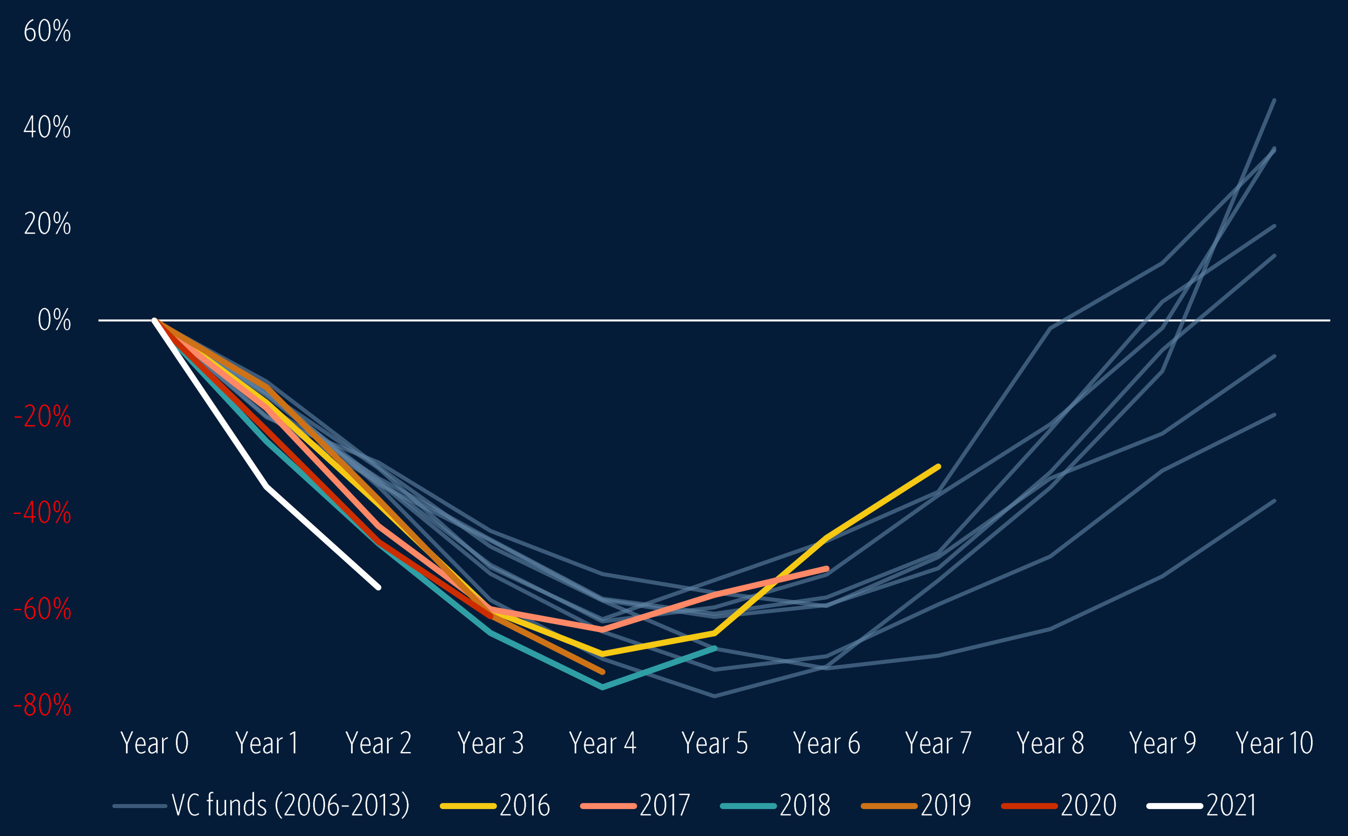
The lack of exit activity has pushed distribution yields and returns to nearly their lowest since the GFC. This has translated into vintages with notable strain on cash flows, with 2019-2021 significantly behind the historical pace…

Figure 33 ▸ **VC distribution yield as a share of NAV versus one-year IRRs**



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

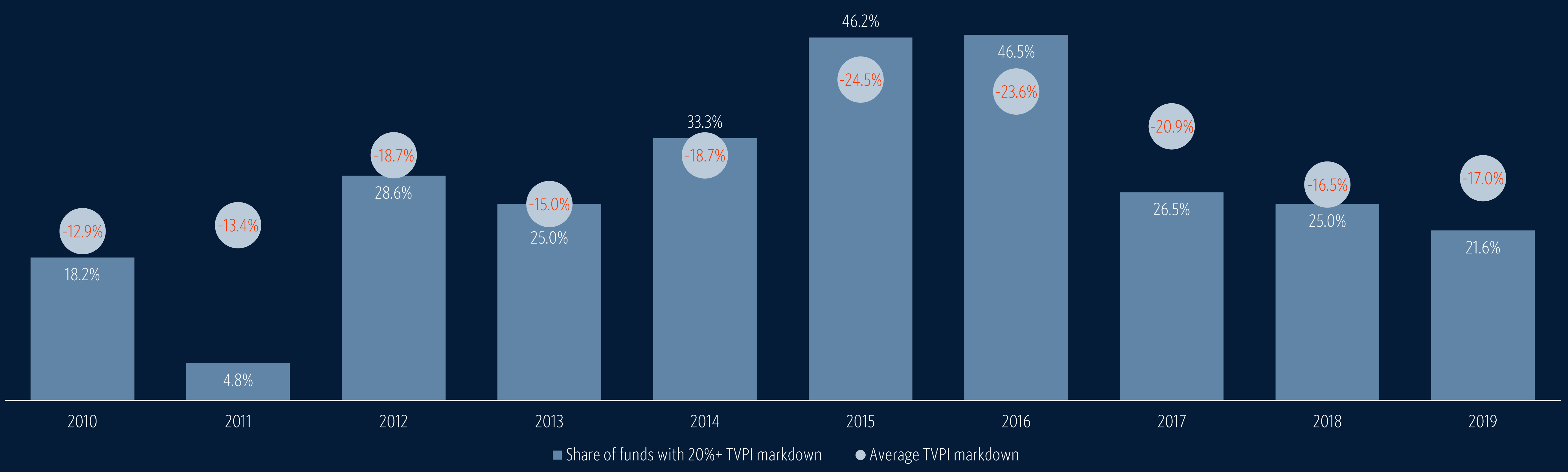
Figure 34 ▸ **Average VC fund net cash flow J-curves by vintage***



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

...and slow distributions have coincided with TVPI multiples taking a hit since 2021. The 2015 and 2016 vintage funds have been most impacted, with nearly half of funds marking TVPIs down at least 20%.

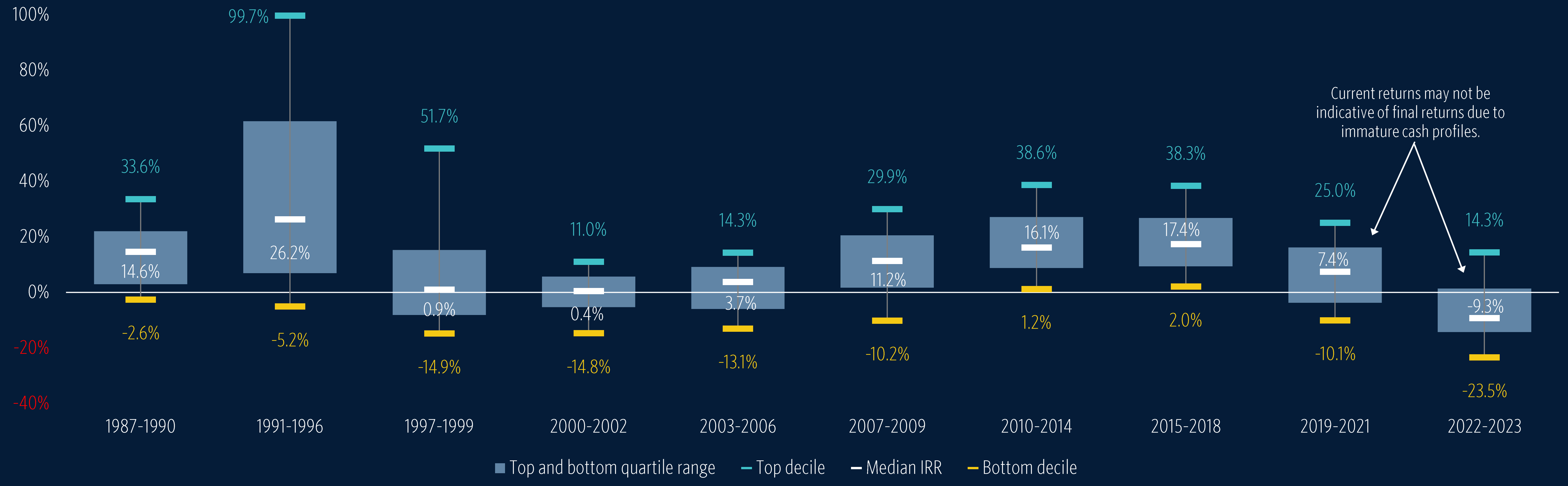
Figure 35 ▸ **VC TVPI markdowns since 2021 by vintage***



Source: PitchBook • Geography: US • *As of March 31, 2024
Note: Data for Q1 2024 is preliminary.

Fortunately, the downside of VC fund investing has improved over the years. More recent vintage cohorts are still firmly in their J-curves, but they are at risk of producing some of the worst loss ratios for fund returns since the GFC era...

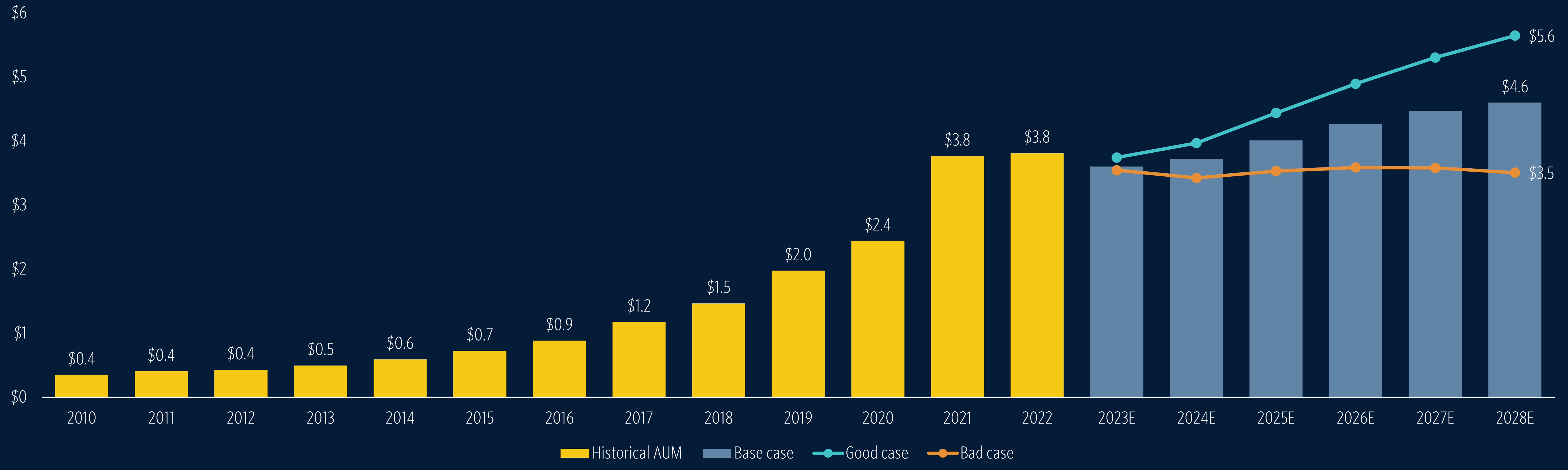
Figure 36 ▸ **VC fund net IRR dispersion by vintage cohorts**



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

…with the downstream impact being a more modest forecast for aggregate capital committed to VC and total AUM. The result should be an environment with a more balanced amount of capital chasing deals relative to 2021.

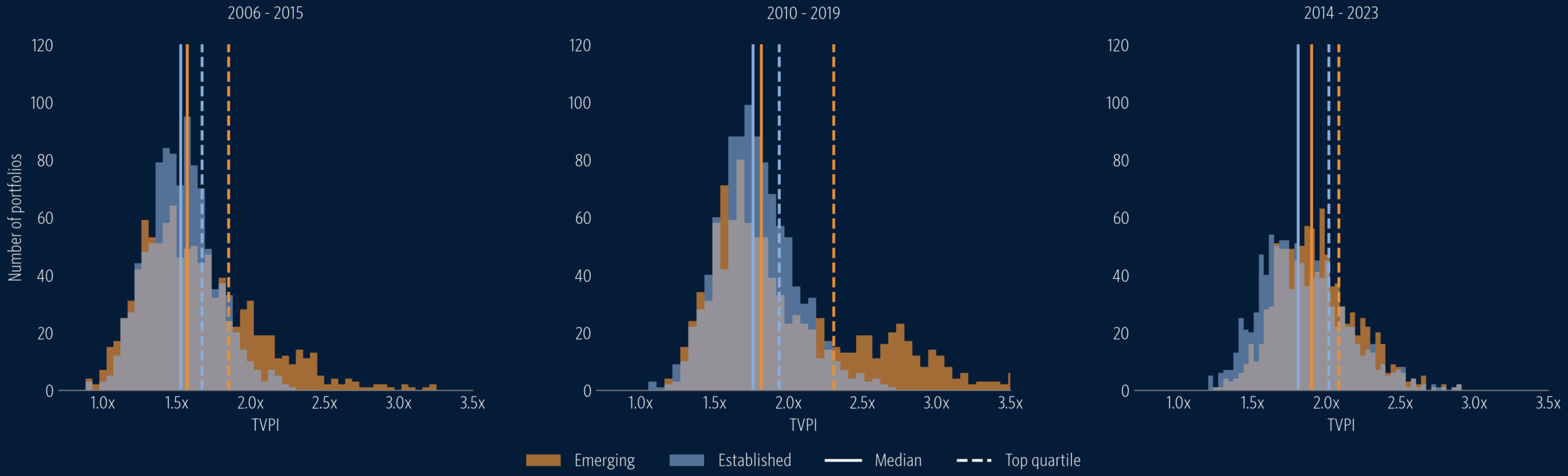
Figure 37 ▸ **VC closed-end funds AUM ($T) forecast***



Source: PitchBook • Geography: Global • *Historical AUM and forecasts generated on April 19, 2024
2023 values are estimates, as year-end figures were not available at the time the forecasts were created.

LPs should be mindful of GP portfolio construction. Simulating fund portfolios of emerging managers versus established managers suggests that emerging managers have had higher upside historically, though with more downside potential...

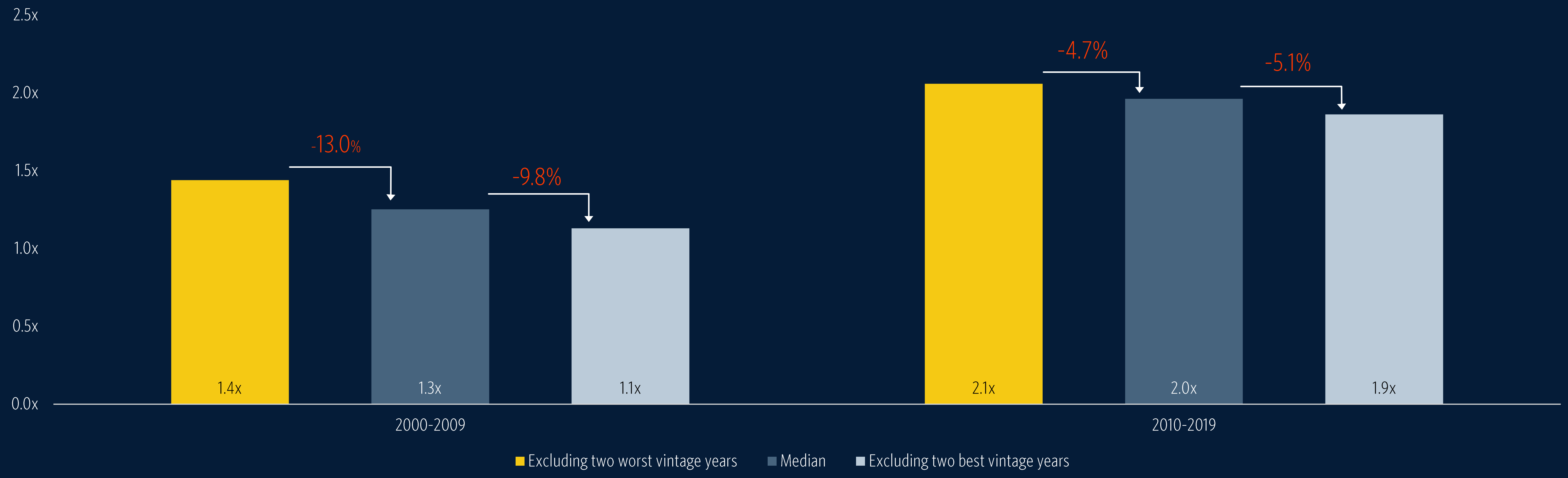
Figure 38 ▸ **VC fund pooled TVPI simulation results by time frame and manager experience***



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

...and vintage year diversification helps to mitigate the downside exposure further. Knowing which will be the worst-performing vintages is a difficult forecasting game, but it is a worthwhile one if they can be avoided.

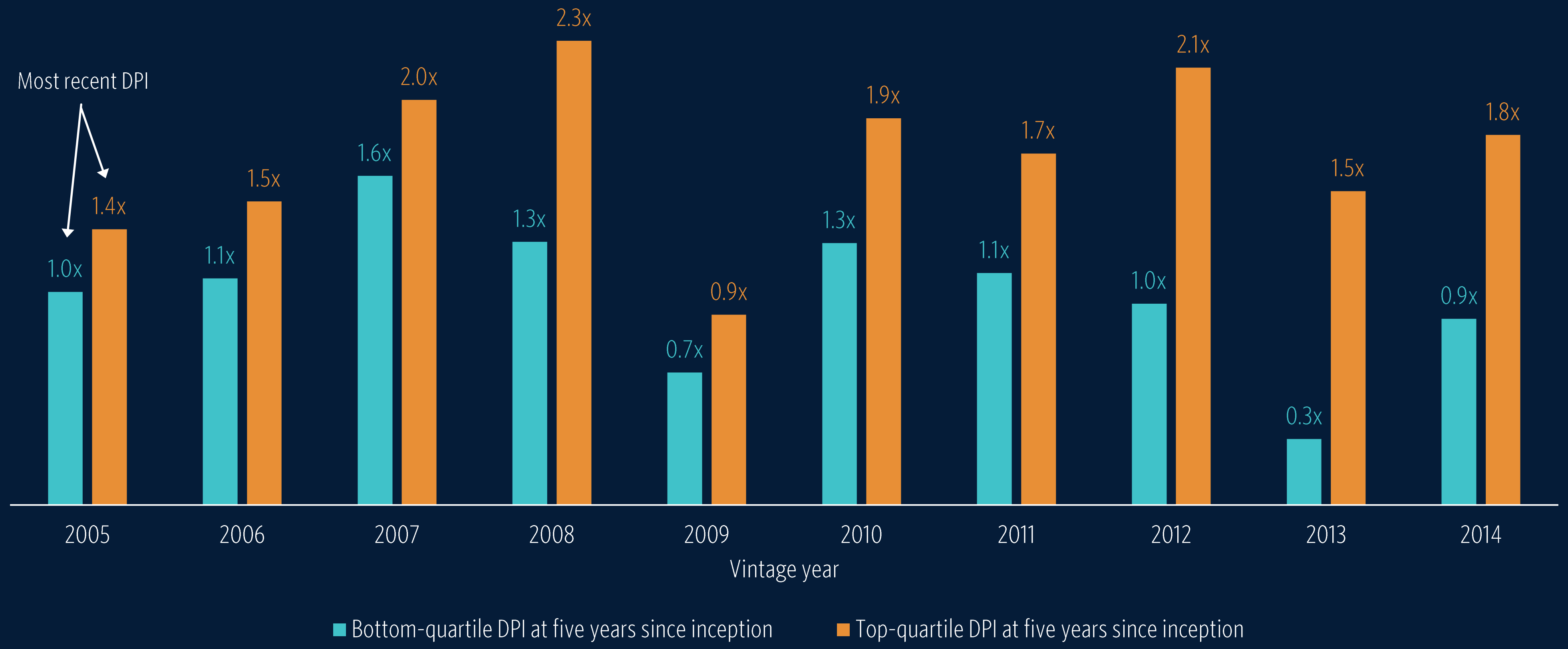
Figure 39 ▸ **TVPI medians for select vintages***



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

Meanwhile, manager evaluation is key. Early DPI is a vital indicator of the cash returns that a fund will have. The worst funds at year five tend to stay subpar as they mature.

Figure 40 **Median current DPI by vintage year, bucketed by quartile at five years since inception***



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

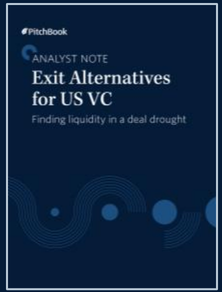
Early DPI indicators

To help quantify why early DPI matters, we looked at fund DPIs at five years since inception across vintage years and ranked funds into quartiles. We then looked at the total DPI after the funds had been fully liquidated, or their most recent available returns as of the end of 2023.

The results show that funds that were in the top quartile for generating early DPI outperformed funds in the bottom quartile as the funds aged. The results are consistent across vintage years, with the median of the best funds generating 0.2x to 1.2x more than the worst early performers. The analysis suggests that LPs should scrutinize DPI laggards in their portfolio and adjust their cash-return expectations going forward. The best funds may well keep chugging along.

Additional research

Market updates



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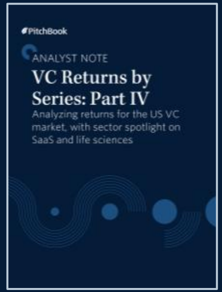

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