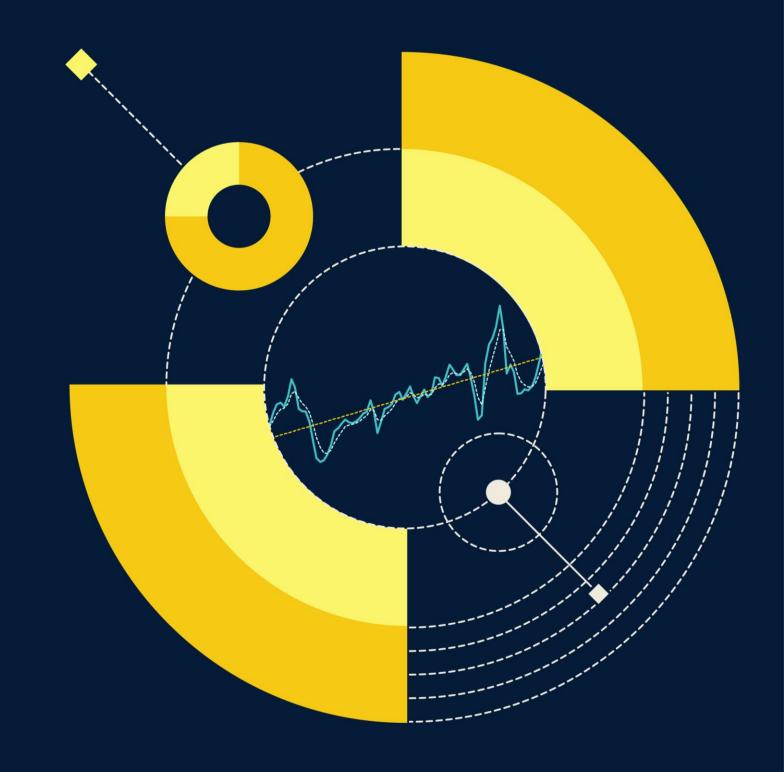


QUANT RESEARCH

## False Start

A QUANTITATIVE PERSPECTIVE ON US PRIVATE EQUITY







### Introduction

As 2024 gave way to 2025, there was a general sense of optimism that markets might be entering a new cycle of sustained growth and lower borrowing costs—conditions that would favor investors and dealmakers alike. However, that optimism may have been short-lived. In Q1 2025, following 11 consecutive quarters of expansion, the US economy recorded its first real GDP contraction since 2022. While this headline figure suggests a cyclical shift, the underlying story is more nuanced. A surge in imports artificially distorted the GDP picture as firms rushed to front-run anticipated tariff increases. Nevertheless, the rise in trade policy uncertainty has left market participants across the board unsettled. The Federal Reserve (the Fed) now finds itself walking a tightrope, acknowledging that prolonged tariffs could fuel both inflation and unemployment.

Markets reacted to the tariff announcement with a sharp uptick in volatility. While it is often argued that PE returns—unlike public equity returns—are insulated from such fluctuations, our proxies for buyout fund performance and daily estimates of PE fund returns indicate that PE was impacted by the April market movement just as acutely.

The prospect of slowing economic growth, elevated inflation, weak business confidence, and widening credit spreads presents a challenging environment for buyout activity. In fact, when we model buyout deal activity under scenarios where these variables follow their typical paths during recessionary periods, the results point to a substantial decline in buyout deal value.

The pressures building on the buy side are mirrored on the exit front. While PE exit value has rebounded in recent quarters, a substantial backlog of unrealized company value remains. The slow pace of exits continues to create ripple effects throughout the drawdown capital flywheel. With fewer realizations, fund managers are forced to extend holding periods beyond historical norms, leading to lower-than-expected distributions and an increasing share of net asset value (NAV) tied up in aging assets. As NAV continues to mature without meaningful liquidity events, the mismatch between capital deployment and return of capital widens, compounding pressure on LPs and fundraising pipelines.

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## Key takeaways

- Real GDP contracted at an annualized rate of 0.3% in Q1 2025, the first decline since 2022. However, the headline figure was skewed by a surge in imports, as businesses and consumers accelerated purchases ahead of expected tariff hikes. This effect is likely to reverse as inventories are depleted and firms explore alternative production channels domestically (pages 5 and 6).
- The Fed is navigating a delicate balance between the risks of rising unemployment and persistent inflation, opting to keep its benchmark rate unchanged at the May meeting. Chair Jerome Powell acknowledged that sustained tariffs are likely to push inflation and unemployment higher while weighing on economic growth (page 10).
- The effective US tariff rate is projected to surge from 2.4%, the level prior to the tariff announcements, to 27.9% once all measures are fully implemented. Even after substituting away from Chinese goods, the rate is still estimated at 18%, roughly 7.5x higher than the pre-announcement level (page 14).
- Buyout portfolios and public small-cap equity benchmarks exhibit different sector exposures, resulting in varying sensitivities to trade policy risk. Compared with public benchmarks, buyout portfolios are overweight in healthcare and commercial services—sectors with relatively low tariff exposure—and underweight in commercial banks and other financial services, which also face limited tariff impact (pages 17 and 18).
- The <u>PitchBook Private Capital Return Barometers</u> provide a framework for estimating PE fund returns based on macroeconomic conditions. By applying the Barometer's coefficients to daily observable inputs, such as equity returns, market volatility, and credit spreads, we can assess PE fund return sensitivity to market shifts. This approach enabled a daily estimation of the trailing three-month PE return in April, which closely tracked the sharp decline across public market risk assets (<u>page 22</u>).

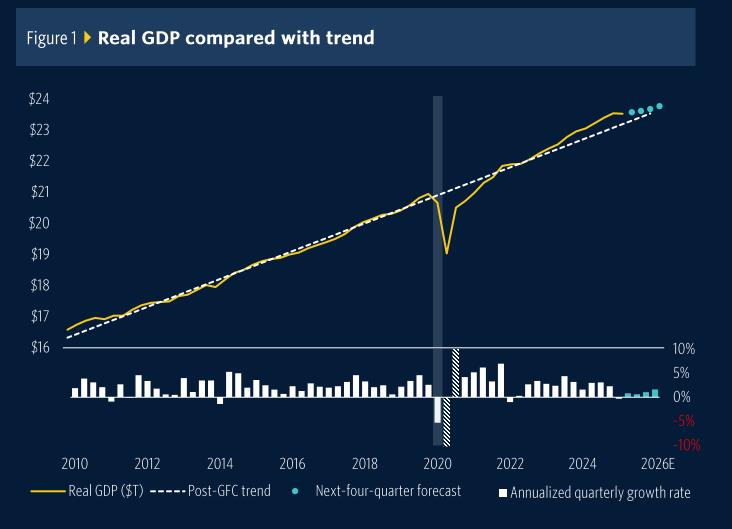
- Using a model that links buyout deal value to key macroeconomic variables growth, inflation, business confidence, and credit spreads—we can project buyout activity under various scenarios. When these inputs are modeled to follow an average recessionary path, buyout deal value over the next four quarters is estimated to decline to the lows observed in 2023 (page 29).
- Borrower stress in the leveraged loan market is not materializing through defaults, which remain low and are trending downward. Instead, pressure is being addressed through liability management exercises, as borrowers and lenders restructure terms to avoid default. At the same time, a rising downgrade/upgrade ratio in the leveraged loan space signals a potential broader deterioration in credit quality (page 31).
- After an extended period of underperformance, PE exit value returned to its long-term trend in Q1. Still, clearing the accumulated backlog will require a prolonged stretch of exit activity well above trend (page 33).
- The slowdown in exits has led to several side effects, including buyout-backed company holding periods rising to levels last seen in 2011, distribution yields falling to lows not seen since the global financial crisis (GFC), and fund DPIs trailing well behind historical norms (pages 34 and 35).
- With funds struggling to realize investments, nearly 40% of all buyout fund NAV is now 7 years old or older. Based on current NAV levels, distribution demand is projected to reach nearly \$360 billion by 2027, far outstripping the \$191.3 billion distributed in 2024 (page 37).
- Looking forward, we estimate global PE AUM across drawdown and evergreen funds will grow from \$6 trillion to \$7.7 trillion by the end of 2029 (page 42).

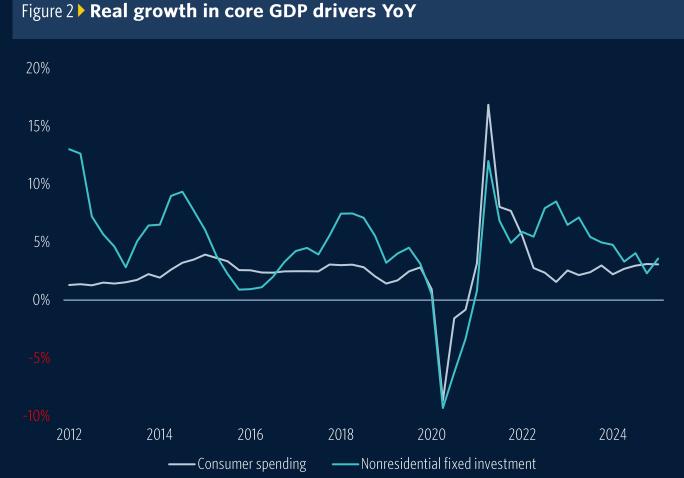


# Coolingoff



The real economy contracted slightly in Q1 and growth expectations for the remainder of the year are subdued despite healthy consumer spending...





Sources: <u>Bureau of Economic Analysis</u>, <u>WSJ Economic Forecasting Survey</u> • Geography: US • As of March 31, 2025

Source: FRED • Geography: US • As of March 31, 2025



#### ...as expectations of higher tariff rates distorted the bigger growth picture.

Figure 3 > Contributions to annualized real GDP growth by quarter 6% 4% 2% 0% Q4 Q1 02 03 04 Q1 02 03 04 Q1 2022 2024 2025 2023 ■ Nonresidential fixed investment ■ Residential fixed investment ■ Change in private inventories Consumer spending Net exports Government spending Total

Source: <u>Bureau of Economic Analysis</u> • Geography: US • As of March 31, 2025 Note: Q1 2025 GDP data is from the advance estimate.

#### Front-running tariffs

While real GDP contracted by 0.3% in Q1, the headline number was distorted by a build in private inventories and a shift in resources to imported goods ahead of tariff rates spiking. Both dynamics are temporary and will likely reverse in the coming quarters as inventory builds get drawn down and domestic production becomes relatively more attractive from a cost perspective.

Imports do not directly reduce GDP and its inclusion in the GDP equation [GDP = consumption + investment + government spending + (exports - imports)] is strictly for accounting purposes to avoid double counting. However, there is an opportunity cost of imports with respect to GDP as some imported goods compete with those produced domestically. This dynamic likely played out in O1 as consumers and firms shifted some of their budget to imported goods that would have otherwise been spent domestically.



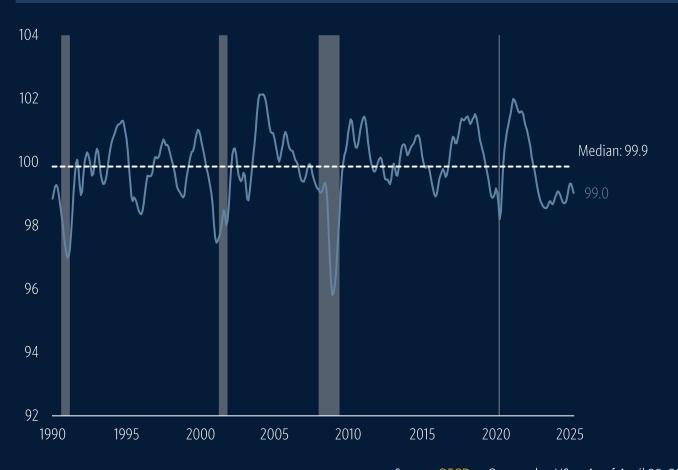
The downstream impact of real GDP contraction is a further plunging of consumer sentiment, which declined seven points since February. Business confidence remains below long-term norms.

Figure 4 > University of Michigan Consumer Sentiment Index



Source: University of Michigan • Geography: US • As of March 31, 2025

Figure 5 US Business Confidence Index



Source: OECD • Geography: US • As of April 30, 2025



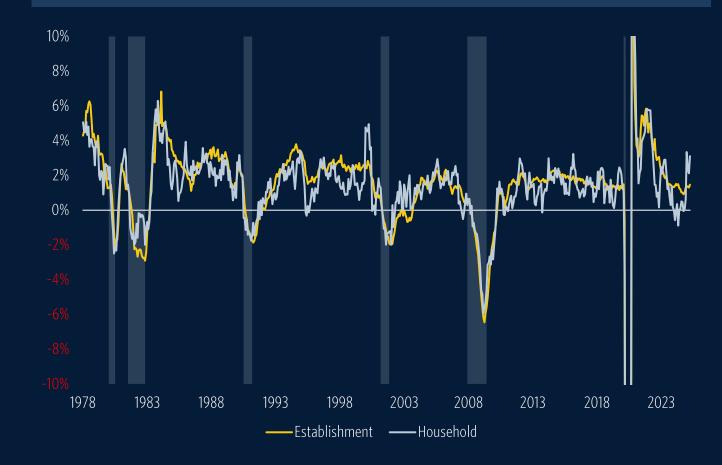
While the labor market has continued to cool with unemployment well above its cycle low, employment growth has remained resilient...

Figure 6 • Unemployment rate



Source: Bureau of Labor Statistics • Geography: US • As of April 30, 2025

Figure 7 > Employment growth by survey (six-month annualized rate)



Source: <u>Bureau of Labor Statistics</u> • Geography: US • As of April 30, 2025



...and initial jobless claims, a leading indicator, are not flashing warning signs. However, the potential impacts of tightening fiscal policy are not yet reflected in the labor market data.

Figure 8 Initial jobless claims (four-week average) 800,000 700,000 600,000 500,000 400,000 300,000 200,000 100,000 1978 1983 1988 1993 1998 2003 2008 2013 2018 2023



83% 81% 79% 77% 75% 73% 71% 1978 1983 1993 2003 2008 2023 2013 2018 1988 1998

Figure 9 Core age (25-54) employment/population ratio

Source: <u>Bureau of Labor Statistics</u> • Geography: US • As of April 30, 2025



### Slowing household wage growth, which has supported strong consumer spending during this cycle, is a key risk to overall economy activity.



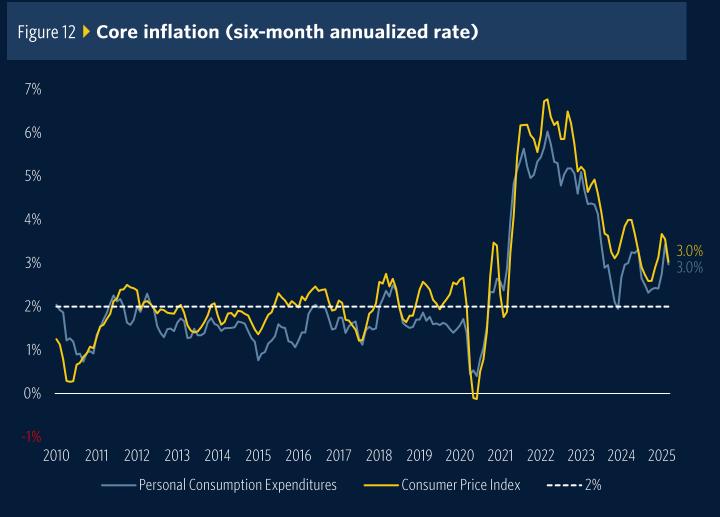


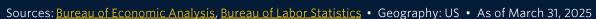


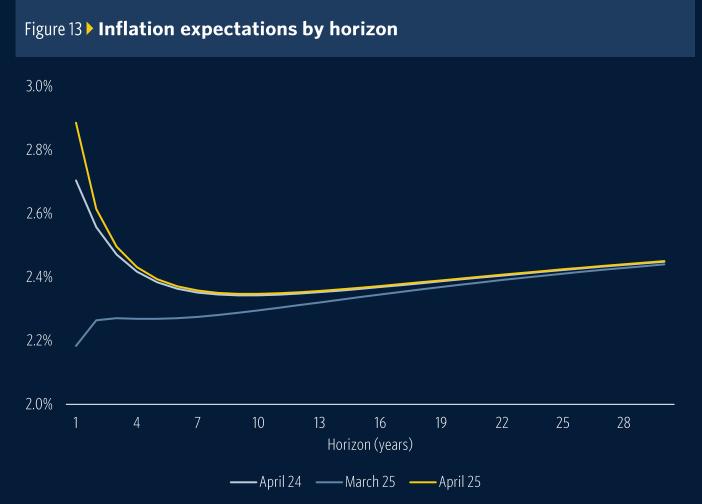
Source: <u>Bureau of Economic Analysis</u> • Geography: US • As of March 31, 2025



## Above-target core inflation rates remain a concern, especially given a significant uptick in short-term inflation expectations...





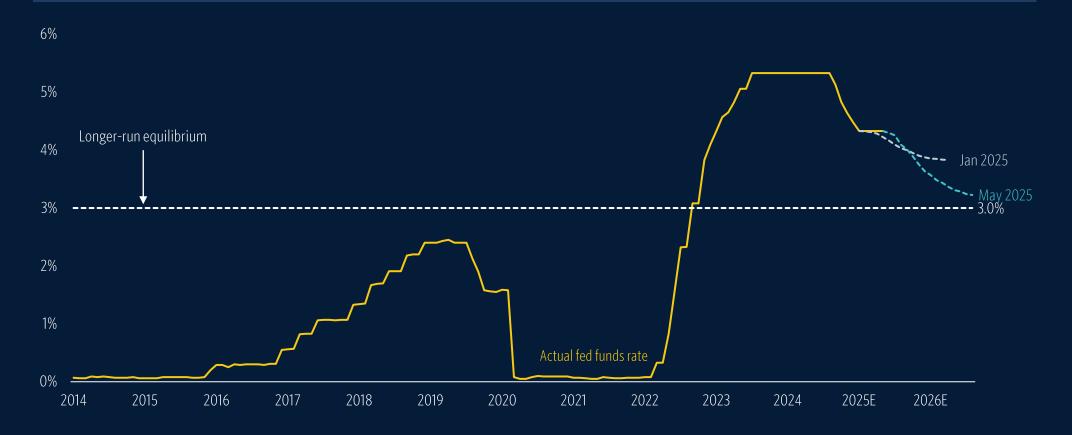


Source: Federal Reserve Bank of Cleveland • Geography: US • As of April 30, 2025



### ...which has made the Fed's task of normalizing monetary policy that much more difficult.

Figure 14 Federal funds rate with market expectations



Sources: Federal Reserve, <u>CME Group</u> • Geography: US • As of May 5, 2024 Note: The long-run equilibrium rate is based on the Fed's latest Summary of Economic Projections (SEP).



### Considerations for monetary policy

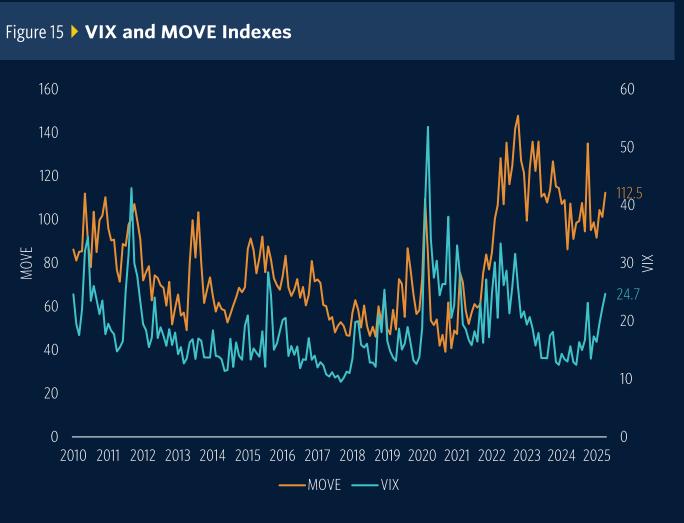
The Fed finds itself in a challenging position, as reflected in its May meeting statement acknowledging that risks to both higher unemployment and inflation have recently intensified. The Federal Open Market Committee has maintained its benchmark rate within a target range of 4.25% to 4.50% at each of its three meetings this year, signaling a commitment to a waitand-see approach.

Rising concerns over upside inflation—fueled in part by increased tariff rates—have effectively tied the Fed's hands, despite continued signs of cooling in the labor market. Absent these inflationary risks, the central bank likely would have already moved forward with additional rate cuts in recent meetings.

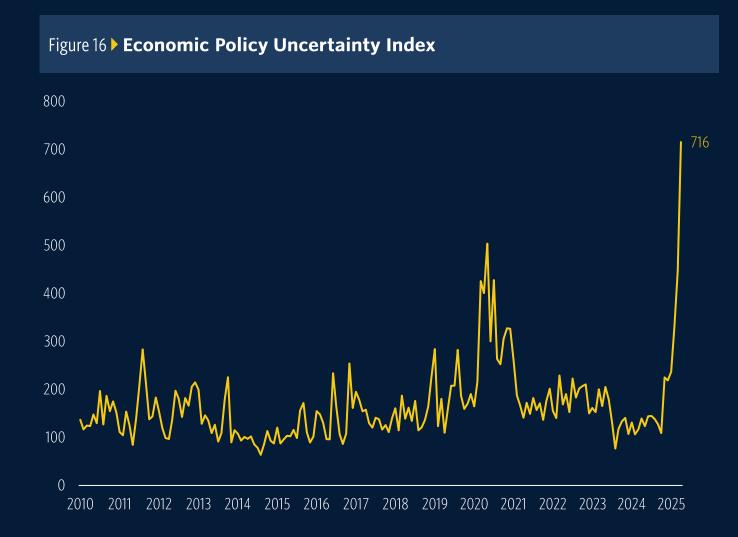
As the Fed waits for greater clarity on trade policy and its impact on inflation, the risk has grown that the Fed may underestimate the mounting slowdown in the labor market—a trend likely to be exacerbated by the very tariffs driving inflation fears. The silver lining, however, is that unlike in previous cycles, the Fed retains considerable room to ease policy should labor market conditions deteriorate more rapidly.



Trade-related announcements have injected renewed volatility into markets, with the VIX spiking in April. Policy-related uncertainty, as measured by the Economic Policy Uncertainty Index, reached a record high.









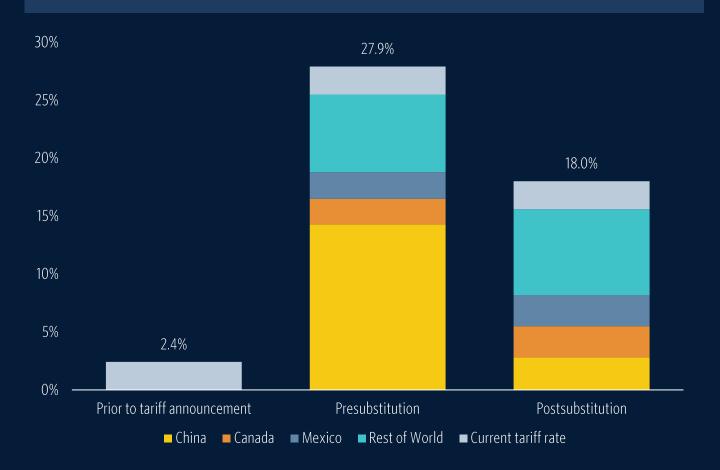
Business executives are signaling a decline in overall business activity and renewed pricing strain emerging in response to recent trade announcements. Even with substitution of Chinese goods, the effective US tariff rate will be significantly higher, reflecting potential ongoing cost challenges.

Figure 17 Texas Manufacturing Outlook Survey select indexes



Source: Texas Manufacturing Outlook Survey • Geography: US • As of April 25, 2025

Figure 18 Effective US tariff rate pre- and post-tariff announcements



Source: The Budget Lab • Geography: US • As of April 15, 2025



# Hitting a snag



Public equity markets posted strong gains in 2024. Those gains have been partially offset this year due to trade policy volatility, which has disrupted business planning and weakened sentiment.

Figure 19 > S&P 500 and Russell 2000 returns since beginning of 2024



Source: Morningstar • Geography: US • As of May 9, 2025

Figure 20 S&P 500 and Russell 2000 returns YTD



Source: Morningstar • Geography: US • As of May 9, 2025



#### Sector exposures represent a key difference between buyout portfolios and most public small-cap equity benchmarks...

Figure 21 > Share of buyout inventory by industry (top 15)

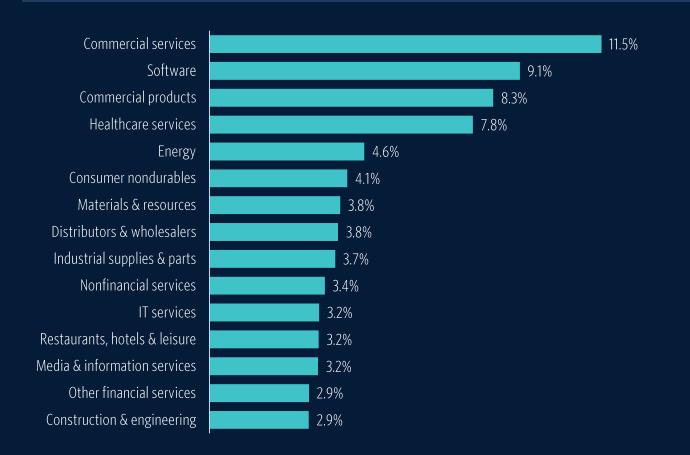
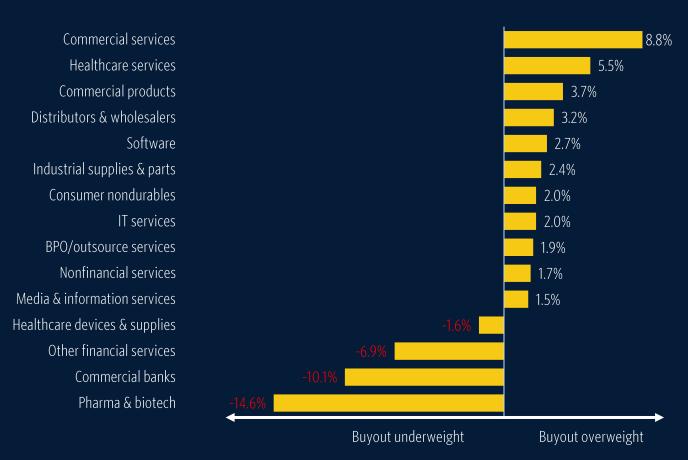


Figure 22 Share of buyout inventory by industry relative to the Russell 2000 Index (top 15 largest absolute differences)

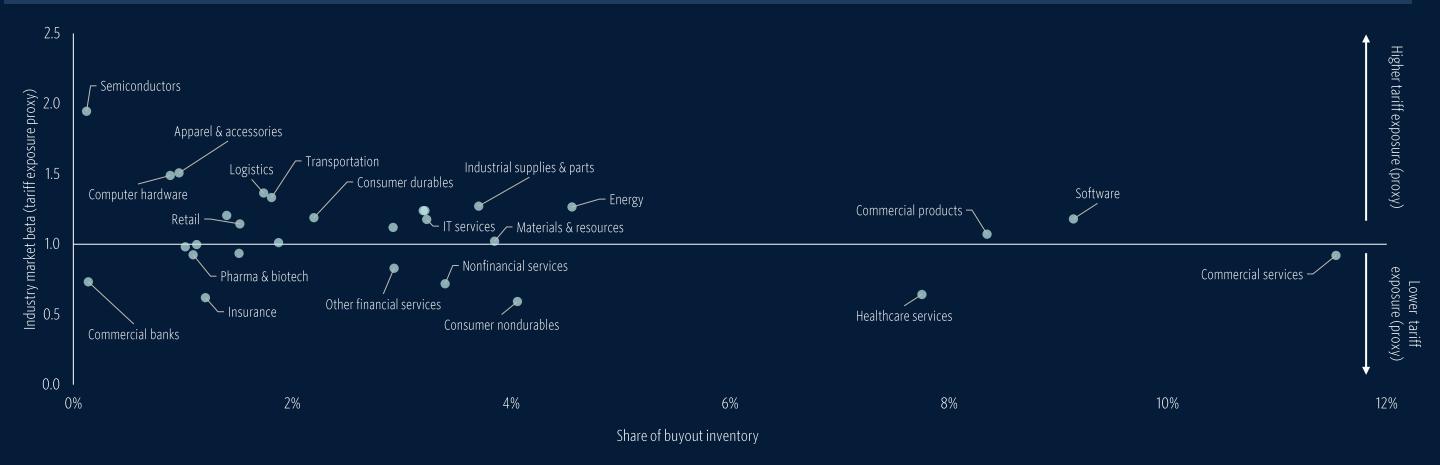


Sources: PitchBook, iShares • Geography: US • As of March 31, 2025



...and are an important consideration when thinking about trade policy risks. While buyout portfolios are overweight in industries with lower tariff exposure like healthcare and commercial services, they are also underweight in others like commercial banks.

Figure 23 Industry market betas from April 3 to April 9 (tariff exposure proxy)



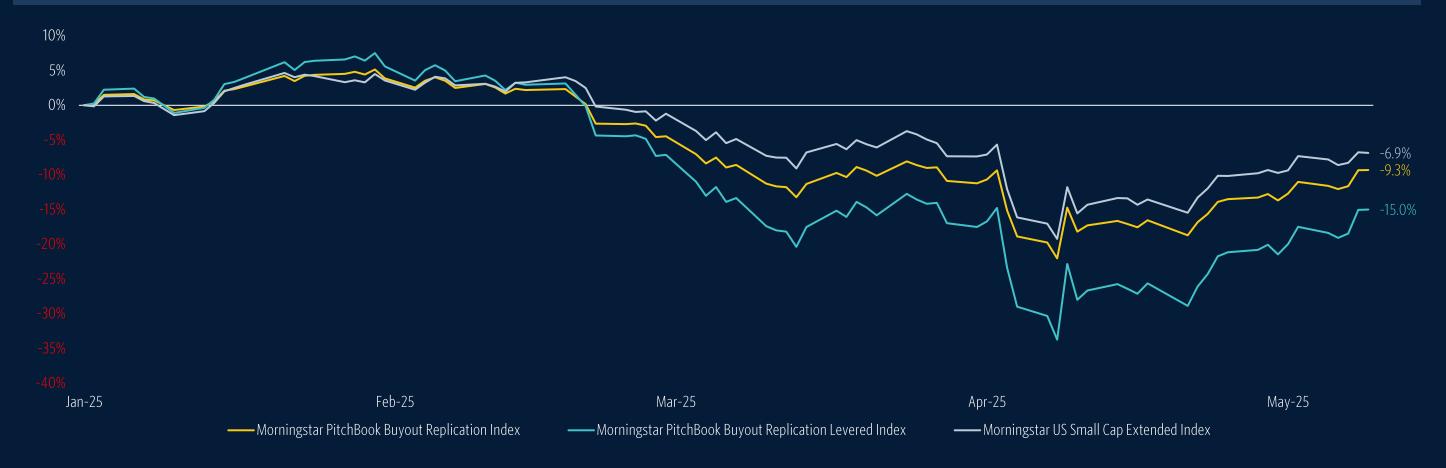
Sources: PitchBook, Morningstar, iShares • Geography: US • As of April 9, 2025

Note: Industry market betas were calculated using daily returns of stocks in the Russell 2000 Index from April 3 to April 9, the period of significant market volatility related to tariff announcements.



Short-term performance of the Morningstar PitchBook Buyout Replication, which considers sector and security selection differences with the small-cap universe, suggests a similar trade risk exposure as the broader market.

Figure 24 Morningstar PitchBook Buyout Replication Index and Morningstar US Small Cap Extended Index returns YTD



Sources: Morningstar, PitchBook • Geography: US • As of May 9, 2025



The PitchBook Private Equity Index, brought forward with our "nowcasts," suggests returns may plateau in early 2025. In the high-flying pandemic years, PE performance was fueled by substantial NAV growth, but that momentum has significantly diminished.

Figure 25 Private Equity Index with nowcasts



Source: PitchBook • Geography: US • As of April 30, 2025

Figure 26 Private Equity Index quarterly return by source



Source: PitchBook • Geography: North America • As of December 31, 2024

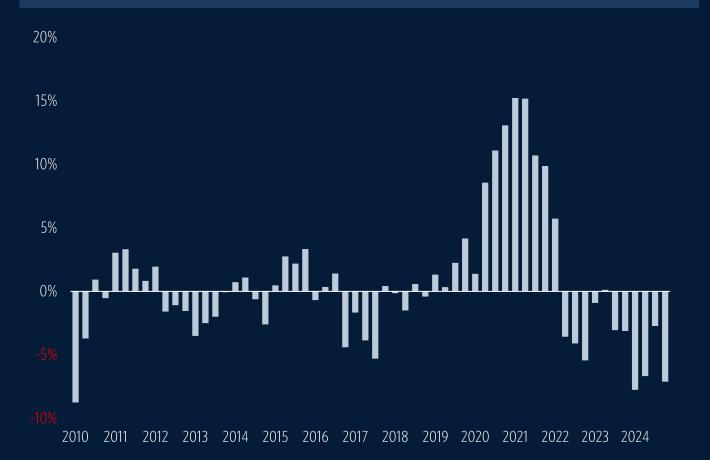


PE fund returns have lagged expectations over the past couple of years, and our PE Barometer signals further downside ahead amid the current macroeconomic environment.

Figure 27 ▶ Rolling one-year PE fund returns 70% 60% 50% 40% 30% 20% 10% 0% 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 ——Reported PE returns ——PE Barometer Nowcast returns



Figure 28 Difference between reported and Barometer Nowcast rolling one-year PE fund returns

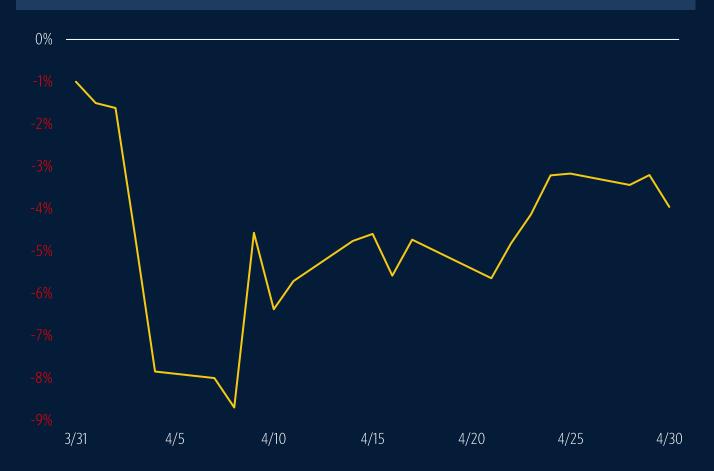


Source: PitchBook • Geography: US • As of April 30, 2025



By applying the PE Barometer's factor coefficients to daily observable inputs—such as public equity performance, market volatility, and credit spreads—we can estimate the trailing three-month PE fund returns on a daily basis.

Figure 29 Implied PE fund returns in April



Source: PitchBook • Geography: US • As of April 30, 2025 Note: The implied PE returns represent a daily estimate of the prior three-month PE returns.

Figure 30 > Top 10 indicators by implied impact on PE expected returns from a one-standard-deviation move by factor

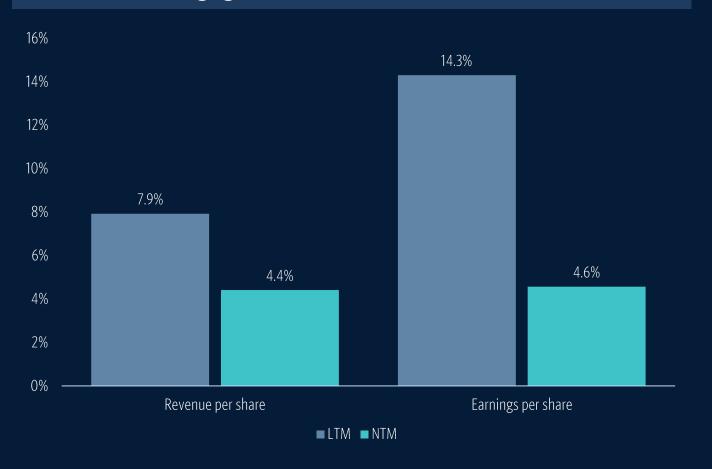


Source: PitchBook • Geography: US • As of April 30, 2025



Forward-looking corporate fundamentals have grown increasingly pessimistic, and while loan and bond spreads have widened in recent months, they remain relatively tight by historical standards.

Figure 31 > S&P 500 last 12-month (LTM) and next 12-month (NTM) revenue and earnings growth



Source: Morningstar • Geography: US • As of May 6, 2025 Note: The NTM growth rates are based on the mean analyst consensus estimates of the underlying index constituents.

Figure 32 Leveraged loan and high-yield bond credit spreads



Sources: Morningstar, ICE Indexes • Geography: US • As of May 2, 2025



Loan and bond indexes experienced sharp declines followed by quick rebounds in response to the tariff announcements. On the loan side, elevated base rates have helped cushion downside price movements.

Figure 33 > Loan and bond index performance YTD 3% 2% 2% 1% 1% Jan-25 Feb-25 Mar-25 Apr-25 May-25 —— Morningstar US High-Yield Bond Index ——Morningstar LSTA US Leveraged Loan Index

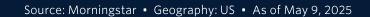


Figure 34 Morningstar LSTA US Leveraged Loan Index returns by source 4% Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 ■ Interest return ■ Market return

Source: Morningstar • Geography: US • As of April 30, 2025. \*Q2 2025 represents the three months ended April 30, 2025

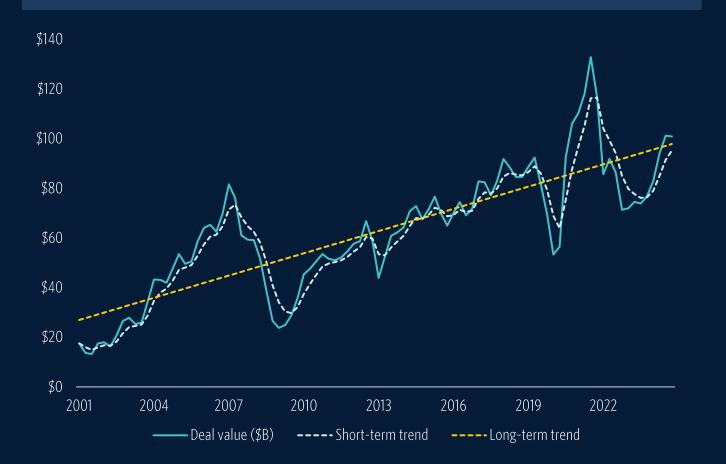


## Course correction



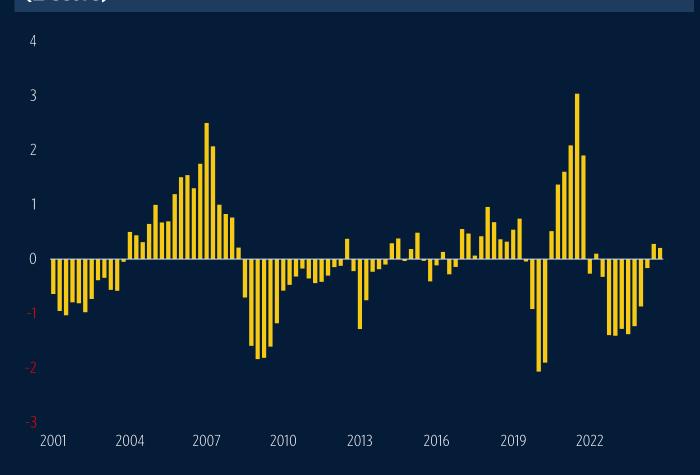
Although buyout deal value has exceeded its long-term trend over the past couple of quarters, the broader economic environment remains unfavorable for sustained improvement.

Figure 35 > Trailing six-month buyout deal value trends



Source: PitchBook • Geography: US • As of March 31, 2025 Note: Data is seasonally adjusted and includes estimates for the four most recent quarters.

Figure 36 Trailing six-month buyout deal value relative to long-term trend (Z-score)



Source: PitchBook • Geography: US • As of March 31, 2025



#### The historically positive relationship between buyout activity and interest rates has reversed in recent periods...

Figure 37 Detrended quarterly buyout deal value and 2-year real Treasury yields



Sources: PitchBook, Federal Reserve, <u>Cleveland Fed</u> • Geography: US • As of March 31, 2025 Note: Inflation expectations from the Cleveland Fed were used to deflate the nominal 2-year Treasury yield.



...and to understand this shifting relationship, key factors that drive interest rates—growth, inflation, business confidence, and spreads—are examined. By modeling changes in these underlying variables, we can estimate potential trajectories for buyout activity...

Figure 38 > Relationships between detrended quarterly buyout deal value and key macro variables (Z-scores)



Sources: PitchBook, Bureau of Economic Analysis, CBO, OECD, ICE BofA Indexes • Geography: US • As of March 31, 2025

Note: Inflation is the deviation of the two-year annualized change in core PCE from 2%.



...and see that if the underlying variables follow a typical recessionary trajectory, buyout activity is projected to fall near the lows observed in 2023, representing an estimated 40% decline from the current implied buyout value.

Figure 39 **Estimated buyout deal value under select scenarios (Z-scores)** 

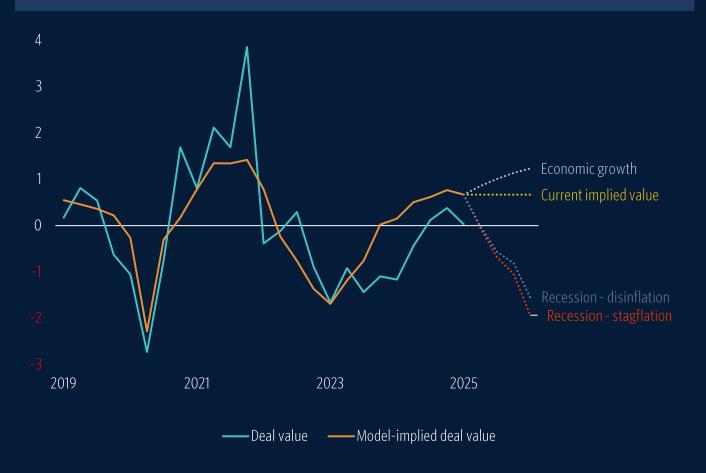
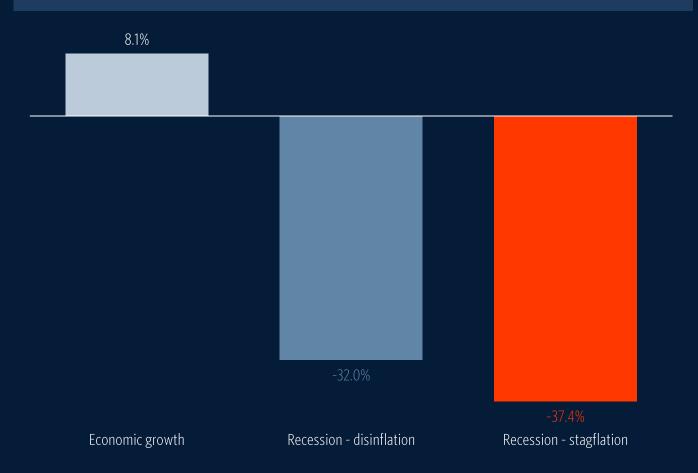


Figure 40 Percentage change to current implied buyout value one year ahead



Sources: PitchBook, Bureau of Economic Analysis, CBO, OECD, ICE BofA Indexes • Geography: US • As of March 31, 2025

Note: Recession scenarios follow average NBER recession trends for spreads, GDP gap, and business confidence. Stagflation assumes inflation rises to 4%.

Disinflation assumes inflation falls to 2%. Economic growth assumes variables move toward top-decile activity, with inflation easing to 2%.



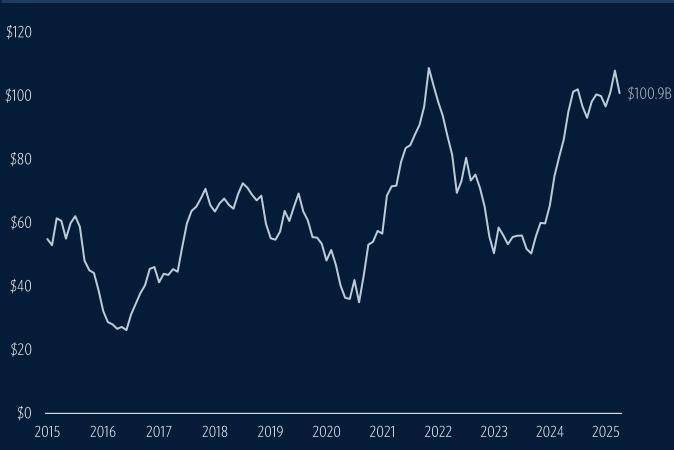
Loan issuance for buyout deals has been recovering, but limited deal flow is likely to constrain further growth. Meanwhile, collateralized loan obligation (CLO) activity remains robust, signaling an open bank syndication market.

Figure 41 > Trailing six-month leveraged loan issuance for LBOs (\$B)



Source: PitchBook | LCD • Geography: US • As of April 30, 2025

Figure 42 Trailing six-month CLO issuance (\$B)

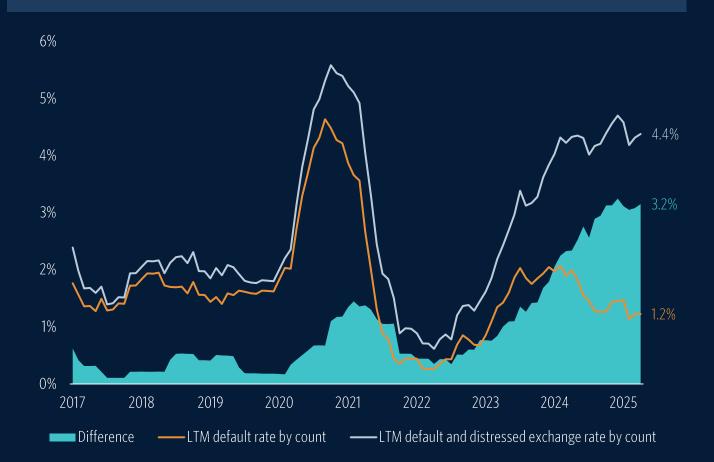


Source: PitchBook | LCD • Geography: US • As of April 30, 2025



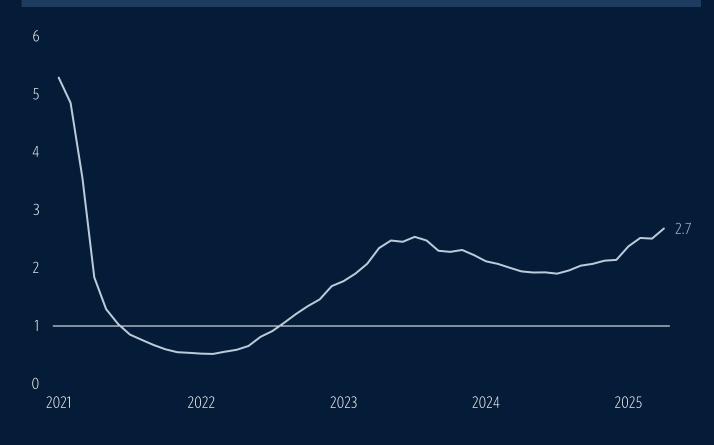
Leveraged loan defaults remain exceptionally low and are not raising immediate concerns. However, the continued rise in distressed exchanges indicates growing pressure on borrowers. Similarly, the increasing downgrade/upgrade ratio points to a negative shift in overall borrower quality.

Figure 43 > US leveraged loan dual-track default rates



Sources: PitchBook | LCD, Morningstar LSTA US Leveraged Loan Index • Geography: US • As of April 30, 2025

Figure 44 US leveraged loans rolling 12-month downgrade/upgrade ratio

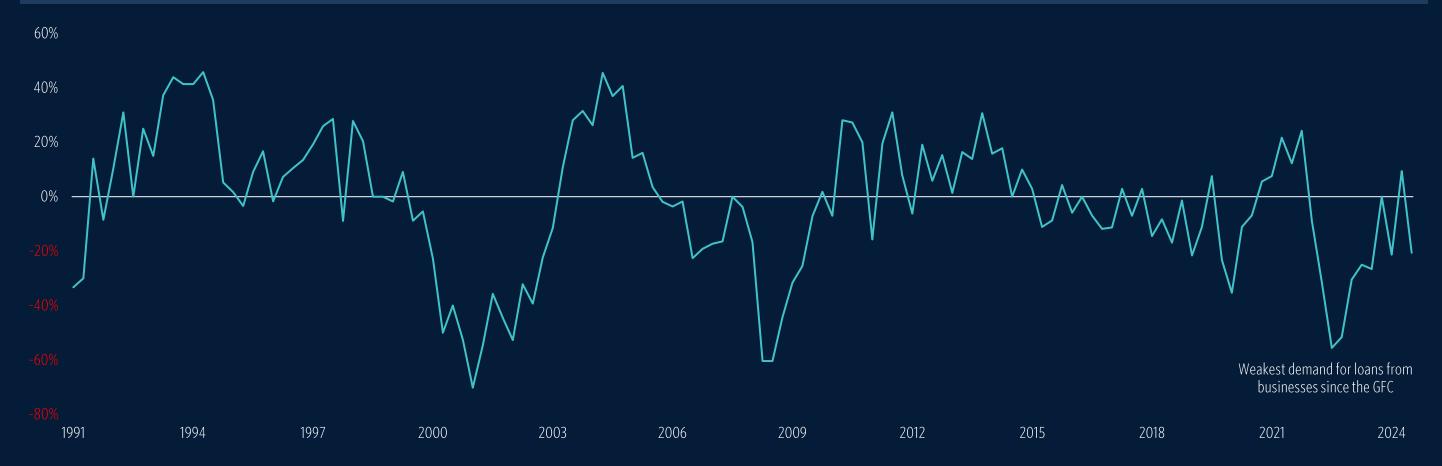


Sources: PitchBook | LCD, Morningstar LSTA US Leveraged Loan Index • Geography: US • As of April 30, 2025



#### Commercial banks reported rising business loan demand late last year, but that momentum flipped in Q1 2025.

Figure 45 Net share of commercial banks reporting stronger demand for business loans



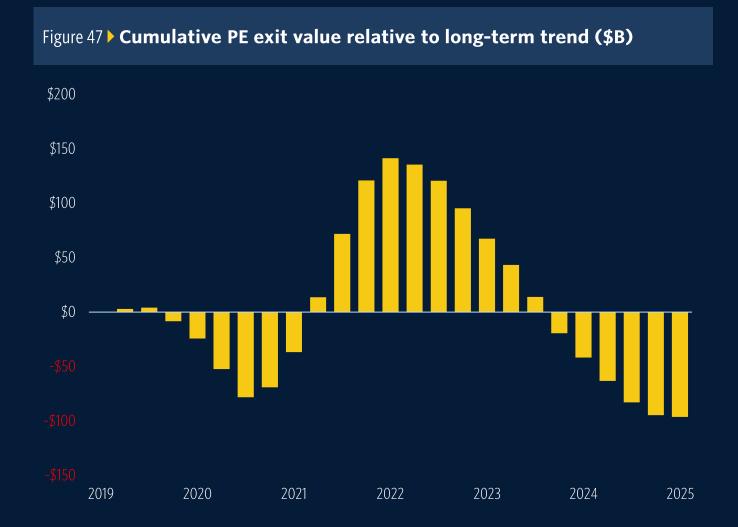
Source: <u>Senior Loan Officer Opinion Survey (SLOOS)</u> • Geography: US • As of March 31, 2025



PE exit value returned to its long-term trend for the first time since 2022, signaling the end of the longest dry spell in the past three decades. However, a significant period of above-trend activity will be needed to clear the backlog that was built up.

Figure 46 ▶ Trailing six-month PE exit value trends \$300 \$250 \$200 \$150 \$100 \$50 \$0 2013 2019 2022 2001 2004 2007 2010 2016 Exit value (\$B) **----** Long-term trend **----** Short-term trend



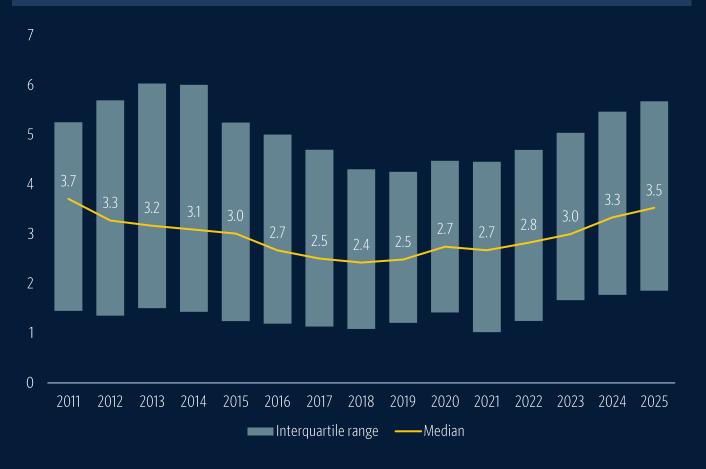


Source: PitchBook • Geography: US • As of March 31, 2025



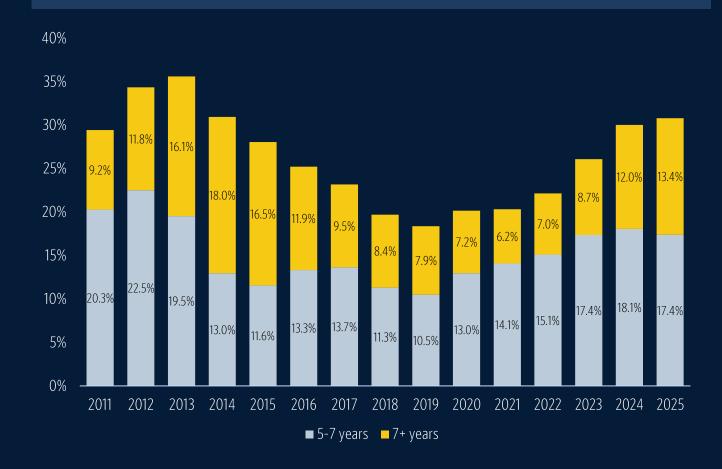
Aging portfolios are a direct result of the sluggish exit and distribution environment. The median holding period for buyout-backed companies has climbed to its highest level since 2011, with over 30% of these companies held for five years or more.

Figure 48 > Holding period of buyout-backed company inventory (years)



Source: PitchBook • Geography: US • As of May 5, 2025

Figure 49 Share of buyout-backed companies by holding period

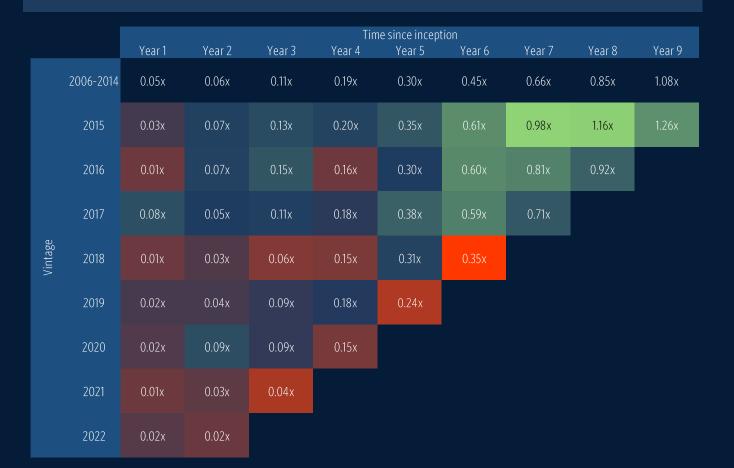


Source: PitchBook • Geography: US • As of May 5, 2025



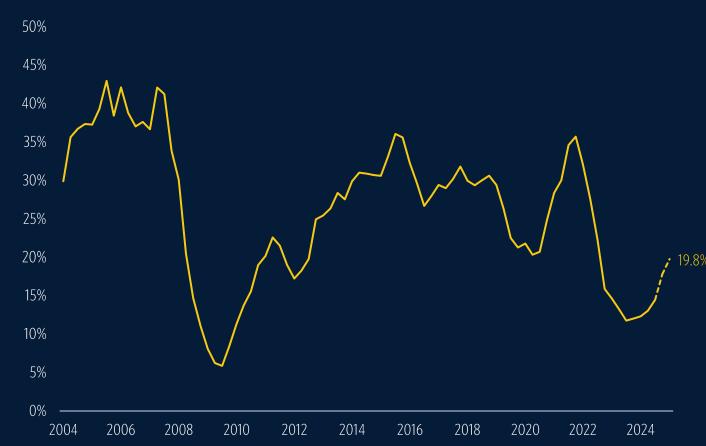
### Buyout fund distribution yields are estimated to recover marginally, but recent vintages are noticeably lagging the distribution pace set by older vintages.

Figure 50 **Buyout fund DPI by age and vintage year** 



Source: PitchBook • Geography: US • As of December 31, 2024 Note: 2006-2014 values are averaged across each time bucket. Shading represents difference from mean 2006-2014 values.

Figure 51 > TTM buyout fund distributions as a share of beginning NAV



Source: PitchBook • Geography: US • As of March 31, 2025 Note: The values for the two most recent quarters were estimated from buyout exit values.

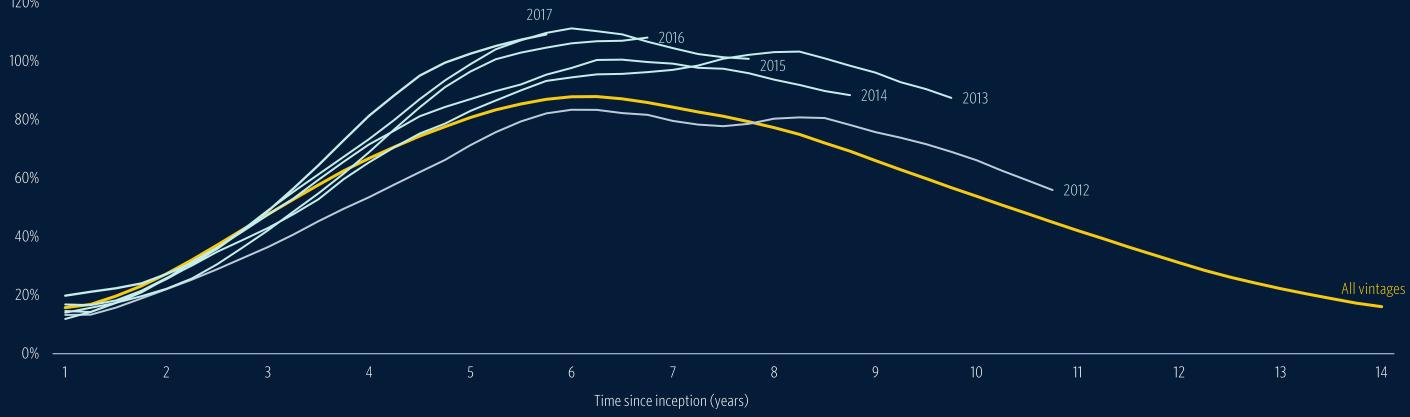


Strong asset performance during COVID-19 drove NAVs sharply higher, but buyout funds have struggled to realize those gains at a pace consistent with the historical buyout NAV trajectory.

Figure 52 Average buyout NAV as share of fund value for select vintages

120%

2017



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



The inability to realize gains has led to a buildup of aging assets, with NAV from buyout holdings 7 years old or older now accounting for 40% of total buyout NAV.

Figure 53 Buyout fund NAV (\$B) by age (years)

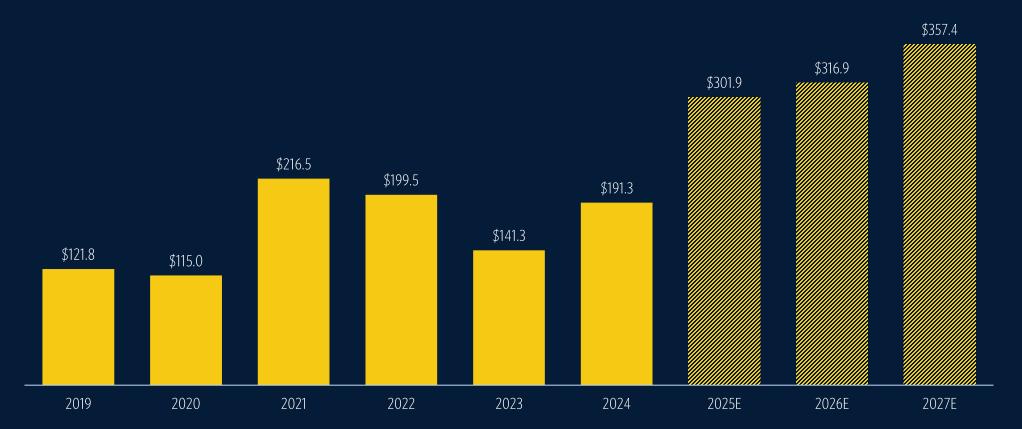


Source: PitchBook • Geography: US • As of September 30, 2024



#### Demand for distributions over the next few years is estimated to significantly exceed the market's current pace of delivery.

Figure 54 > Actual and estimated buyout fund distributions (\$B) from funds 7 years old and older



Source: PitchBook • Geography: US • As of September 30, 2024 Note: Annual values represent the trailing 12-month period ending in September.



#### **Estimating needed exit** liquidity

We estimated the aggregate liquidity demand based on the empirical relationship between NAV and forward distributions. For each fund age cohort, we fit linear regression models that predict distributions from each fund one, two, and three years ahead. As expected, higher NAVs are associated with higher distributions over each of the next three years, all else equal.

The models purposefully do not take into account the current exit environment because the goal was to determine the total estimated liquidity demand. If this demand cannot be met, it is likely that NAVs are currently overstated, and they will need to be discounted in order to clear the market.



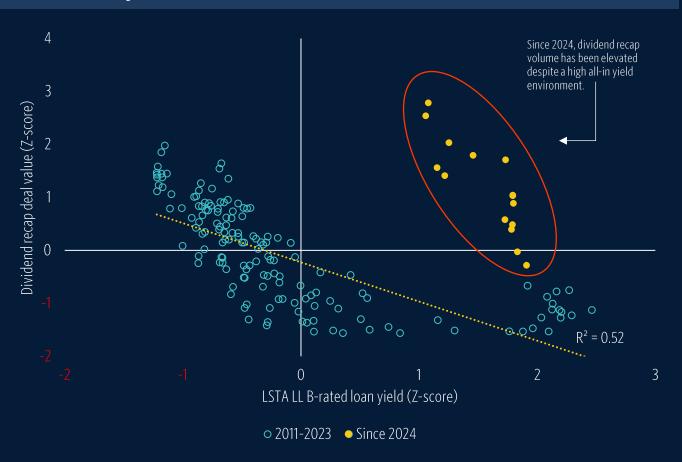
Recently, dividend recapitalizations have served as a release valve for funds seeking to generate distributions. However, due to heightened market volatility, the volume of dividend recaps is expected to decline in the near term.

Figure 55 > Standardized sponsored dividend recap deal value and LSTA LL B-rated loan yield



Source: PitchBook | LCD • Geography: US • As of April 30, 2025

Figure 56 Standardized sponsored dividend recap deal value and LSTA LL B-rated loan yield



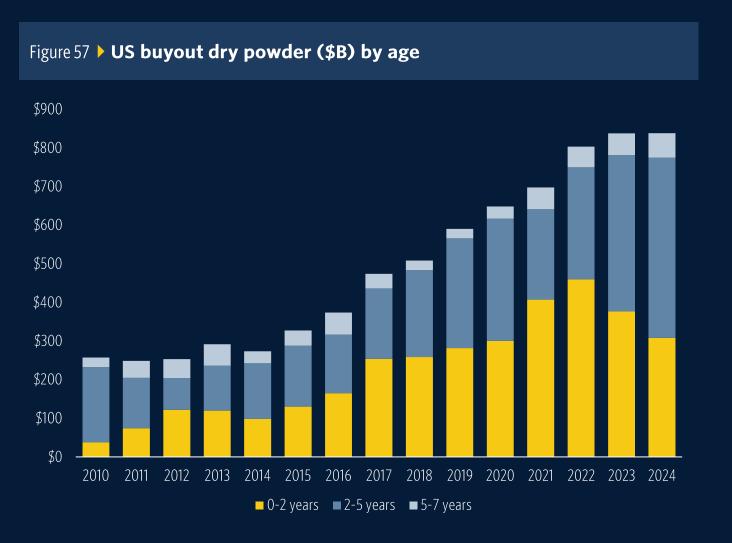
Source: PitchBook | LCD • Geography: US • As of April 30, 2025



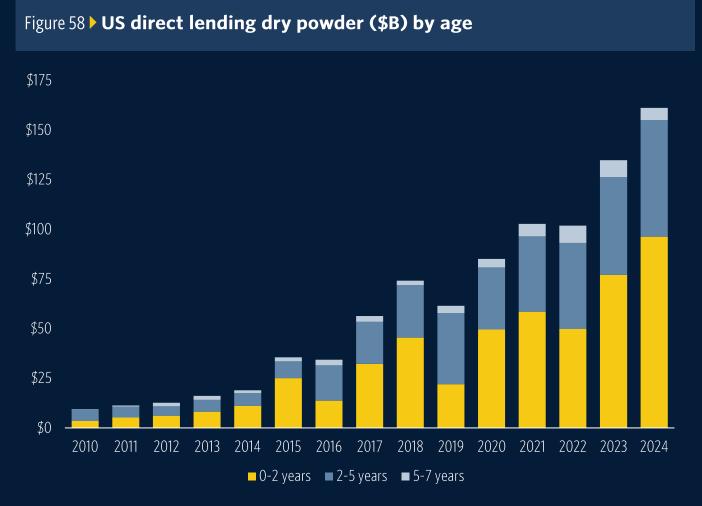
## Looking ahead



In parallel with aging NAVs, dry powder has remained on the sidelines for longer and longer. Direct lending dry powder is well-positioned to support future buyout deployment.





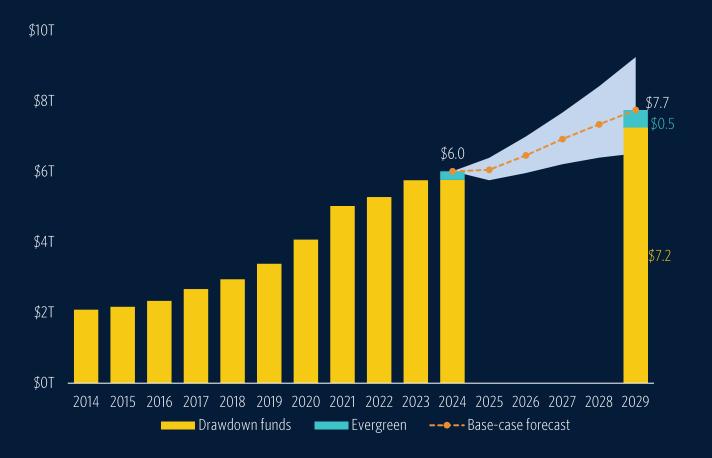


Source: PitchBook • Geography: US • As of September 30, 2024



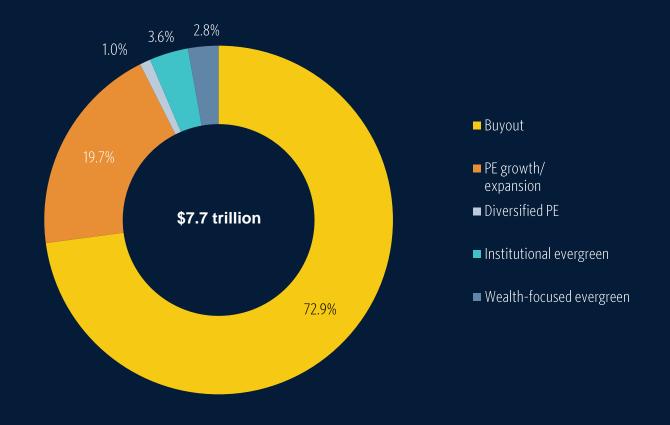
Despite near-term headwinds, we forecast global PE AUM will continue its upward trajectory, reaching \$7.7 trillion by the end of 2029. Traditional drawdown buyout funds will remain the primary investment vehicle, but we anticipate robust capital formation growth in evergreen structures as investor preferences evolve.

Figure 59 PE AUM forecast (\$T)



Source: PitchBook • Geography: Global • Forecasts as of April 14, 2025

Figure 60 > 2029 AUM forecast by substrategy



Source: PitchBook • Geography: Global • Forecasts as of April 14, 2025



#### Additional research

#### Market updates



#### Q1 2025 US PE Breakdown

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