PitchBook

QUANTITATIVE PERSPECTIVES

US PE Enters a New Regime

Q2 2022

US PE Enters a New Regime

Introduction

Recent market movements and economic data have signaled a regime shift in the underlying investment environment that will have a significant impact on private equity (PE). We wrote about this shift from a high-level macro perspective in this note. The post-pandemic regime was characterized by near-zero interest rates, excessive monetary and fiscal stimulus, easy credit conditions, and manageable inflation that fueled an unsustainable rise in asset valuations. The new regime, highlighted by uncomfortably high inflation, has put policy makers in a difficult position that will lead to less support of economic growth and financial markets.

In this report, we cover the key elements of this new regime and how it might impact the PE market. While PE dealmaking will be supported in the short-term by a near-record amount of dry powder and a robust funding market, investors will face several challenges, including rising interest rates, lower valuations, and less liquidity to support exits.

Research

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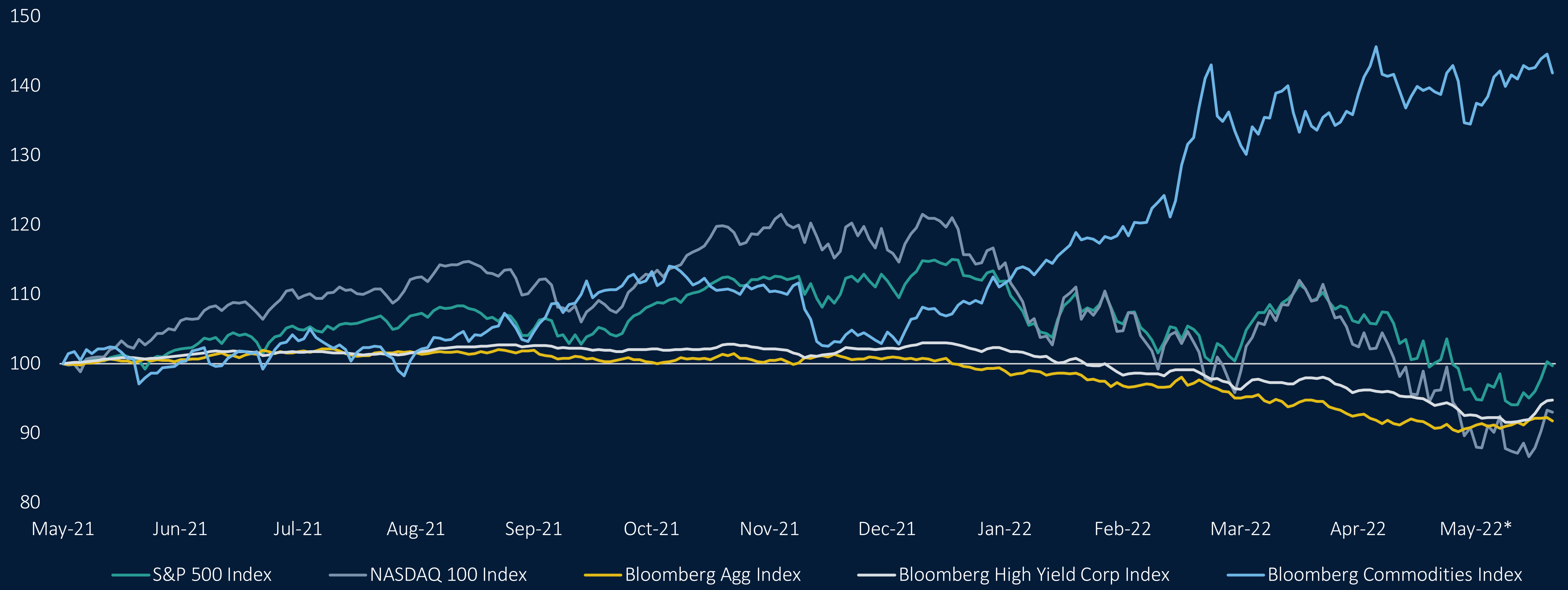
The market landscape

Key takeaways

- Except for commodities, public market asset classes have performed extremely poorly so far in 2022. A risk-balanced portfolio of equities and bonds experienced one of its worst drawdowns in the past 100 years as the traditional diversifying relationship between the two asset classes broke down.
- The drawdown in equities of around 20% was not out of the ordinary from a historical perspective, but there has been a sharp underlying rotation away from stocks with high valuations and implied growth rates into those with low valuations and implied growth rates. This phenomenon has had a severe impact on technology stocks, many of which have fallen by more than 50%.
- The combination of strong corporate earnings growth and falling equity prices has led to a moderation in public market valuation multiples, closing the valuation gap between private equity.
- The market's expectations of the federal funds rate at year-end 2022 increased by 200 basis points to 2.8% in the past six months. This rise in discount rates has been one of the key drivers of recent market turmoil and the underperformance of the technology sector.
- While inflation moderated slightly in April, the 8.2% year-over-year change in the Consumer Price Index (CPI) remained near a 40-year high. Inflation has been fueled by a positive demand shock created by monetary and fiscal stimulus, especially for physical goods, and continued supply and production constraints.
- The economy is suffering from a lack of labor supply as the gap between the number of job openings and total unemployed persons widened to a record 5.5 million in May.
- Despite the challenging environment, our economic modeling indicates there is only a 19% chance of a recession occurring in the next 18 months based on data available at the end of May.

Equity and fixed income returns have been poor, while commodities have experienced their best performance in decades.

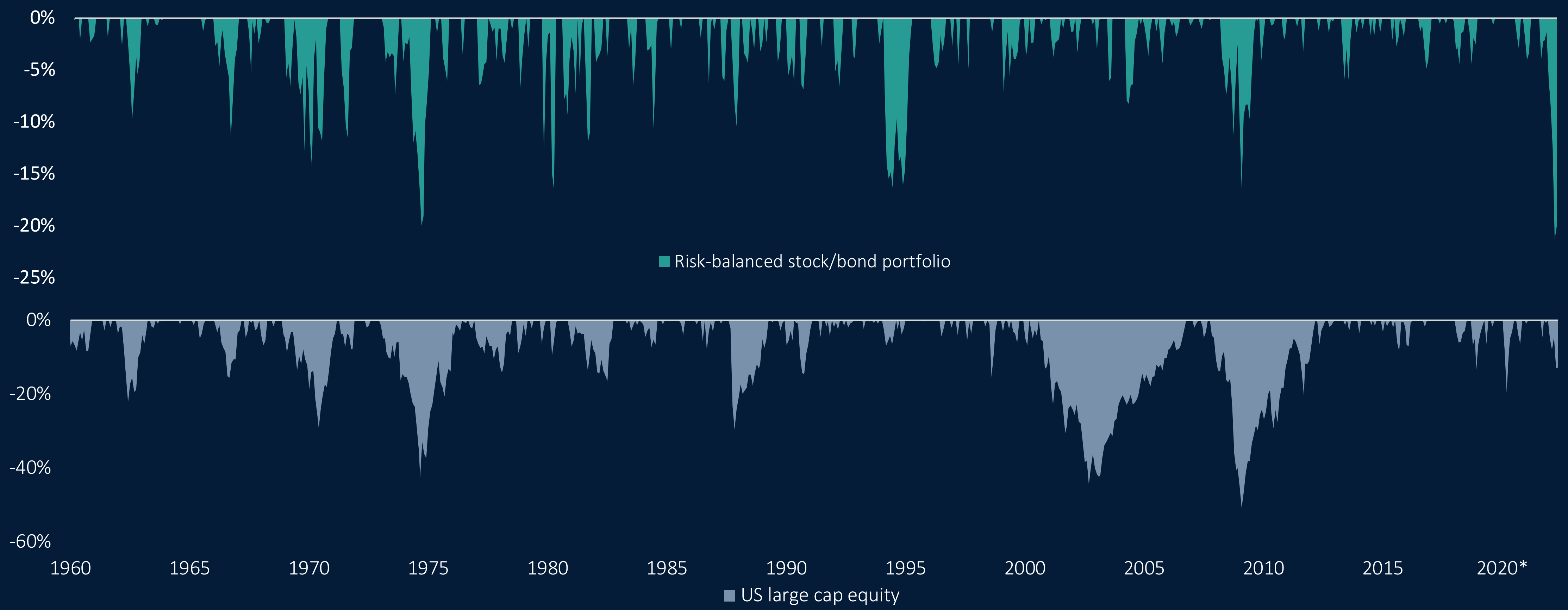
Total return indexes for select asset classes (indexed to 100)



Source: Morningstar | Geography: US
*As of May 31, 2022

A risk-balanced portfolio of stocks and bonds is experiencing one of its worst drawdowns ever, while the drawdown in the equity market alone is quite normal…

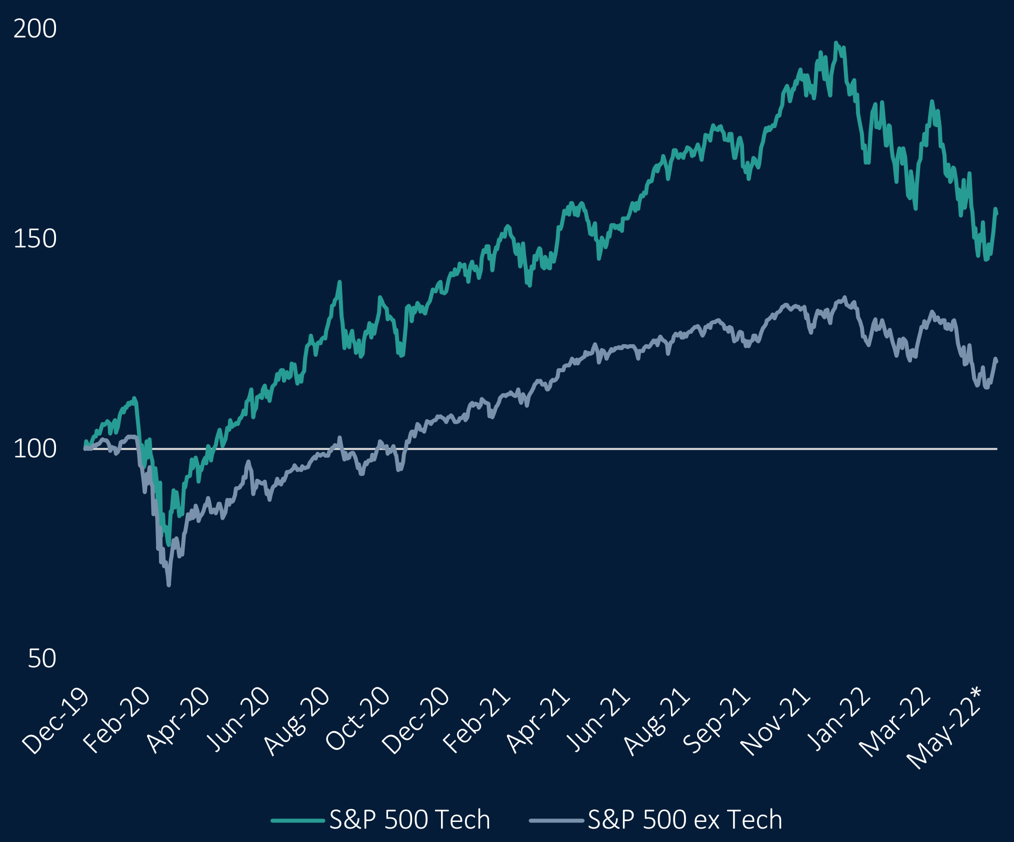
Drawdowns from prior peak



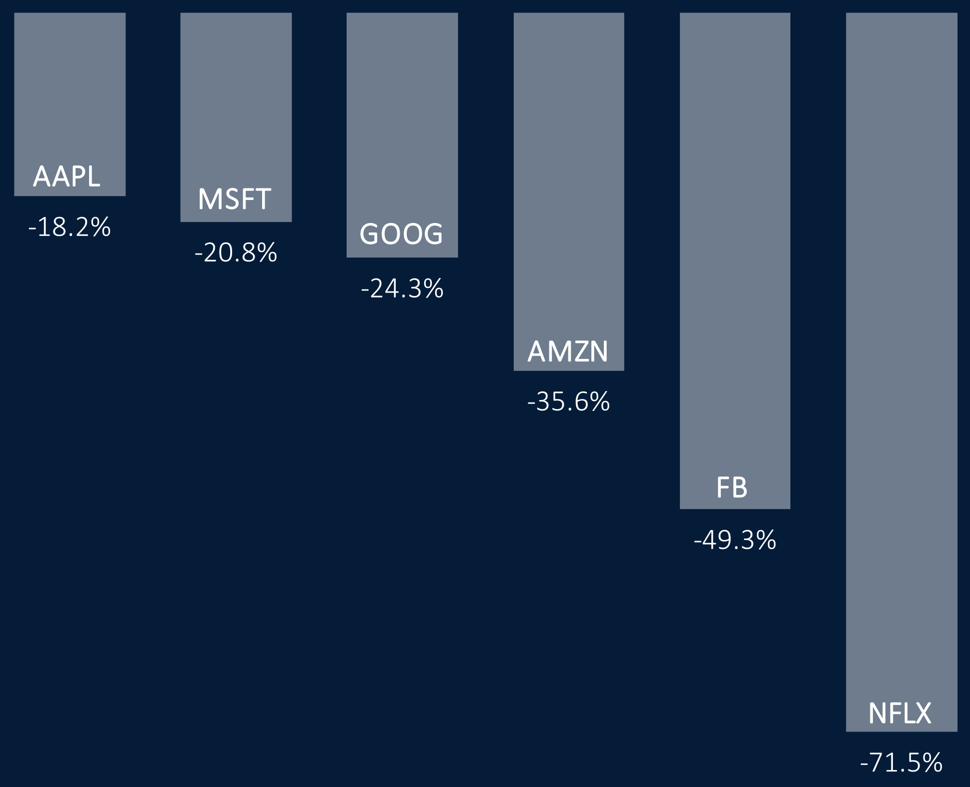
Source: Ibbotson Associates, SBBI | Geography: US
*As of May 31, 2022
Note: The risk-balanced portfolio allocations are based on full period ex-post volatility. Drawdowns are calculated using monthly data.

…but technology stocks that were the drivers of the post-COVID-19 rally have been hit harder, albeit from historically high valuations.

Total return indexes (indexed to 100)



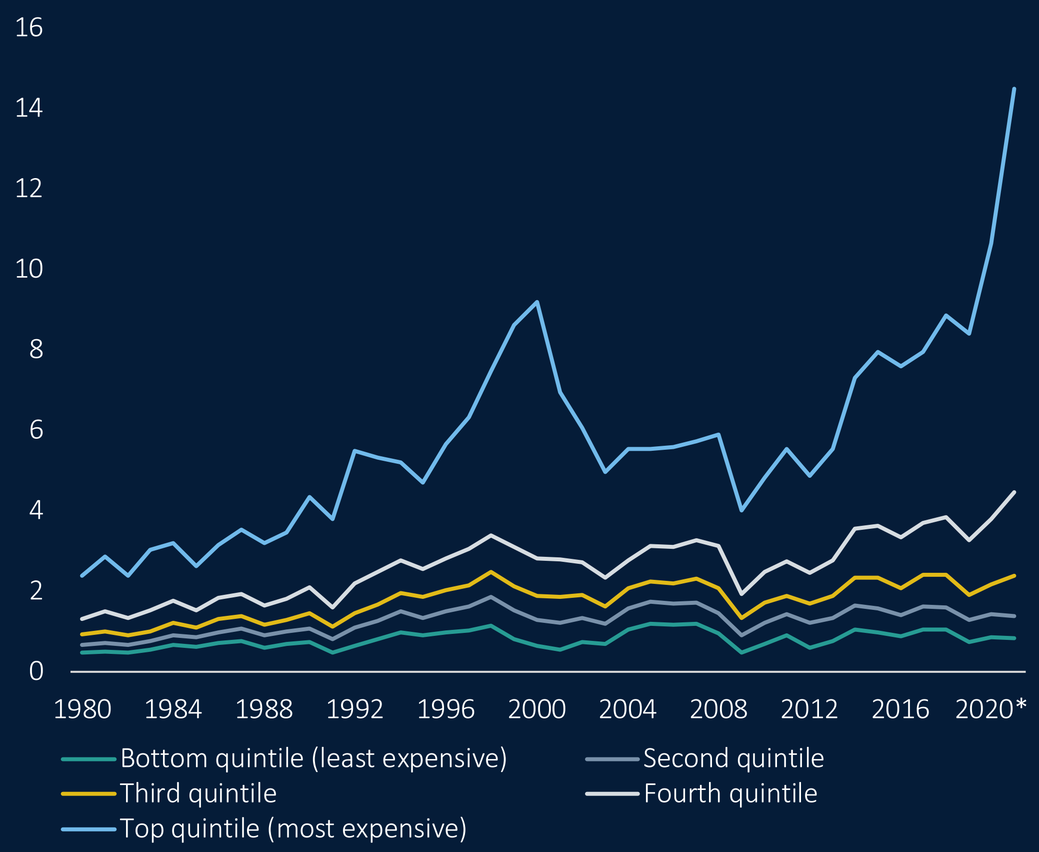
Current drawdowns of select technology stocks*



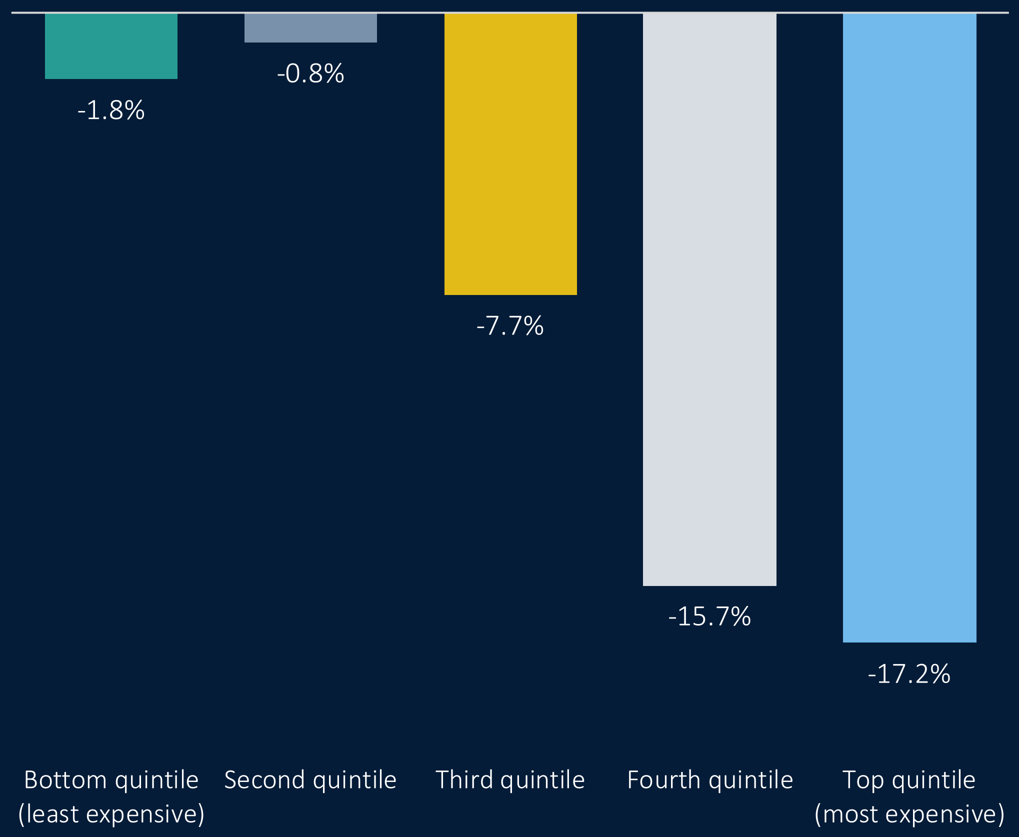
Source: Morningstar | Geography: US
*As of May 31, 2022

Equity performance by valuation quintiles shows that underneath the recent market turbulence there has been a rotation from expensive stocks into cheap stocks.

Market equity to book equity ratios by quintile



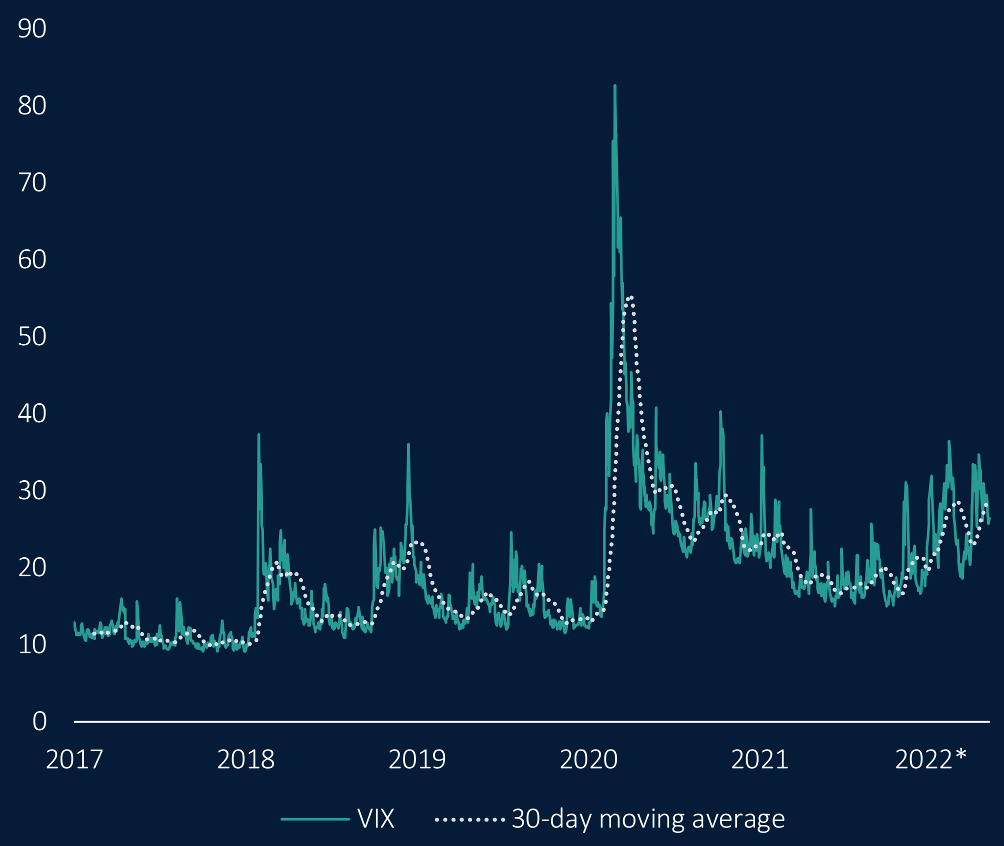
Year-to-date equity returns by valuation quintile**



Source: Kenneth French Data Library | Geography: US
*As of December 31, 2021
**As of April 30, 2022

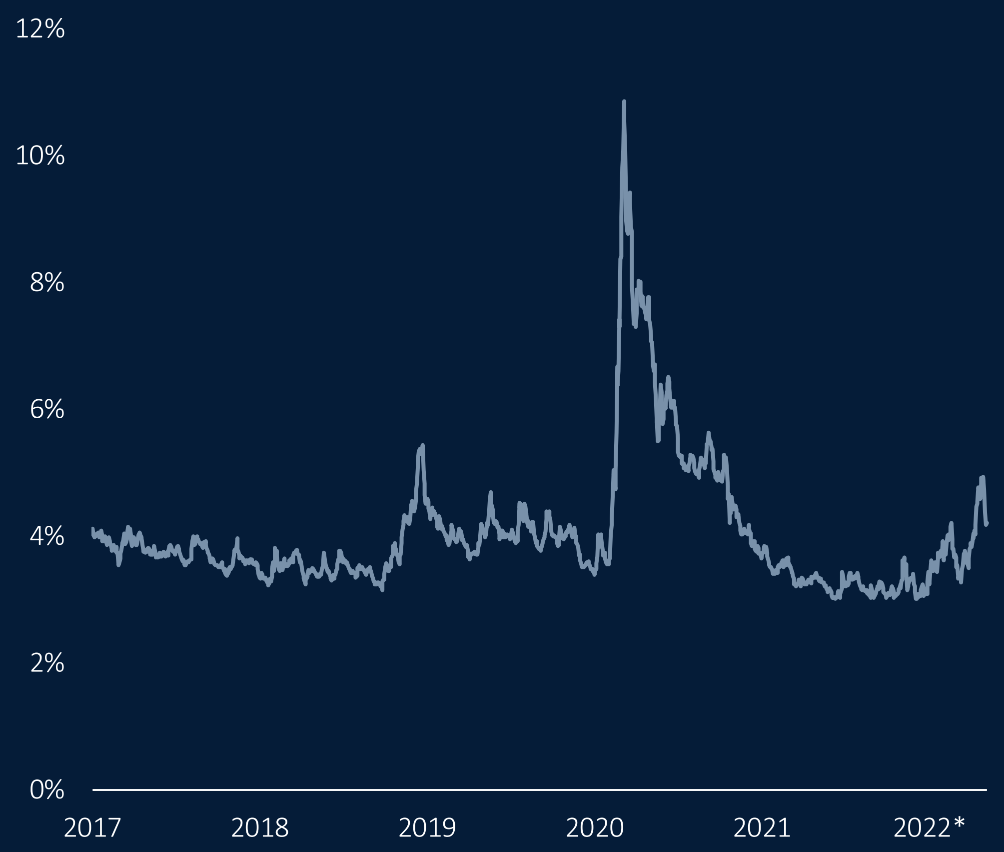
Key market risk indicators have risen only modestly.

S&P 500 implied volatility (VIX)



Source: CBOE | Geography: US
*As of May 31, 2022

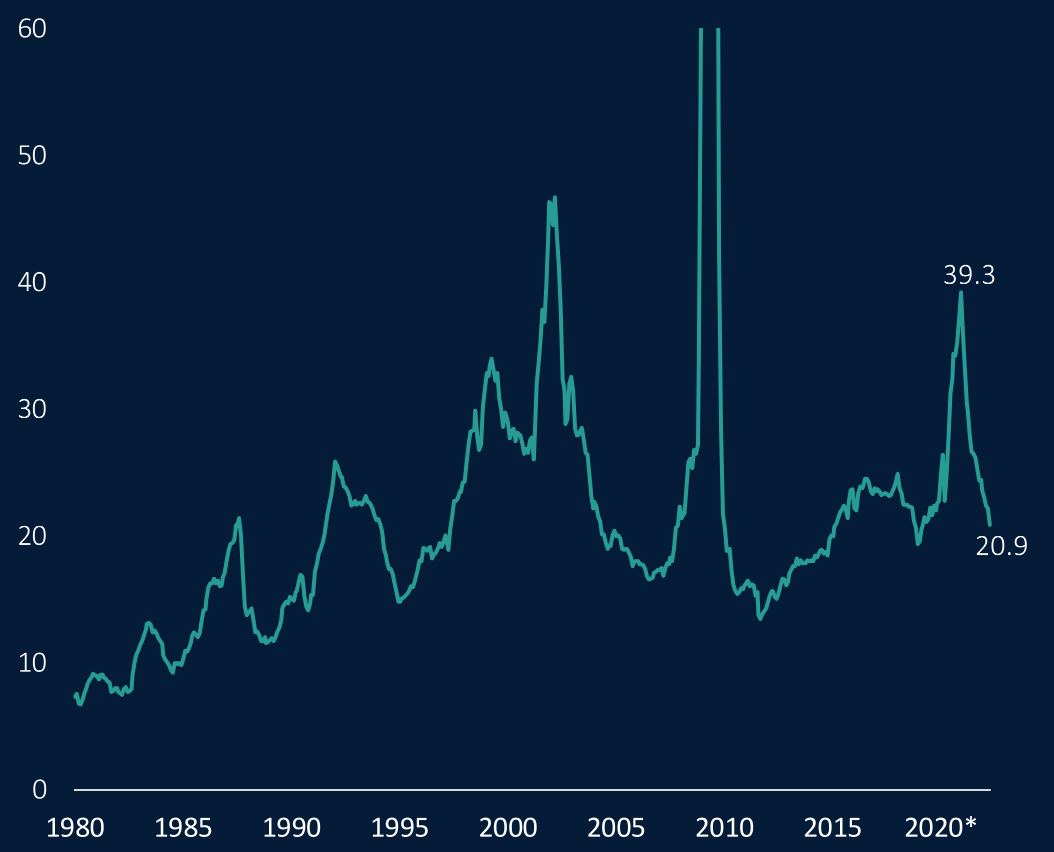
Corporate high-yield option-adjusted spreads



Source: ICE BofA Indices | Geography: US
*As of May 31, 2022

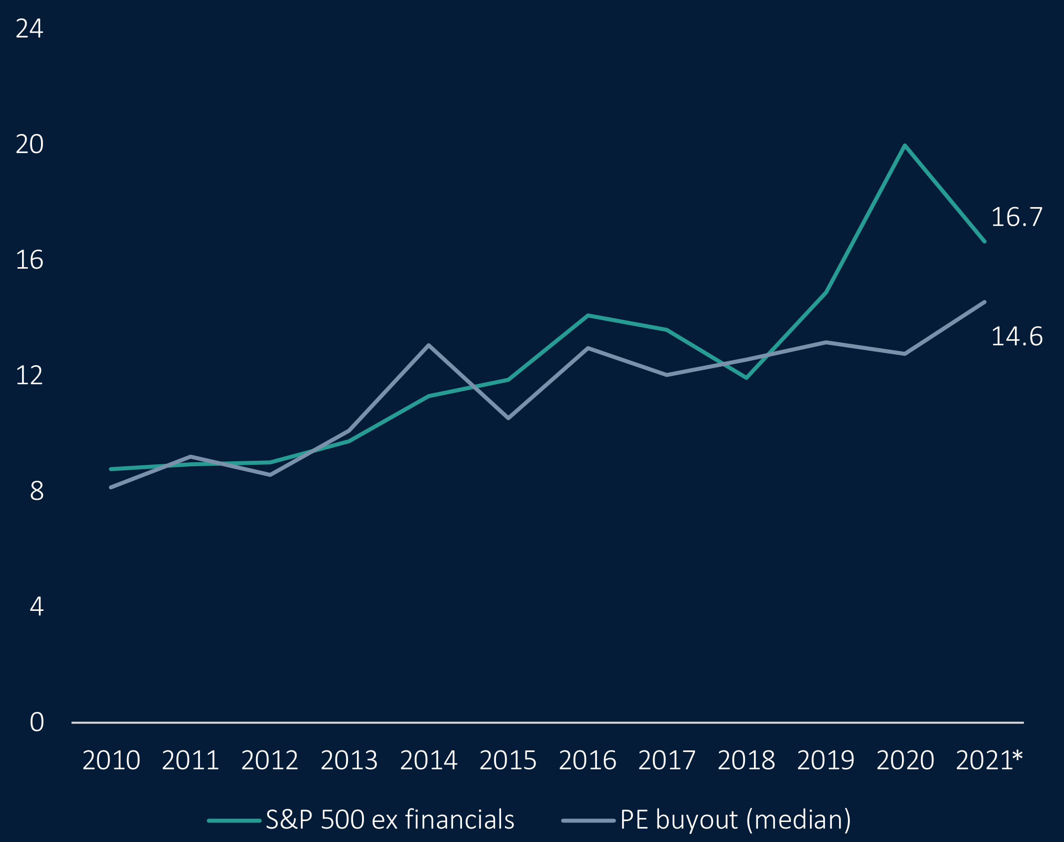
Valuations in the broader equity market have moderated, closing the gap between public and private markets…

S&P 500 trailing 12-month P/E ratio



Source: Robert Shiller | Geography: US
*As of April 30, 2022

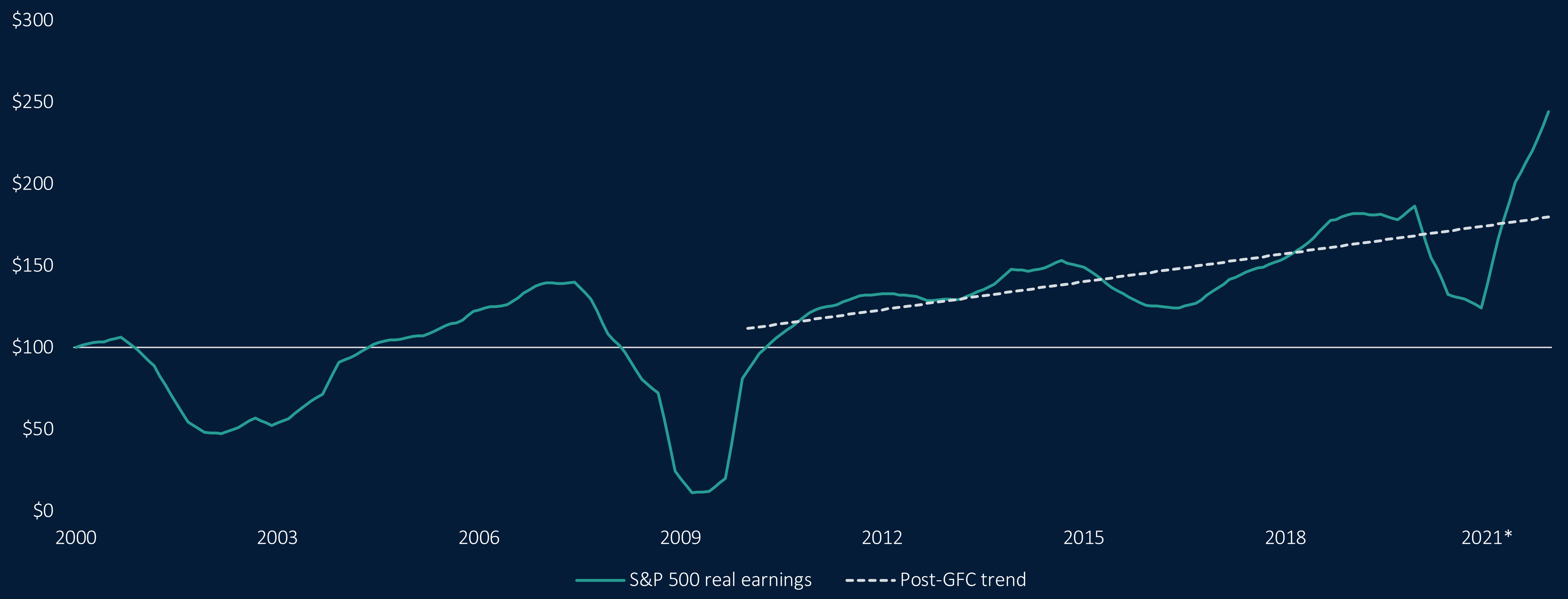
S&P 500 versus PE buyout EV/EBITDA ratios



Source: PitchBook, Morningstar, iShares | Geography: US
*As of December 31, 2021

…as the trend in real corporate earnings has continued to be extremely strong.

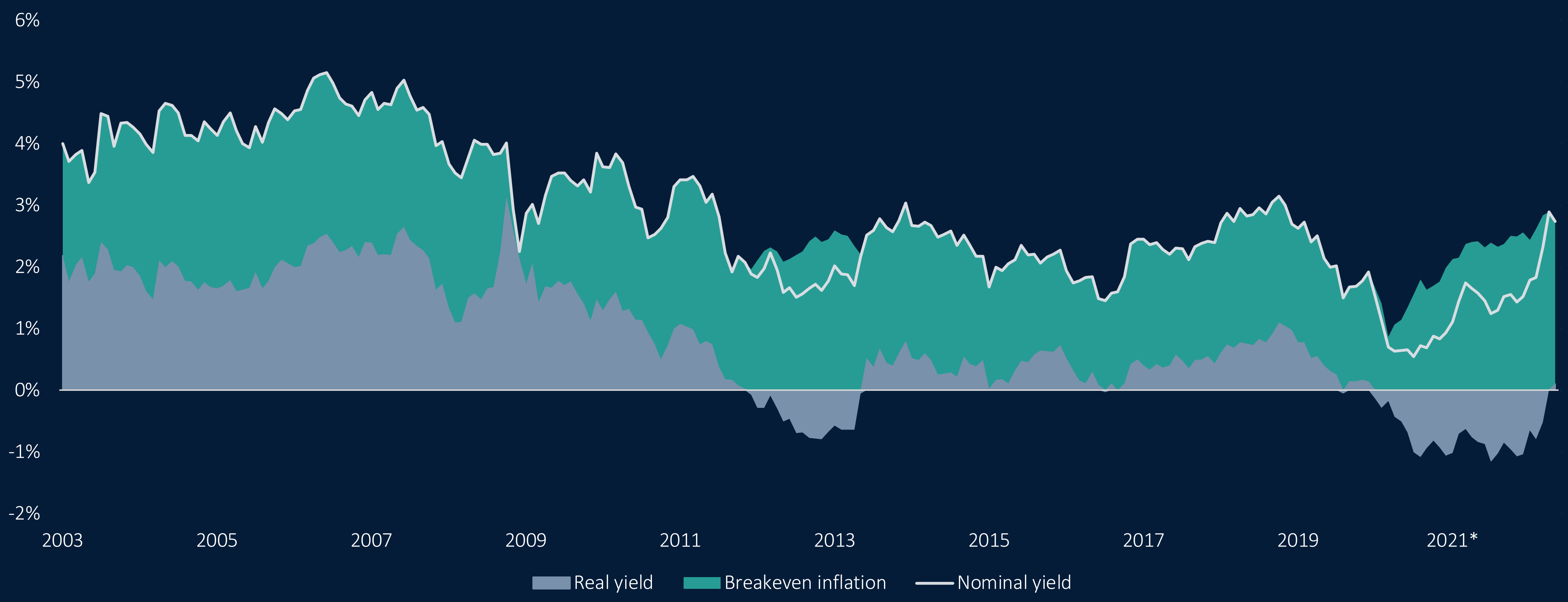
S&P 500 real earnings (indexed to $100)



Source: Robert Shiller | Geography: US
*As of December 31, 2021

The sell-off in risk assets, particularly those with high implied growth rates, has been influenced by a rise in long-term nominal and real yields…

10-year Treasury yield attribution



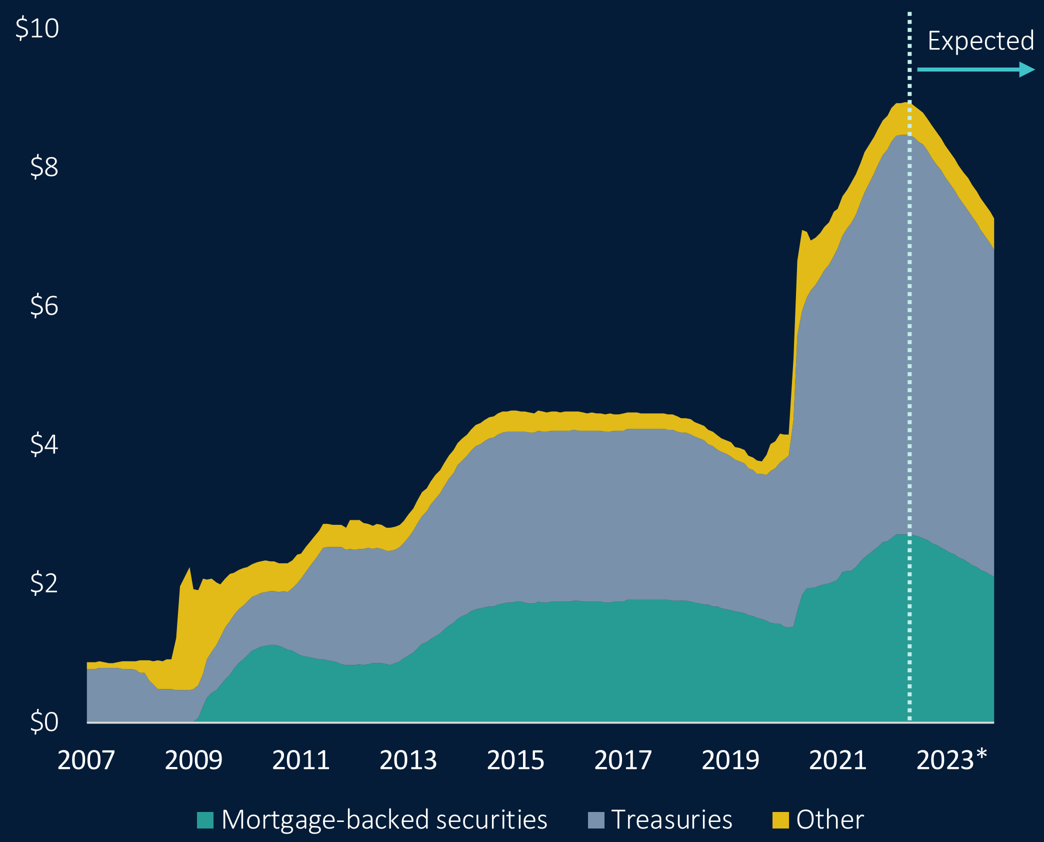
Source: FRED | Geography: US
*As of May 31, 2022

…and a sharp increase in the market's expectations of monetary tightening.

Market-implied fed funds rate at year-end 2022

Source: The CME Group | Geography: US
*As of May 31, 2022

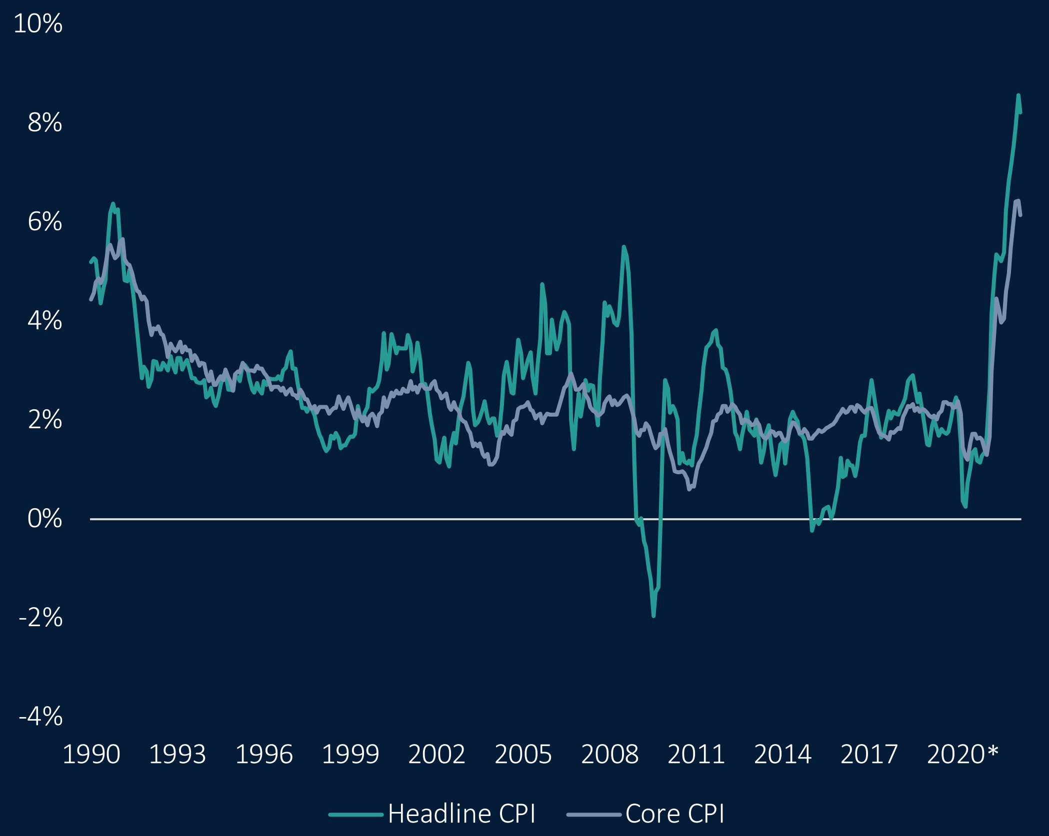
Federal Reserve balance sheet assets by type ($T)



Source: Federal Reserve | Geography: US
*As of April 30, 2022
Note: Expected balance sheet assets are based on the Fed's announced run-off schedule.

Rising and high inflation has been the key driver of monetary tightening expectations, and its future path will be essential in determining Fed policy.

Year-over-year change in the consumer price index (CPI)



Source: Bureau of Labor Services | Geography: US
*As of April 30, 2022

Medium-term inflation expectations

Source: New York Fed, FRED | Geography: US
*As of April 30, 2022

Inflation has been fueled by extraordinarily strong consumer demand, especially for goods...

Real consumer spending (percentage difference from pre-COVID-19 trend)

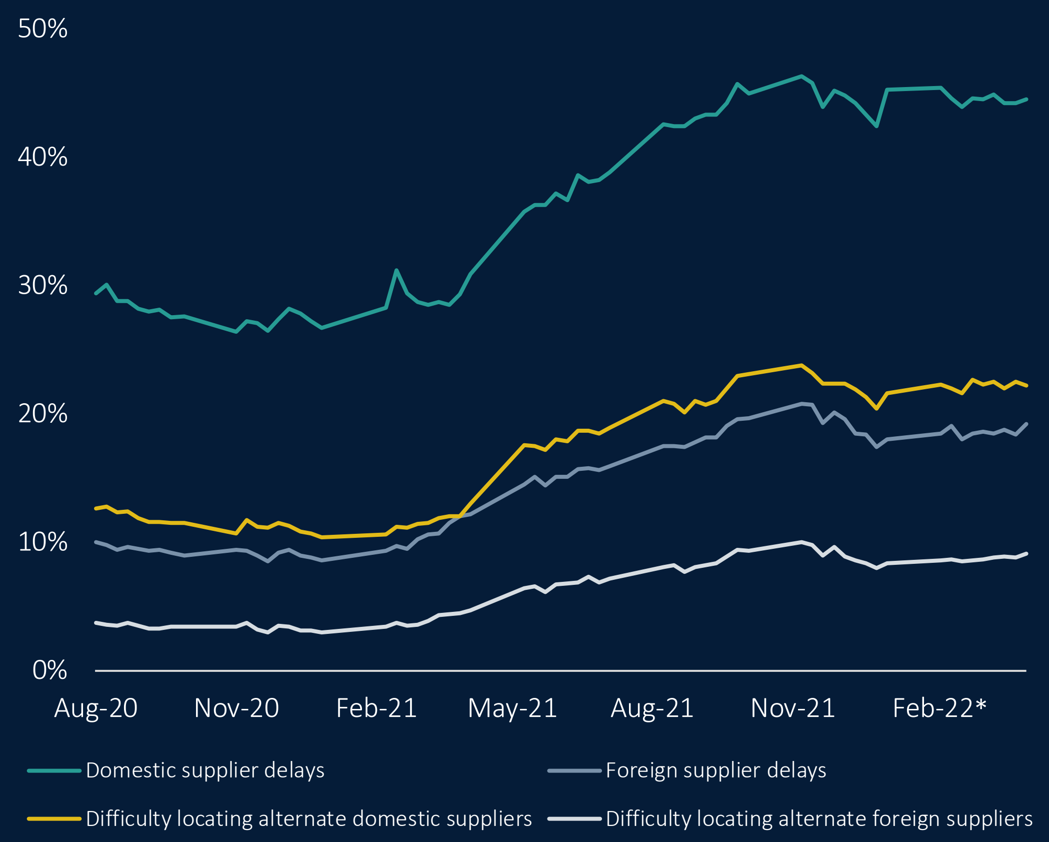
Source: Bureau of Economic Analysis | Geography: US
*As of April 30, 2022

The COVID-19 pandemic and the response from policy makers created a unique environment for consumers. Personal incomes and demand soared at the same time people were unable to go out and spend money on services, such as travel and leisure. Therefore, this demand shifted to goods, which led to the biggest increase in consumer spending on record. Meanwhile, supply chain issues limited goods production. The combination of a positive demand shock and a negative supply shock was a perfect storm for inflation.

While the mix of consumer spending is slowly shifting back toward services, there remains a significant imbalance relative to normal. Further increases in spending on services would help ease inflationary pressures, although a continued rise in wages would limit this effect.

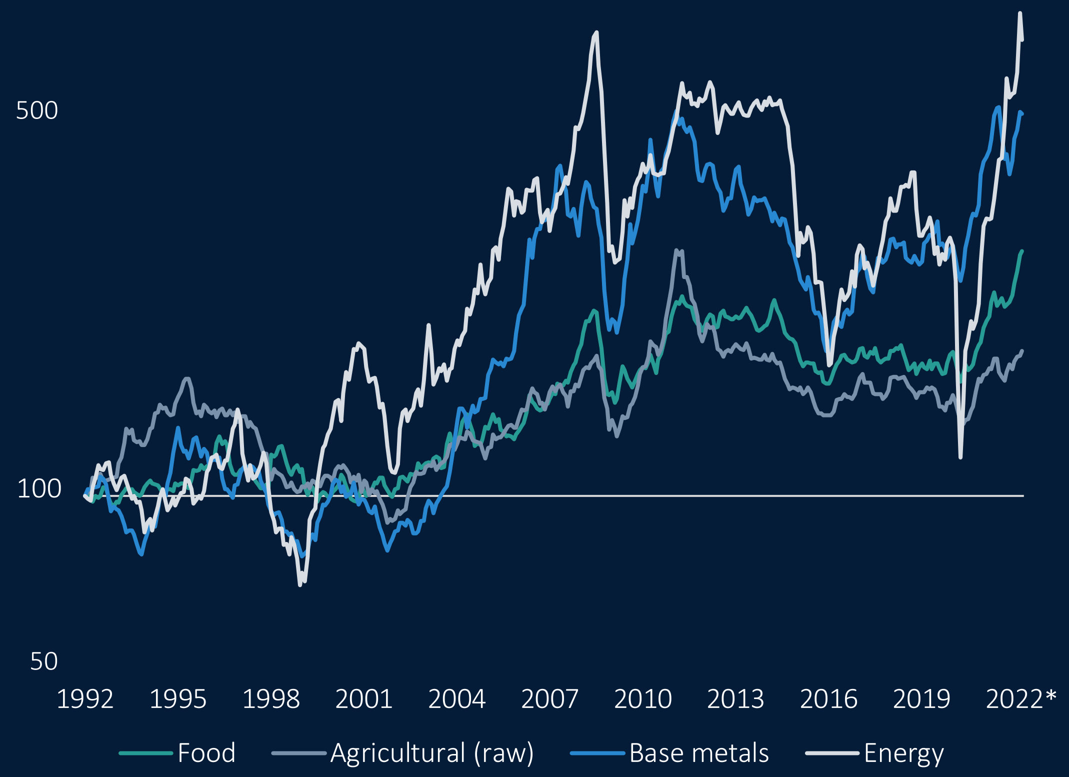
…and persistent supply chain issues that have helped send commodity prices soaring, especially energy and base metals.

Businesses reporting supply chain issues as a share of those surveyed



Source: US Census Pulse Survey | Geography: US
*As of April 17, 2022

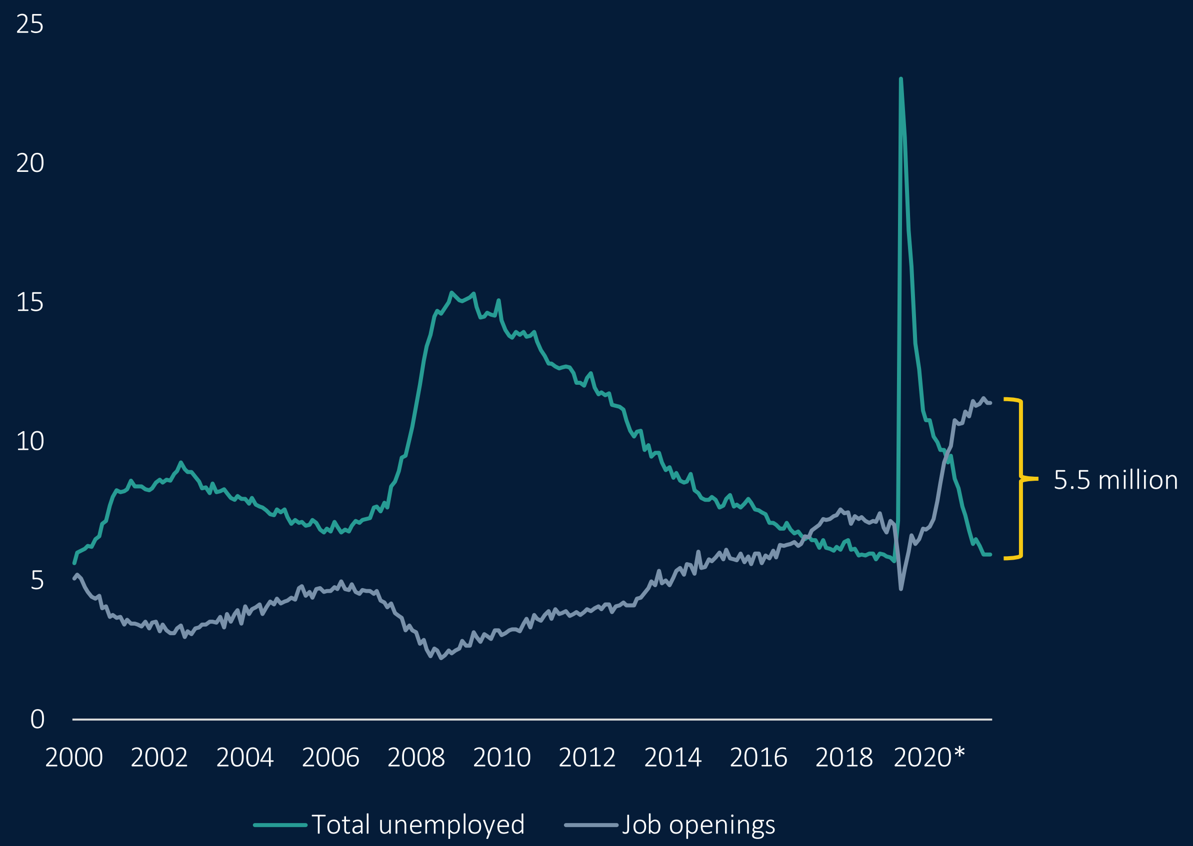
Global commodity price indexes (indexed to 100 USD, log scale)



Source: IMF | Geography: Global
*As of April 30, 2022

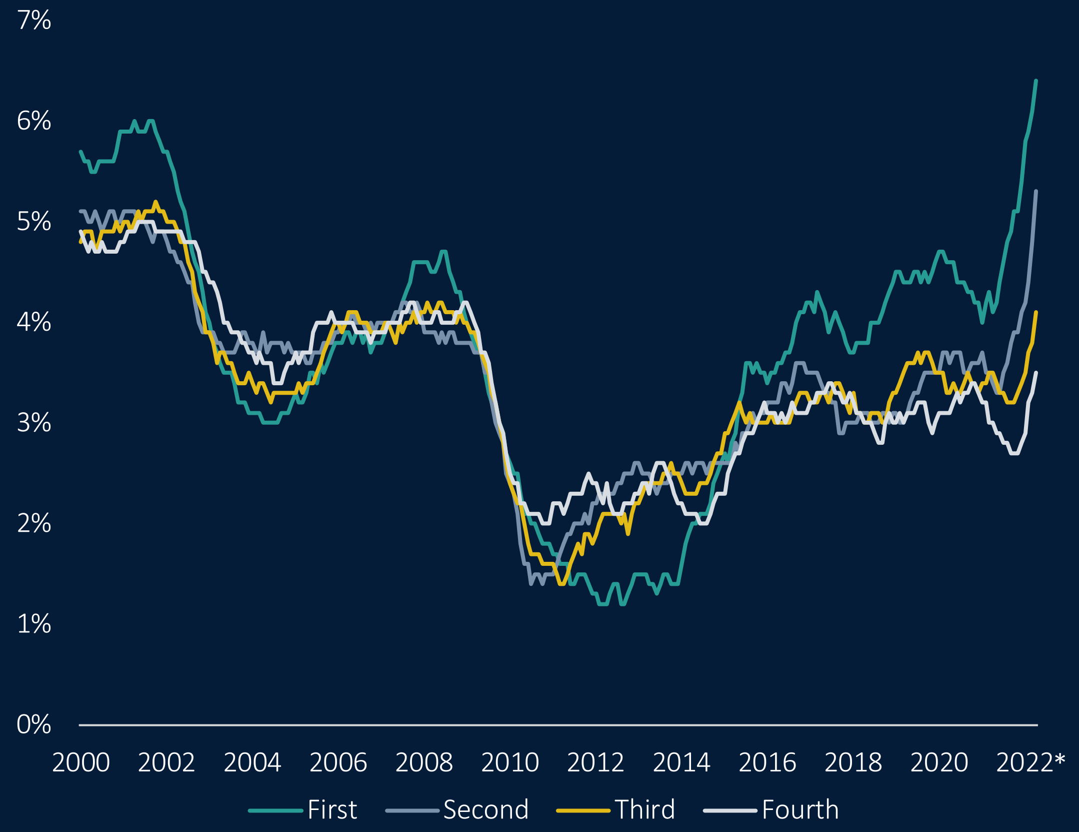
A tight labor market is a headwind to easing production constraints, and labor is becoming increasingly expensive.

Total unemployed and job openings (millions)



Source: Bureau of Labor Statistics | Geography: US
*As of May 31, 2022

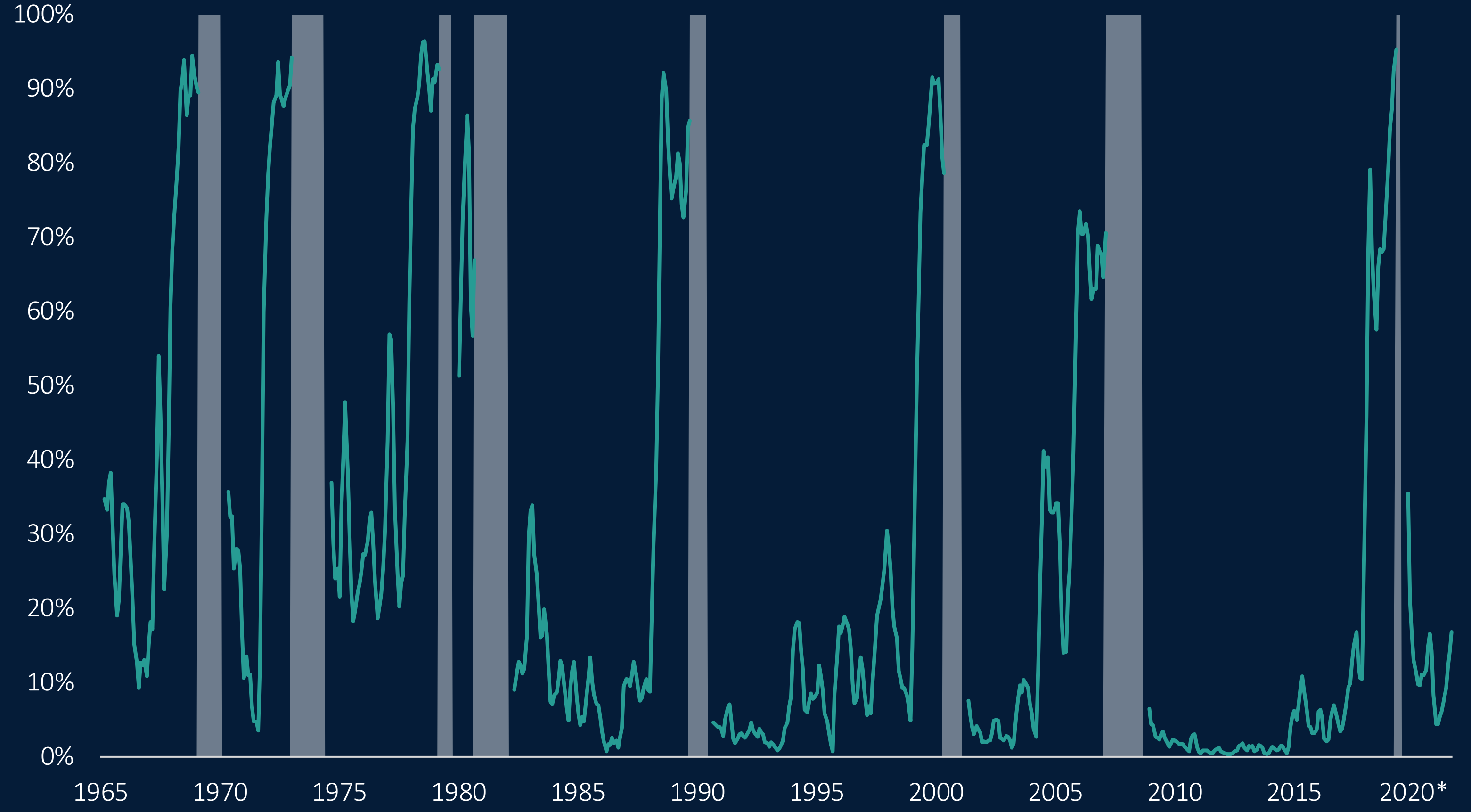
Wage growth by wage quartile (12-month rolling median)



Source: Atlanta Fed | Geography: US
*As of April 30, 2022

Despite the challenging macro backdrop and elevated market volatility, our model indicates that recession risk is still low.

Smoothed probability of a recession occurring in the next 18 months



Source: PitchBook | Geography: US
*As of May 31, 2022
Note: Predictions are out-of-sample and not made during a recession.

Our recession model considers 13 different macroeconomic and market variables to determine the probability that a recession will occur at any time in the following 18 months.

The model was trained on data going back to the 1950s and out-of-sample predictions were generated from 1965 to present. This span contains eight instances of recession. The predictions have been correct about 90% of the time.

Contributions from high inflation and a tight labor market were offset by a moderate level of economic output relative to potential.

Recession model inputs*

	Feature	Normalized importance (0 least, 1 most)	Value	Normalized value	Contribution to recession prob
Economic	GDP slack (% of potential)	1.00	-1.4%	-0.26	-14.6%
Economic	Inflation (CPI, YoY)	0.34	8.2%	1.69	5.9%
Economic	Household debt (YoY)	0.28	7.3%	-0.16	-0.1%
Economic	Unemployment rate (level)	0.25	3.6%	-1.35	3.8%
Economic	Corporate debt (YoY)	0.21	5.2%	-0.55	-0.4%
Economic	Corporate profit margins (YoY	0.07	1.2%	1.19	-1.1%
Economic	Unemployment rate (YoY)	0.01	-2.4%	-1.70	1.3%
Market	3-month Treasury bill (YoY)	0.79	1.0%	0.67	5.6%
Market	Yield curve spread (level)	0.71	1.3%	0.30	-2.5%
Market	Corporate credit spread (YoY)	0.28	-0.7%	-1.03	-0.9%
Market	Yield curve spread (YoY)	0.17	0.8%	1.13	1.5%
Market	Corporate credit spread (level	0.14	2.1%	-0.11	0.2%
Market	Stock prices (YoY)	0.00	-1.7%	-0.67	-0.4%

Source: PitchBook, Morningstar, FRED | Geography: US
*As of May 31, 2022

The inputs to the recession model were selected based on two primary criteria: 1) a clear relationship between the variable and traditional business cycle theory and 2) a long data history going back to at least the 1950s so that the model could be trained over as many cycles as possible. While the inputs capture many key predictors of economic activity, they are not exhaustive.

The current prediction is strongly influenced by the GDP slack variable, which measures actual economic output relative to the economy's maximum sustainable output. GDP slack has recently dislocated from its historical relationships with other indicators—like the unemployment rate—mainly due to people not returning to the labor force. If low labor force participation persists, the GDP slack variable may be biased to the downside, and in turn, the model may be underestimating the probability of a recession.

Spotlight: Buyout financing

Key takeaways

- Buyout dealmaking has been fueled by the maturation of the leveraged loan market, which now exceeds $1.4 trillion in outstanding loans.
- Issuance of loans that were specifically used to fund buyout deals, which represent around 35% of total issuance, has slowed in Q2 2022 from near-record levels.
- Driven by demand for yield, the credit quality of leveraged loans has deteriorated over the past five years, suggesting the market is at an elevated risk of an economic downturn. More than 64% of outstanding loans are rated single B (just one rating above junk status), up from just 45% at the beginning of 2017.
- Financing costs for single B-rated loans have increased to 5.9% from a record low of 4.3% at the beginning of 2022, driven by increases in both benchmark interest rates and credit spreads.
- The rise in financing rates would result in a 33% increase in interest expenses for a baseline buyout deal with a valuation of 12x EBITDA and a debt-to-equity ratio of 1. To offset this increase and keep interest coverage ratios at acceptable levels, buyout investors will likely seek deals at lower valuations.
- It will be much more difficult to mitigate the impact of a continued increase in financing costs on companies that have already undergone a buyout, especially in the event of a recession.

The leveraged loan market—the lifeblood of PE buyouts—has continued to mature at a rapid pace.

Leveraged loans outstanding ($B)

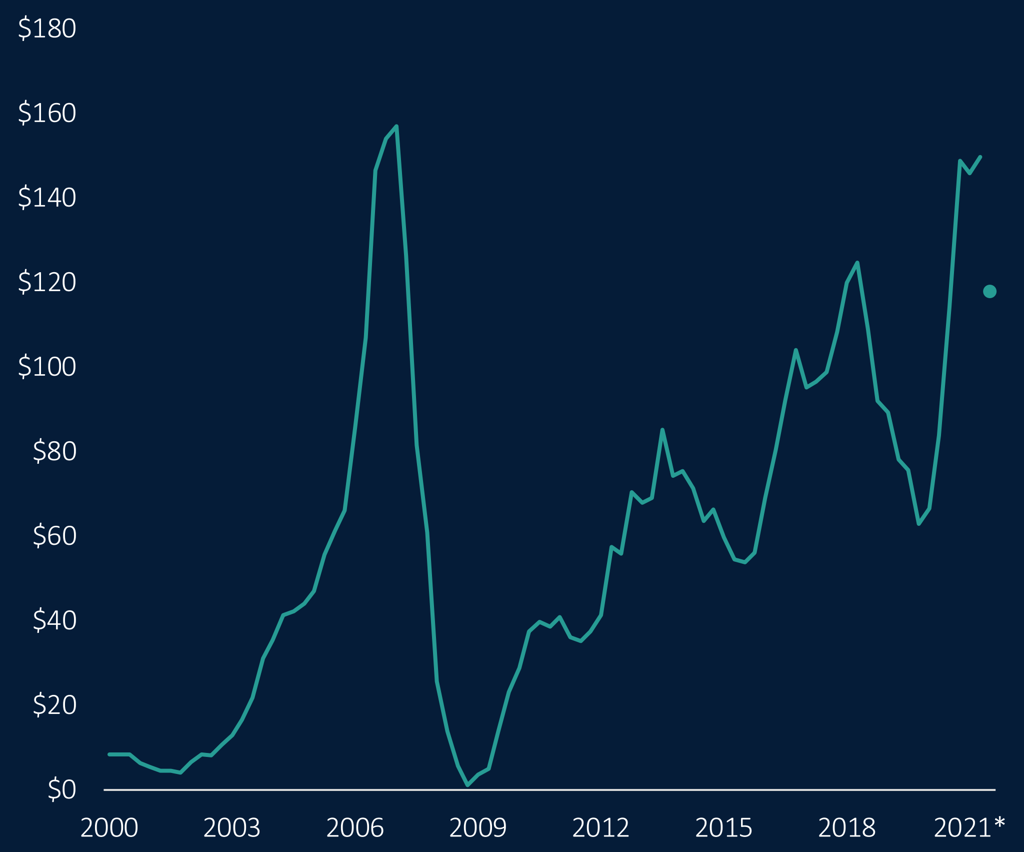
Source: LCD | Geography: US
As of May 17, 2022

The US leveraged loan market recently surpassed $1.4 trillion in outstanding value amid strong demand for high yielding credit and protection from rising interest rates. The continued growth of this financing market has provided PE investors with an ample source of cheap credit that has supported the surge in buyout activity since the middle of 2020.

The market is facing several risks that could impact both buyout dealmaking as well as buyout-back companies. First, if interest rates continue to rise, it would place pressure on valuations and coverage ratios. Second, if a recession is on the horizon, not only would it put pressure on margins and worsen liquidity, but it could also cause a further deterioration in credit quality and weaken investor demand.

Leveraged loan issuance for buyouts slowed in Q2 from a near-record level reached at the end of 2021.

Rolling four-quarter leveraged loan issuance for buyouts ($B)

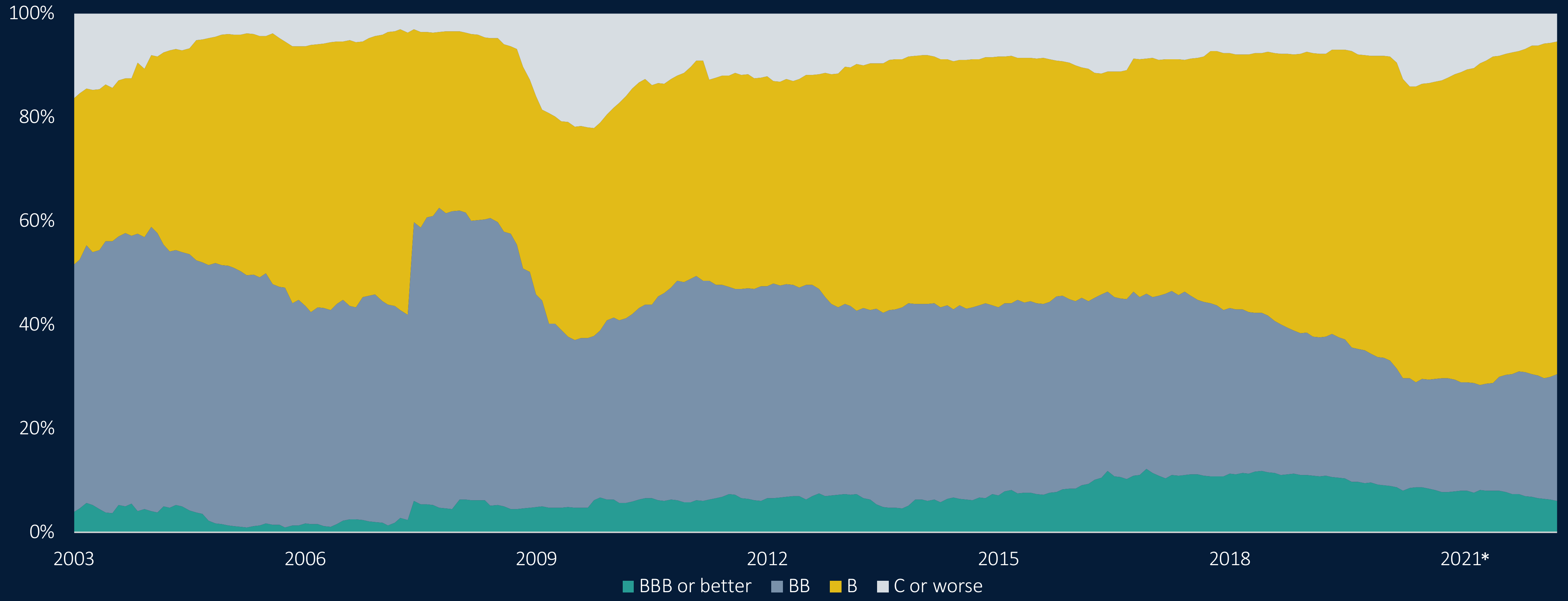


Rolling four-quarter leveraged loan issuance for buyouts as a proportion of total issuance (excluding refinancings)

Source: LCD | Geography: US
As of May 31, 2022

The credit quality of the overall leveraged loan market has deteriorated since 2017, suggesting companies are at an elevated risk of an economic downturn…

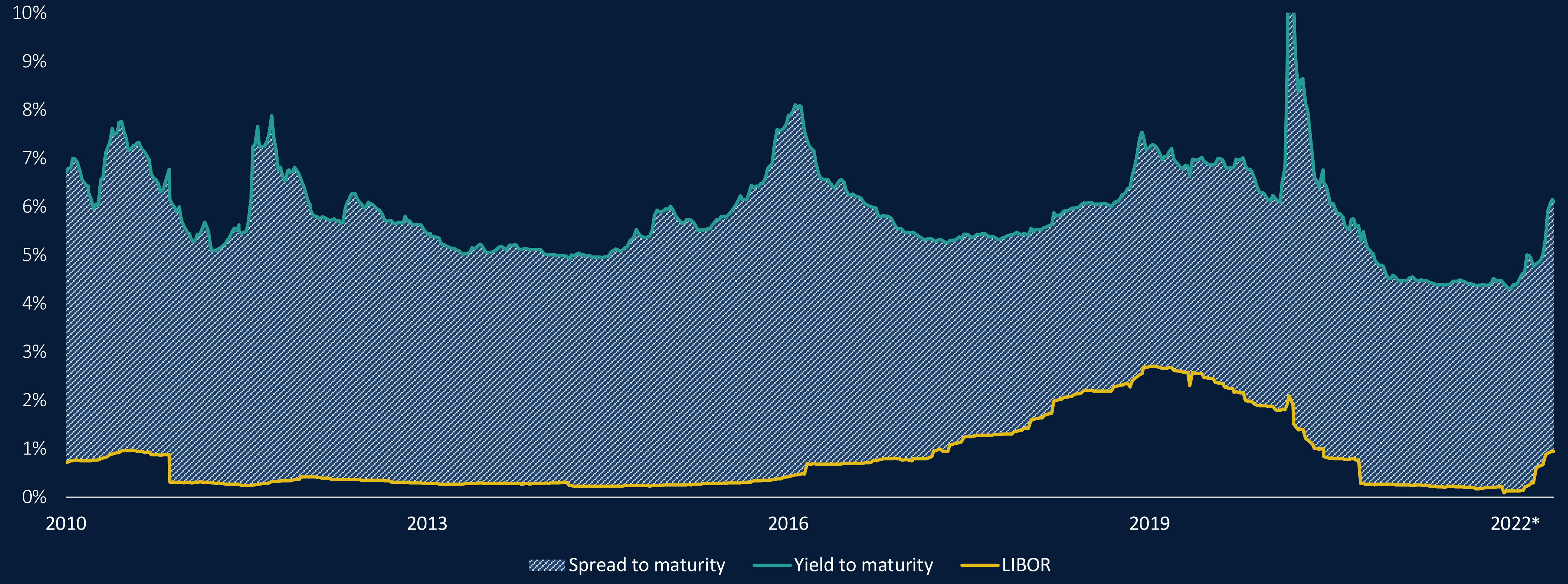
Leveraged loans outstanding by credit rating (par value)



Source: LCD | Geography: US
As of April 30, 2022

…while borrowing costs are increasing at the same time, driven by both spreads and benchmark interest rates.

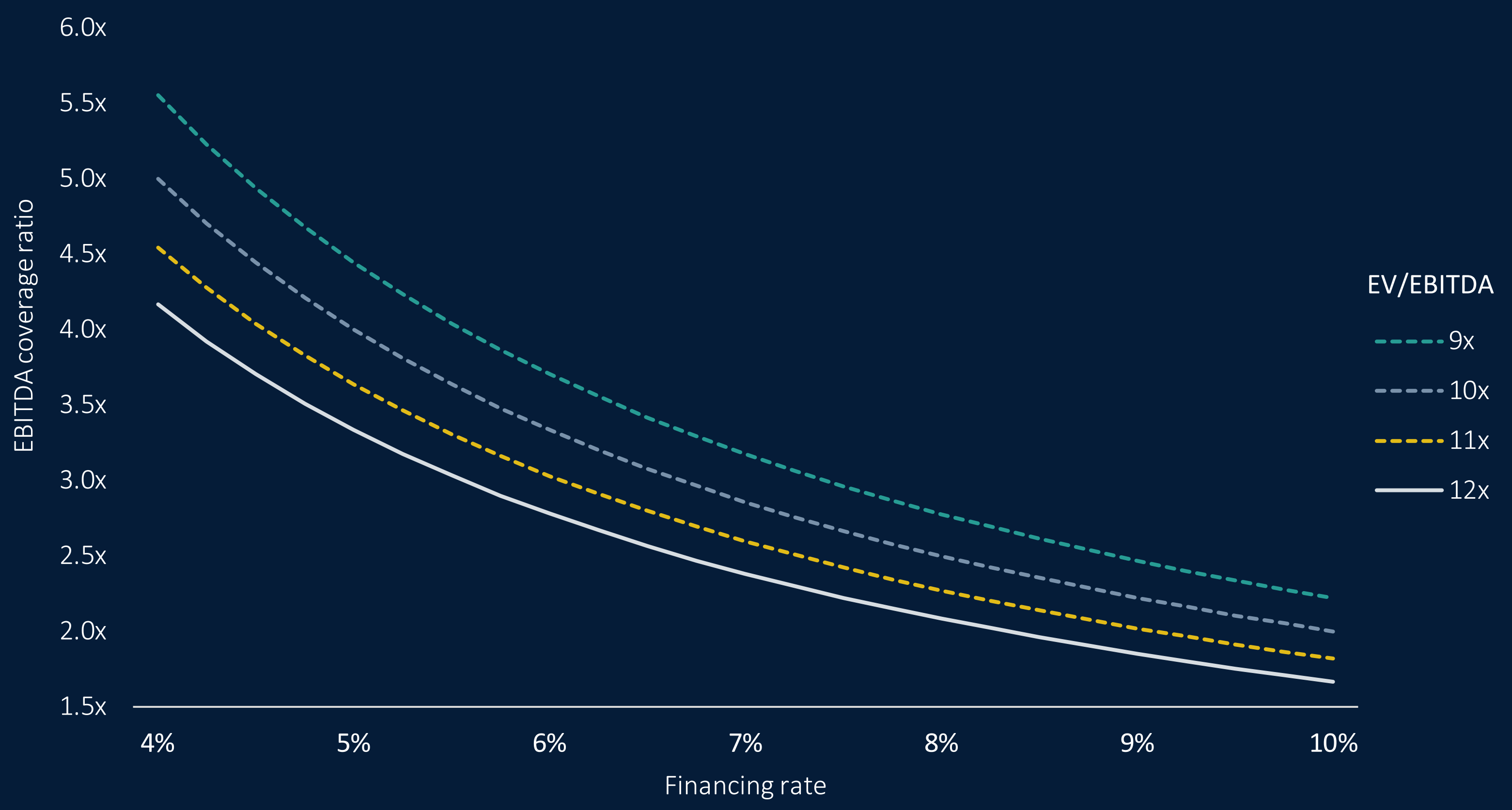
Yield to maturity attribution for B-rated leveraged loans



Source: LCD | Geography: US
As of May 31, 2022

A decline in valuations would directly offset the impact of an increase in borrowing costs on coverage ratios for future buyout deals...

Impact of financing rate and valuation on the coverage ratio



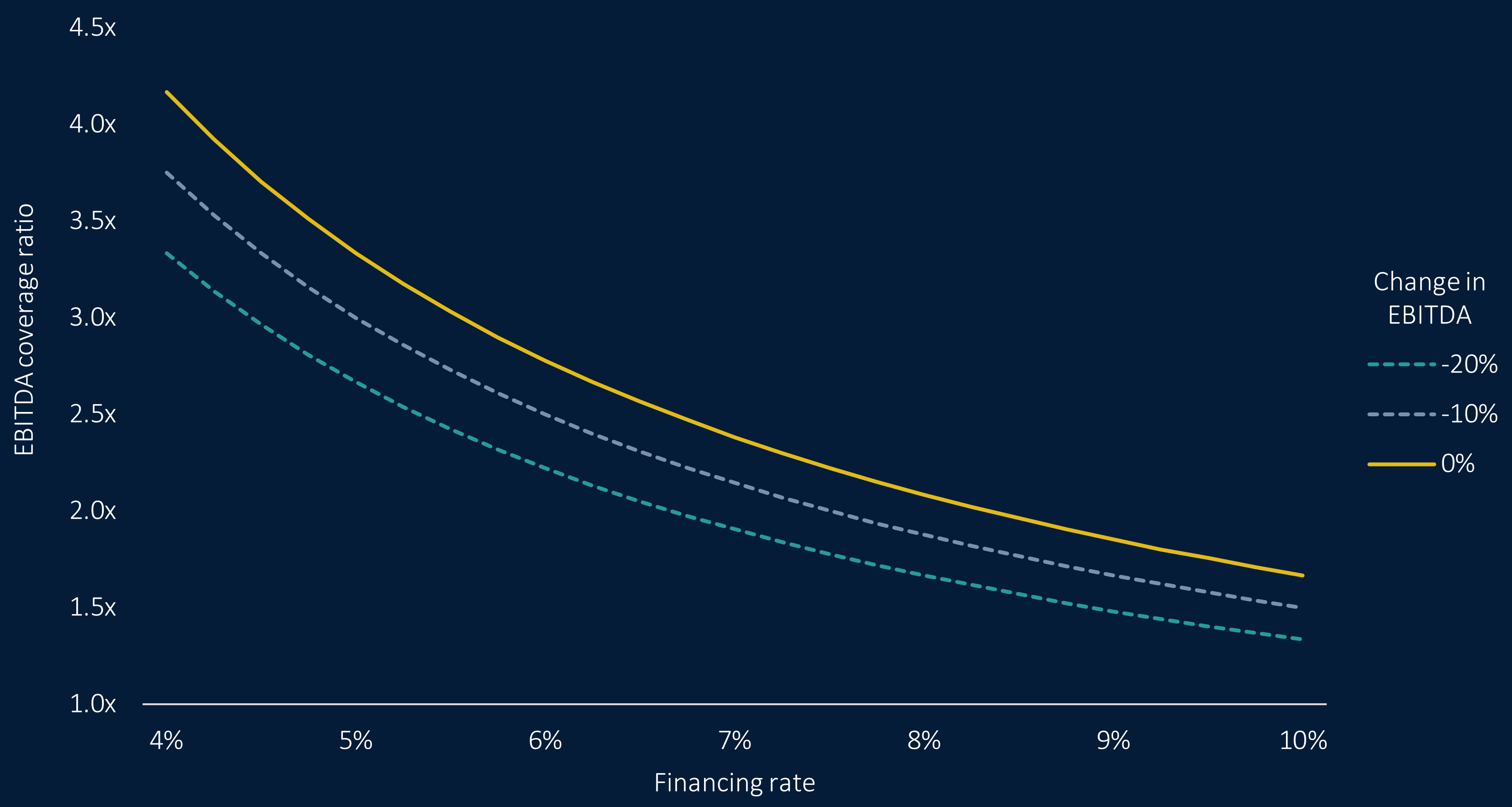
Source: PitchBook
Note: For illustrative purposes only. Assumes a debt-to-equity ratio of 1.

The current median EV/EBITDA buyout multiple of 12x, a financing rate of 6.0%, and a debt-to-equity ratio of 1 result in an interest coverage ratio of 2.8x. If interest rates increased by another 200 basis points—which the market is pricing—the interest coverage ratio would fall to 2.1x.

To alleviate the burden of higher financing costs and maintain leverage ratios, buyout investors may seek to invest at lower valuations. For example, in the above scenario where financing rates increase to 8.0%, a valuation of 9x EBITDA leads to no change in the interest coverage ratio. However, there is likely a limitation on how far valuations can fall given that equity may become a more efficient form of capital on the margin. In this case, leverage will need to come down as investors bring more equity to the deal.

...but for current buyout-backed companies, rising interest rates will place pressure on coverage ratios, especially if earnings fall.

Impact of financing rate and change in EBITDA on the coverage ratio

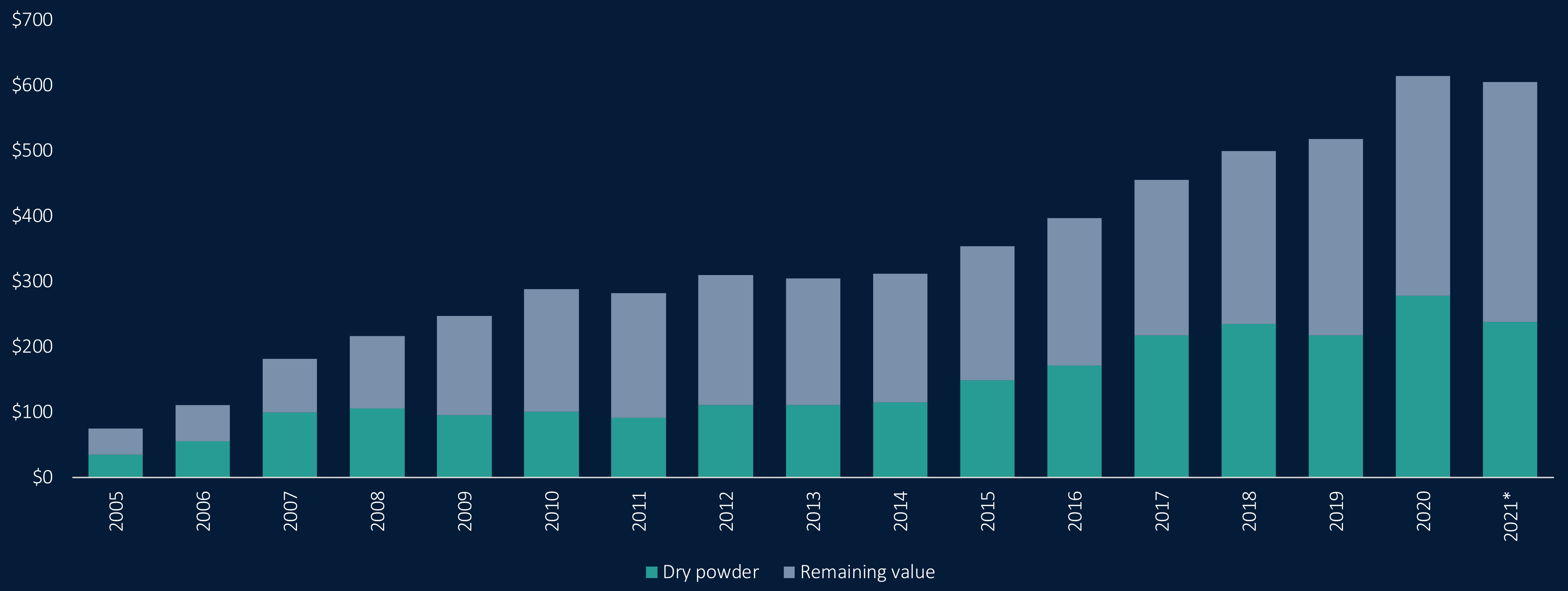


Source: PitchBook
Note: For illustrative purposes only. Assumes a starting leverage ratio of 6x EBITDA.

The impacts of rising rates on borrowing costs and coverage ratios become much more difficult to mitigate after a buyout deal has been completed. In addition, if a recession does occur, falling earnings along with higher borrowing costs would be a worrisome combination. For example, if interest rates rose 2.0%, a 20% decline in EBITDA would lead to a coverage ratio of only 1.7x, assuming a starting leverage ratio of 6x. GPs should consider conducting this type of scenario analysis for their portfolio to better understand company-specific risks.

While the cyclicality of leveraged loans presents a risk to buyout financing and dealmaking, the growth of private credit funding provides an alternative source of debt capital.

Private credit assets under management ($B)



Source: PitchBook | Geography: US
*As of December 31, 2021

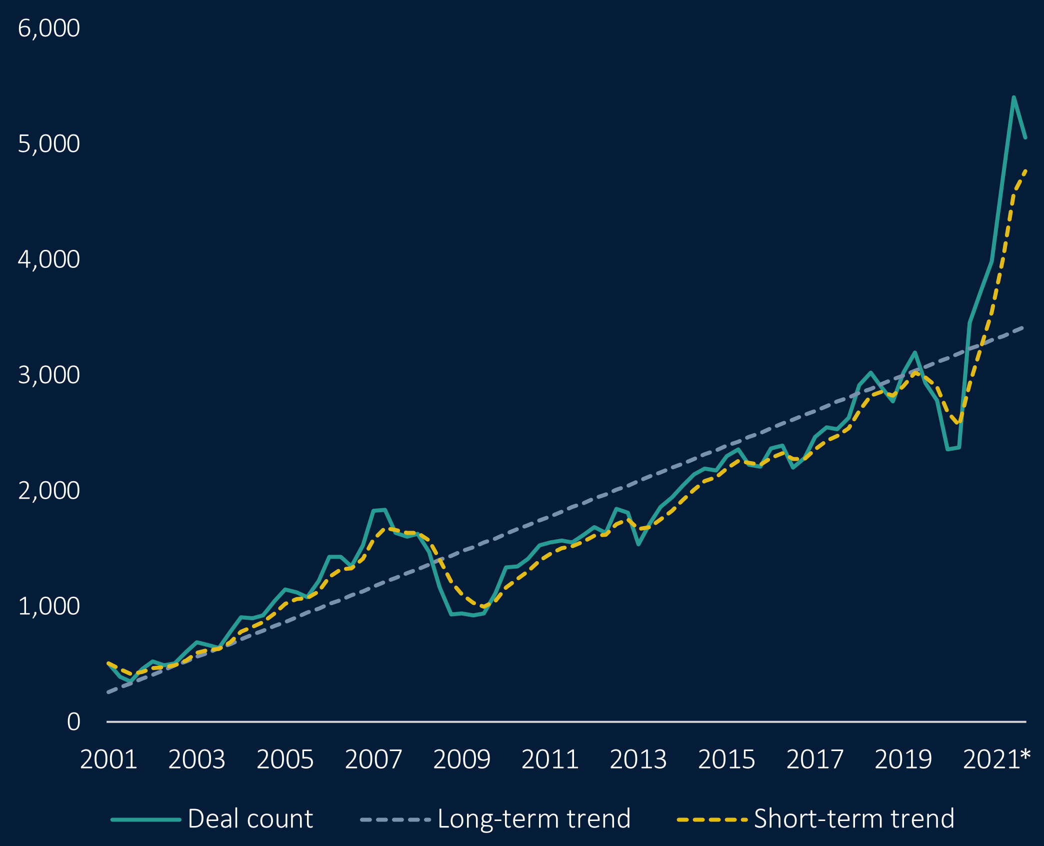
Deals & exits

Key takeaways

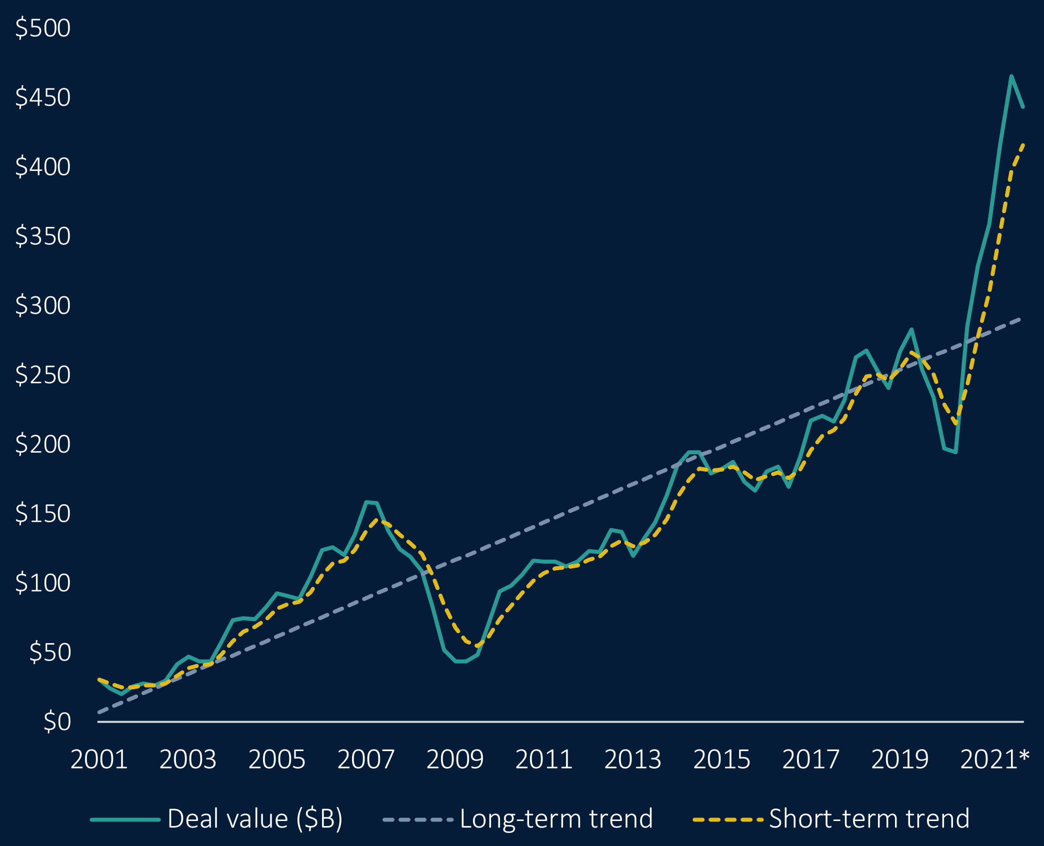
- Deal activity slowed in Q1 2022, but it remained well above both short- and long-term trends.
- Over the past six years, PE managers have shifted into the technology sector and away from commodity-focused businesses. This shift, in addition to a greater focus on growth fundraising and dealmaking, has increased PE's exposure to the sell-off in growth-oriented assets that happened in the public markets.
- Exits slowed dramatically in Q1 2022 from the frenzied pace experienced in recent quarters. Total exit value was just $66.7 billion in the quarter, compared to an average of $201.6 billion in 2021.
- Liquidity via public listings, which had been driving most of the recent PE exit value, completely dried up as the broader IPO market came back to reality. In the three months ending in May, there were only 31 US-based companies listed on the NYSE and NASDAQ exchanges, compared to 347 during the peak of activity in Q1 2021.

PE deal activity has slowed from a scorching pace, but it remains well above both short- and long-term trends...

Rolling six-month PE deal count trends



Rolling six-month PE deal value ($B) trends



Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted, and the most recent four quarters include estimations.

...due to strength within the financials and business and consumer products & services sectors.

PE deal trends dashboard*

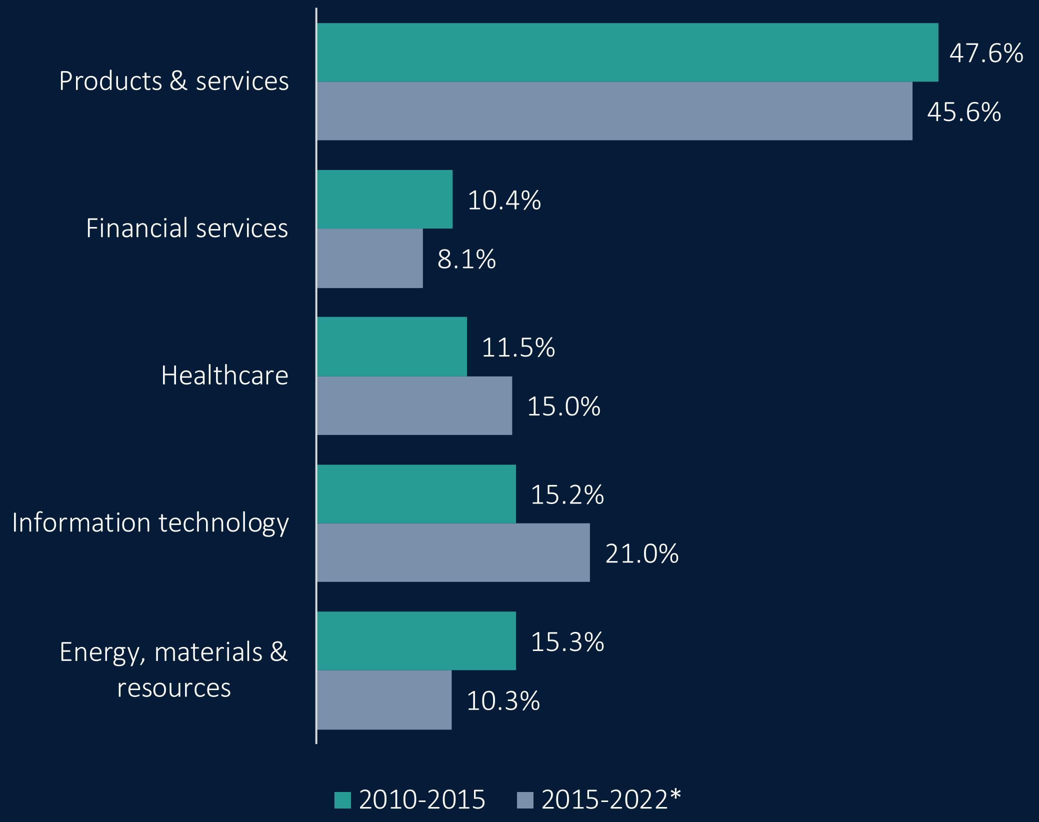
	Segment	Deal count (#) Current	% of total	Long-term score	Short-term score	Deal value ($B) Current	% of total	Long-term score	Short-term score
	Total	5,051	100.0%	3.62	0.28	$443.40	100.0%	3.32	0.21
Sector	Business products & services	1,941	37.5%	4.00	0.65	$157.90	35.0%	3.55	0.44
Sector	Consumer products & service	831	16.0%	3.50	0.60	$74.17	16.4%	3.38	0.49
Sector	Energy	124	2.4%	-1.23	-0.31	$18.01	4.0%	-0.57	0.24
Sector	Financial services	466	9.0%	4.55	0.66	$44.01	9.8%	2.94	-0.06
Sector	Healthcare	798	15.4%	3.39	0.04	$64.42	14.3%	3.02	0.00
Sector	Information technology	902	17.4%	3.38	0.03	$78.63	17.4%	3.17	0.10
Sector	Materials & resources	119	2.3%	1.90	0.10	$14.02	3.1%	2.03	0.01
Type	Buyout (all)	4,236	83.9%	3.70	0.40	$396.41	89.4%	3.33	0.30
Type	Buyout (add-on)	3,110	61.6%	4.03	0.41	$245.20	55.3%	3.89	0.45
Type	PE growth	942	18.6%	4.06	0.53	$54.76	12.4%	3.66	0.16

Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted and includes estimates.

The PE deal trends dashboard provides a quantitative assessment of overall trailing six-month deal activity, as well as within each sector and deal type after adjusting for seasonality and reporting lags. The long- and short-term scores represent the normalized deviations from a full period linear trendline and a 12-month exponential moving average, respectively.

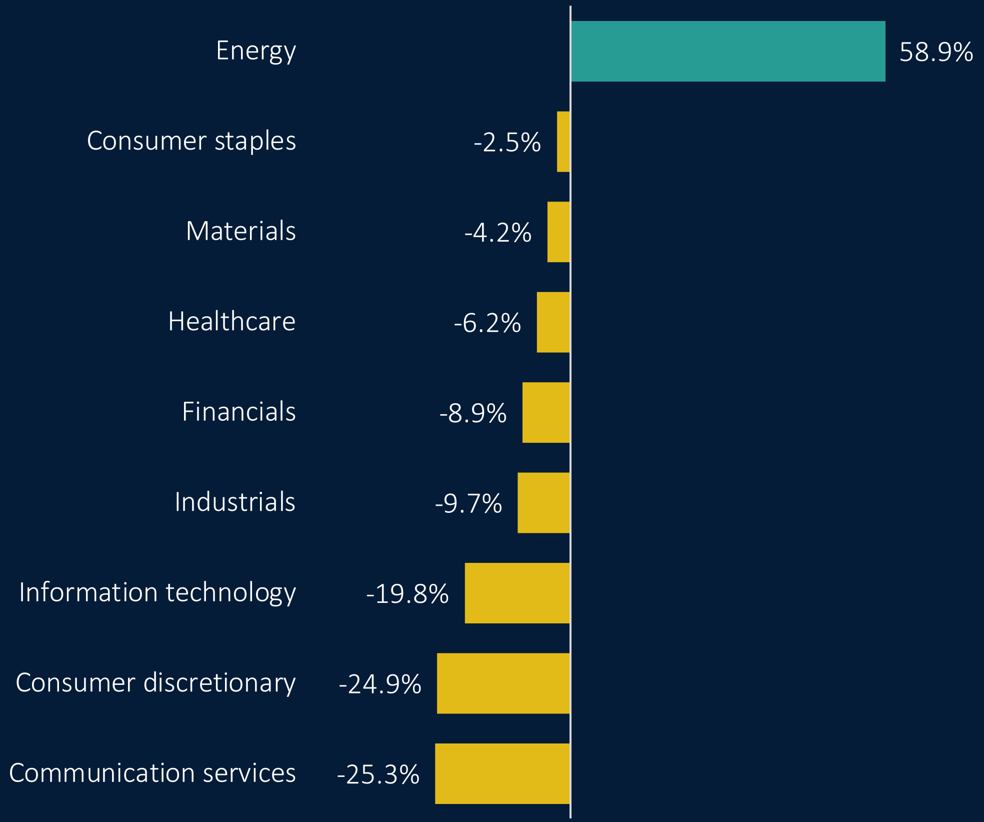
Over the past six years, PE managers have shifted into the technology sector and away from commodity-focused businesses.

PE deal value by sector as proportion of total



Source: PitchBook | Geography: US
*As of March 31, 2022

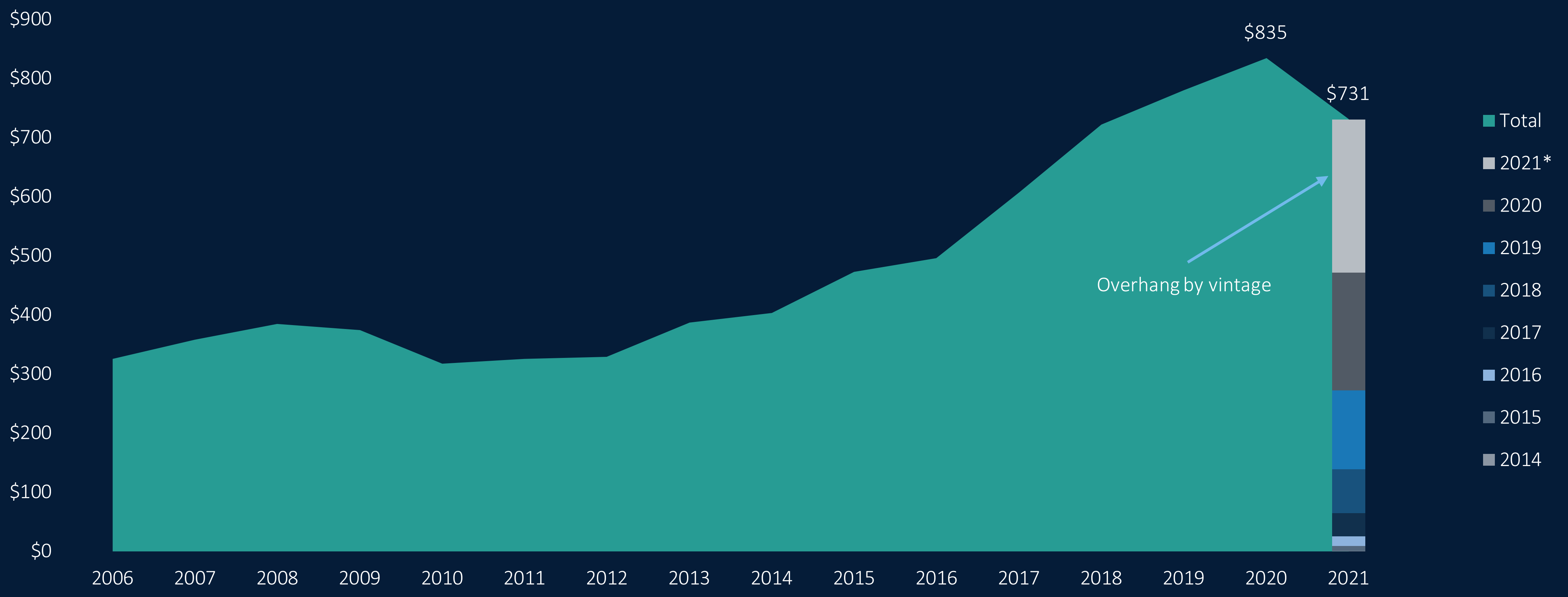
S&P 500 Index year-to-date performance by sector*



Source: Morningstar | Geography: US
*As of May 31, 2022

Despite the challenging environment, dealmaking will be supported in the short-term by a near-record amount of dry powder.

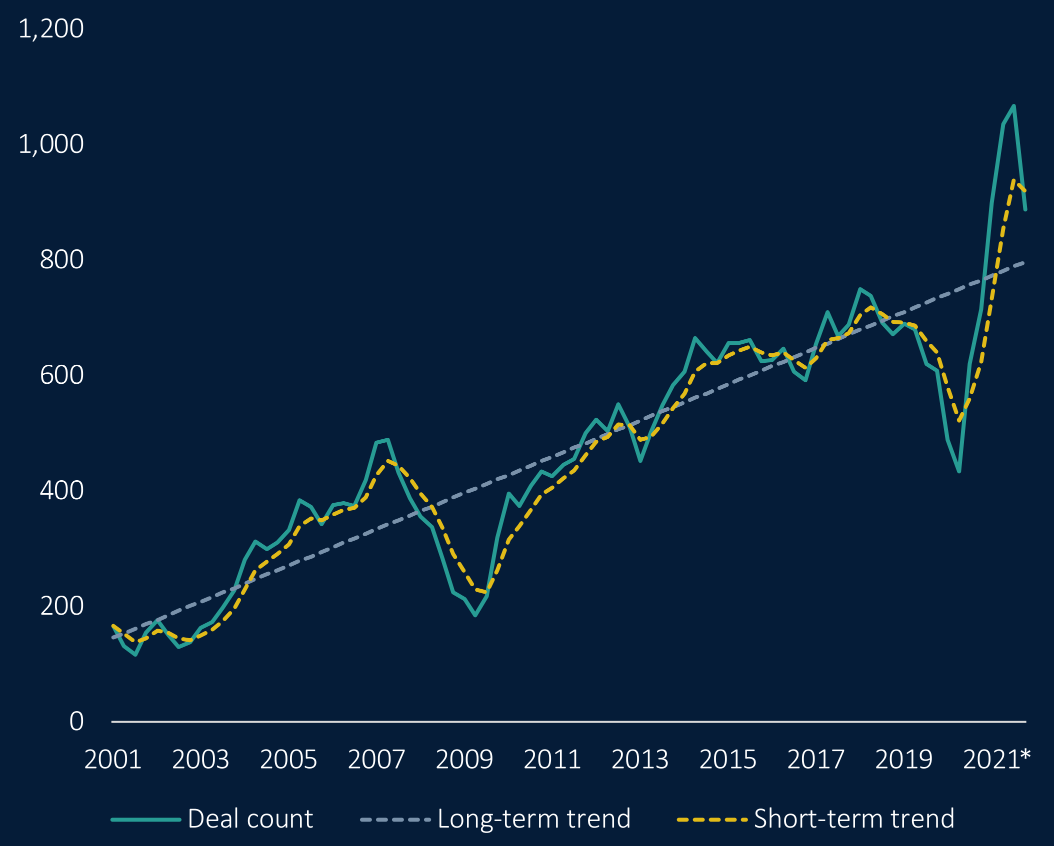
PE dry powder ($B)



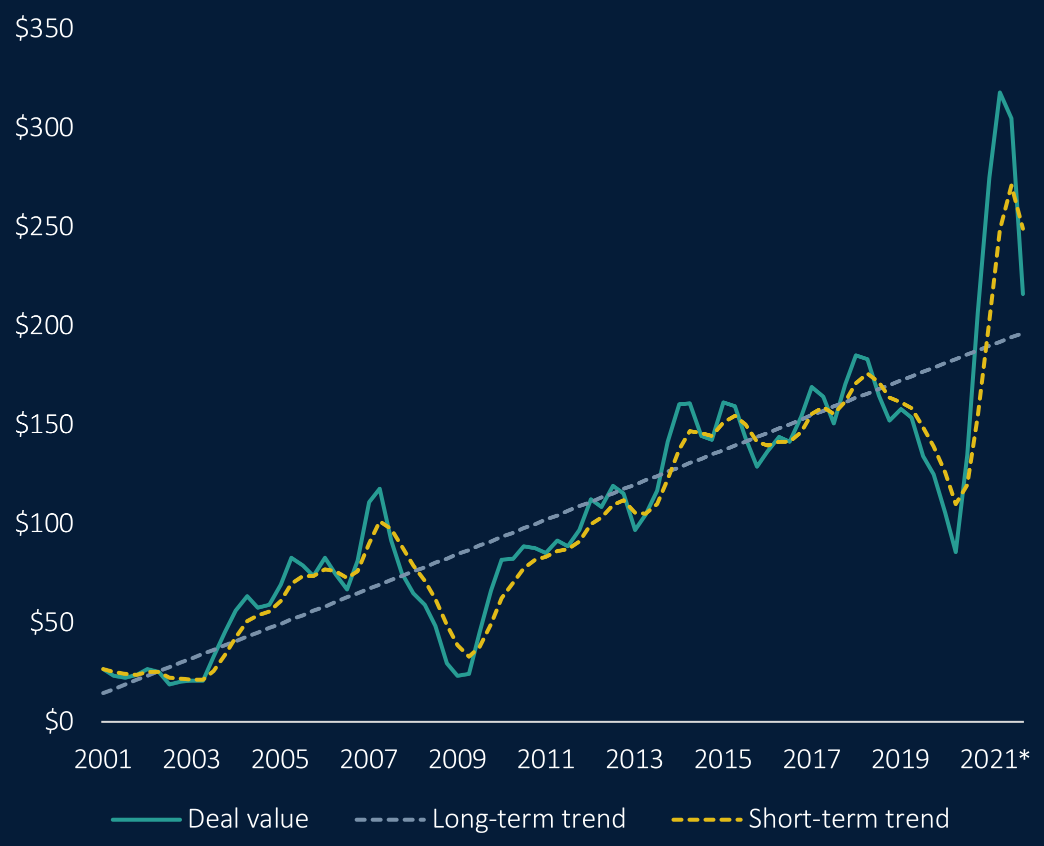
Source: PitchBook | Geography: US
*As of December 31, 2021

Exit activity has reverted sharply back to near its long-term trends...

Rolling six-month PE exit count trends



Rolling six-month PE exit value ($B) trends



Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted, and the most recent four quarters include estimations.

...and in some sectors, such as consumer products and services and financial services, activity has fallen below trend.

PE exit trends dashboard*

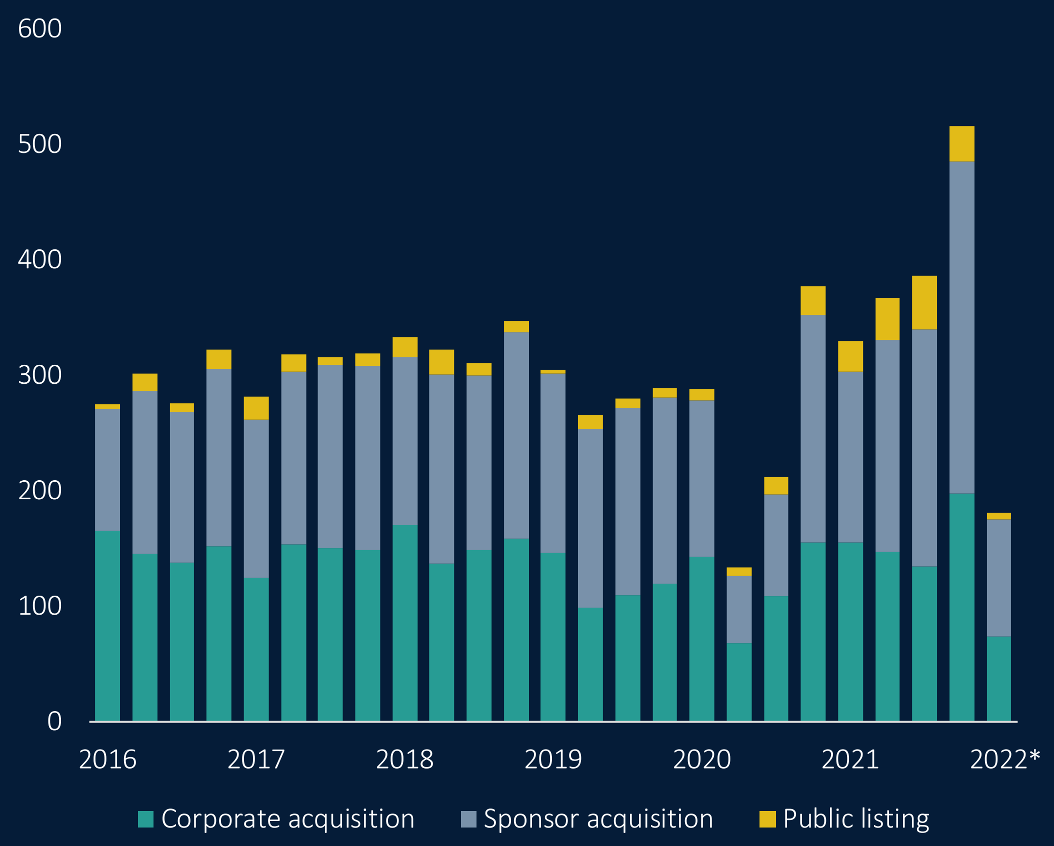
	Segment	Exit count (#) Current	% of total	Long-term score	Short-term score	Exit value ($B) Current	% of total	Long-term score	Short-term score
	Total	888	100.0%	0.97	-0.60	$216.07	100.0%	0.59	-1.08
Sector	Business products & services	355	39.4%	2.13	0.23	$74.39	34.2%	1.53	-0.54
Sector	Consumer products & service	146	16.2%	-0.43	-0.98	$32.34	14.9%	-0.54	-1.43
Sector	Energy	50	5.5%	-0.22	0.18	$17.04	7.8%	0.37	0.51
Sector	Financial services	46	5.1%	-1.12	-0.66	$13.52	6.2%	-0.60	-0.45
Sector	Healthcare	128	14.2%	1.71	-0.56	$39.38	18.1%	1.60	-0.58
Sector	Information technology	145	16.1%	0.88	-1.08	$34.31	15.8%	-0.11	-1.41
Sector	Materials & resources	31	3.4%	0.04	0.05	$6.60	3.0%	-0.42	-0.10
Type	Acquisition	363	40.2%	-0.54	-0.66	$99.29	45.6%	0.96	-0.23
Type	Buyout	493	54.7%	2.24	-0.10	$101.62	46.7%	1.23	-0.52
Type	Public listing	46	5.1%	0.47	-1.29	$16.67	7.7%	-0.84	-1.82

Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted and includes estimates.

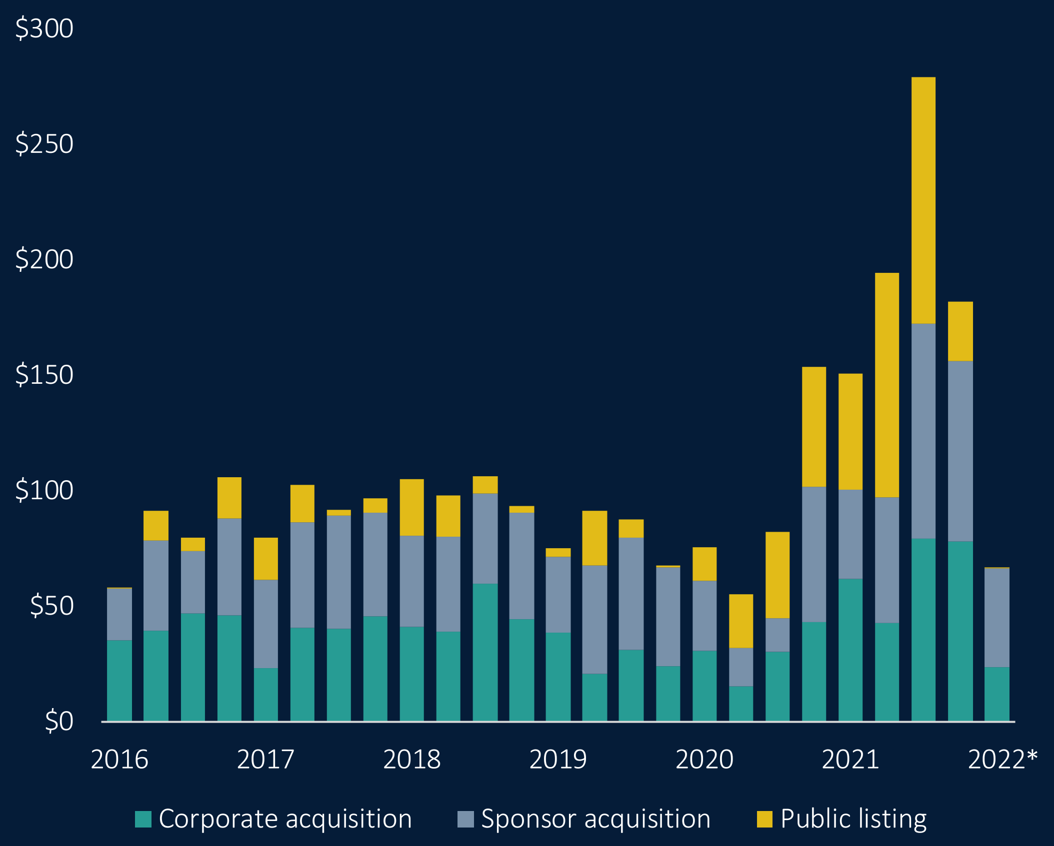
The PE exit trends dashboard provides a quantitative assessment of overall trailing six-month exit activity, as well as within each sector and exit type after adjusting for seasonality and reporting lags. The long- and short-term scores represent the normalized deviations from a full period linear trendline and a 12-month exponential moving average, respectively.

Public listings, which had driven PE exit value in the past six quarters, completely dried up in Q1 2022...

Quarterly PE exit count by exit type



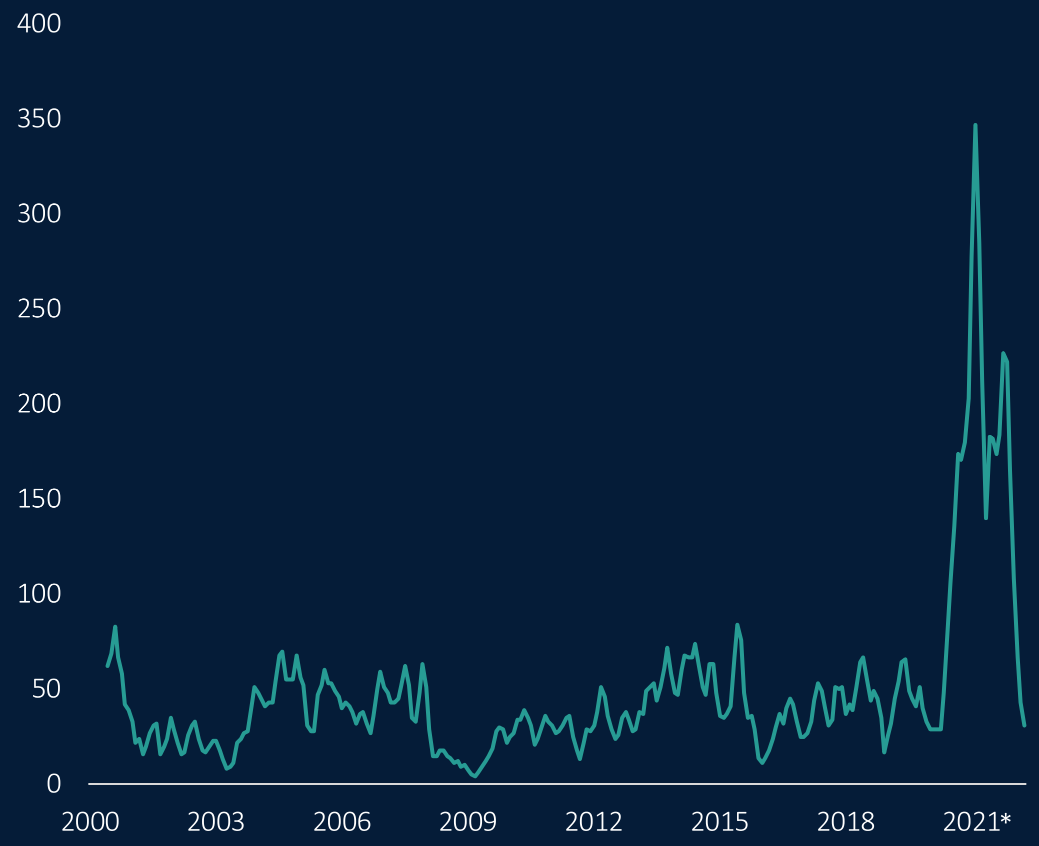
Quarterly PE exit value ($B) by exit type



Source: PitchBook | Geography: US
*As of March 31, 2022

…and overall IPO listings fell sharply back to more normal levels. While continued weakness in the public equity market may be a headwind, it has historically been a weak predictor of IPO activity.

Rolling three-month IPO listings



Relationship between trailing equity returns and IPO listings*

Source: PitchBook | Geography: US
*As of May 31, 2022
Note: Includes all IPO listings of US-based companies on the NYSE and NASDAQ exchanges.

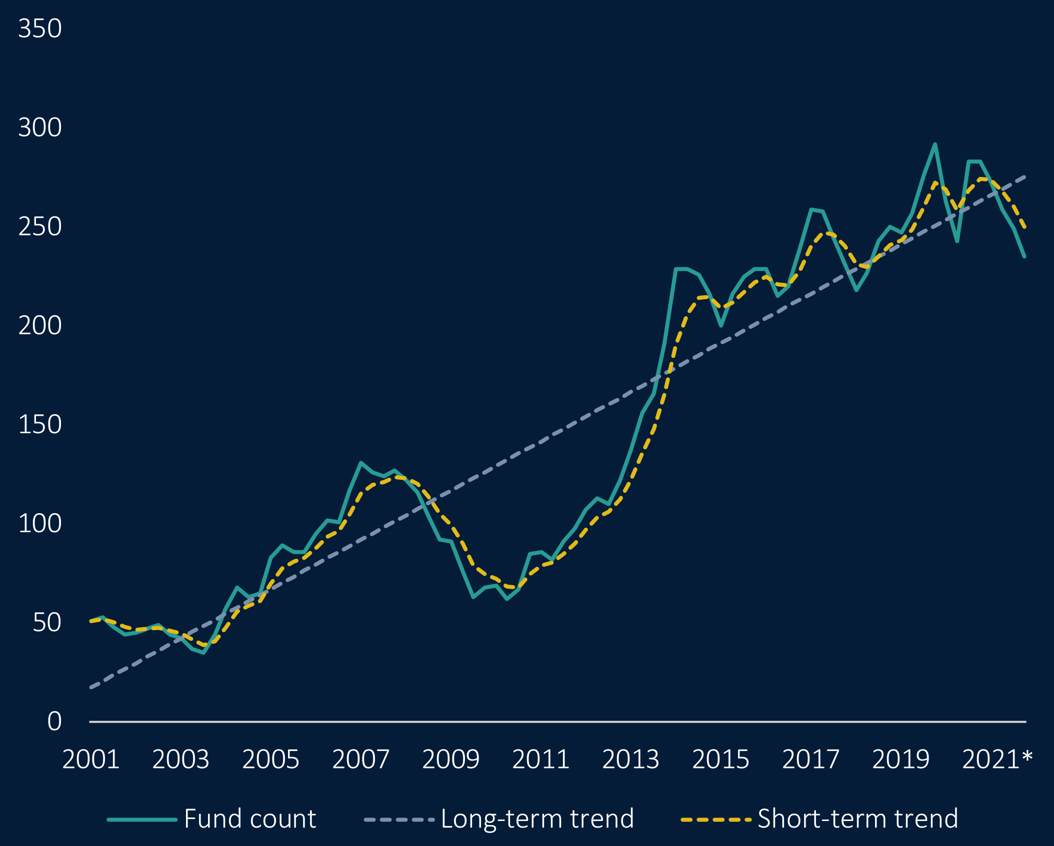
Fundraising & performance

Key takeaways

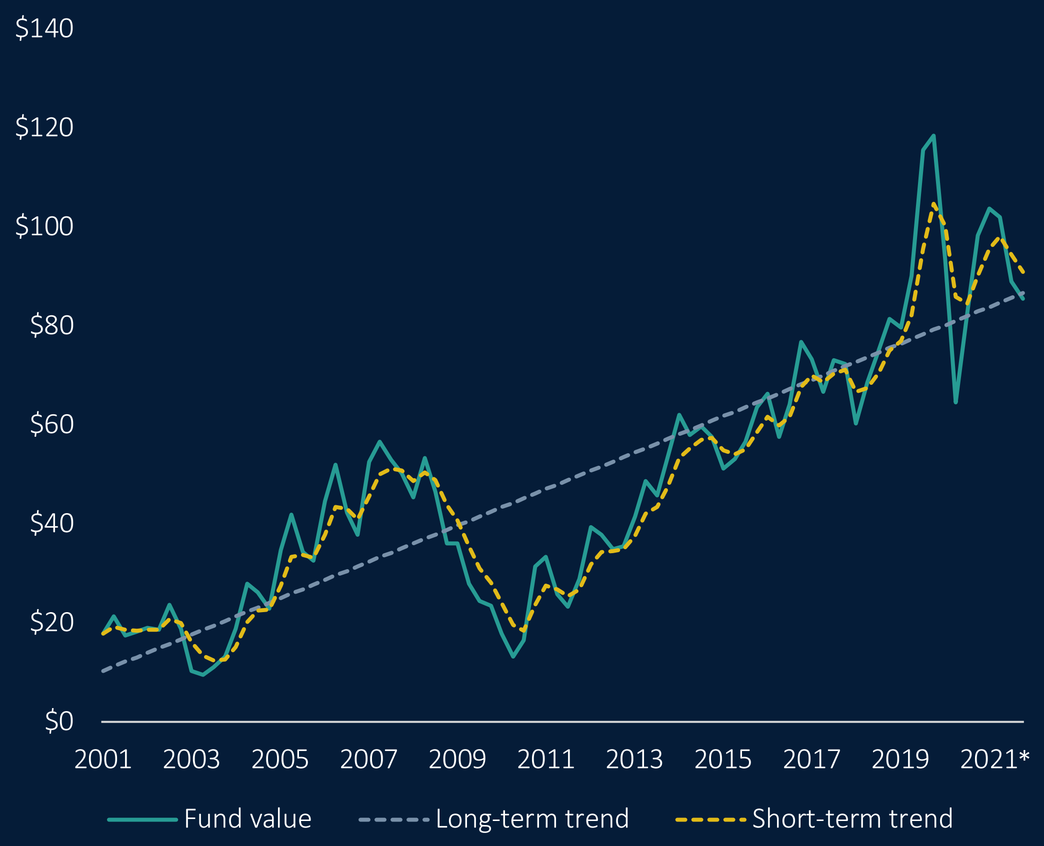
- The number of PE funds raised fell further below its short- and long-term trends as larger funds continued to dominate the available capital and push smaller funds out of the market.
- Over the past two quarters ending in March 2022, capital raised by PE growth funds exceeded that raised by buyout funds for just the second time in at least the past 20 years as PE continues to push further into growth and technology investments and away from traditional value investments.
- Following a modest decline in Q2 2020, PE fund returns have been exceptionally strong. However, these returns were not justified by market and economic fundamentals and were mainly driven by unrealized gains, which are likely to marked down in the next few quarters given the market's reassessment of valuations.

Fundraising counts continued to fall below trend, while total capital returned to its long-term trend, buoyed by large funds dominating the market.

Rolling six-month PE fund count trends



Rolling six-month PE fund value ($B) trends



Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted.

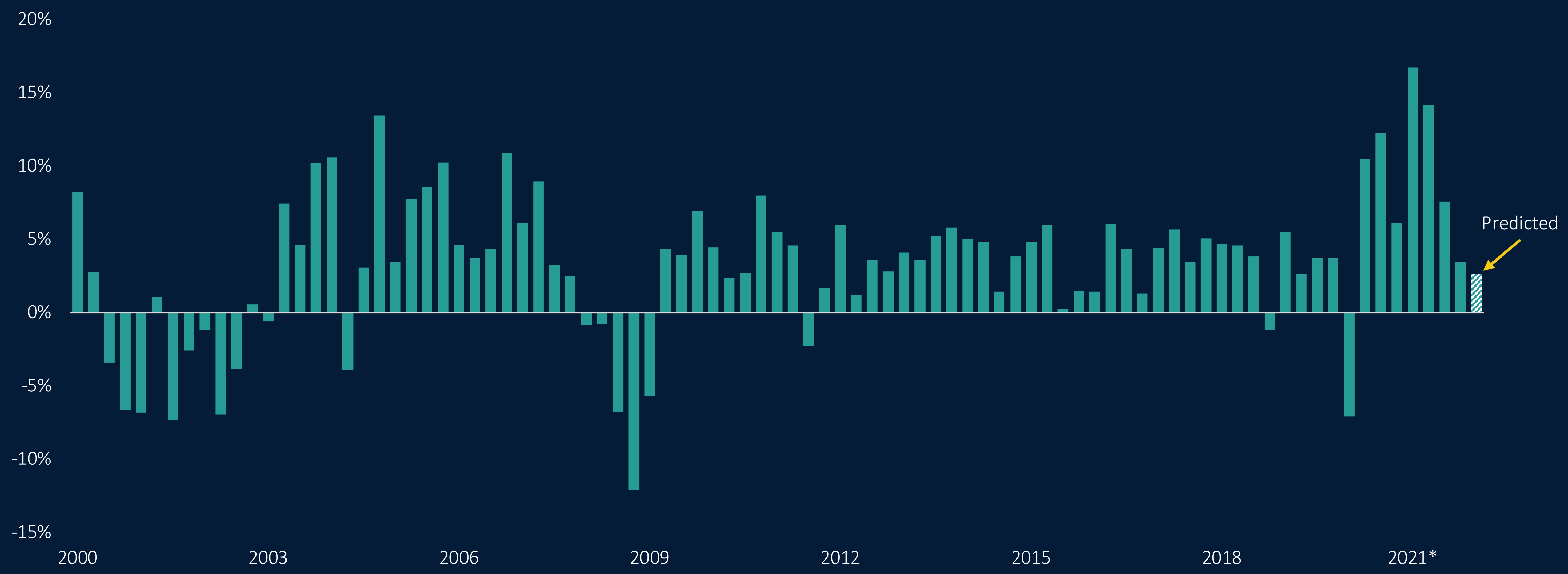
After the COVID-19 pandemic started, the PE industry shifted focus more toward growth, increasing its exposure to the current market sell-off.

PE growth as a proportion of buyout fundraising (rolling six-month)

Source: PitchBook | Geography: US
*As of March 31, 2022
Note: Data is seasonally adjusted.

PE fund returns have slowed from extremely strong levels in the six quarters following the Q2 2020 decline…

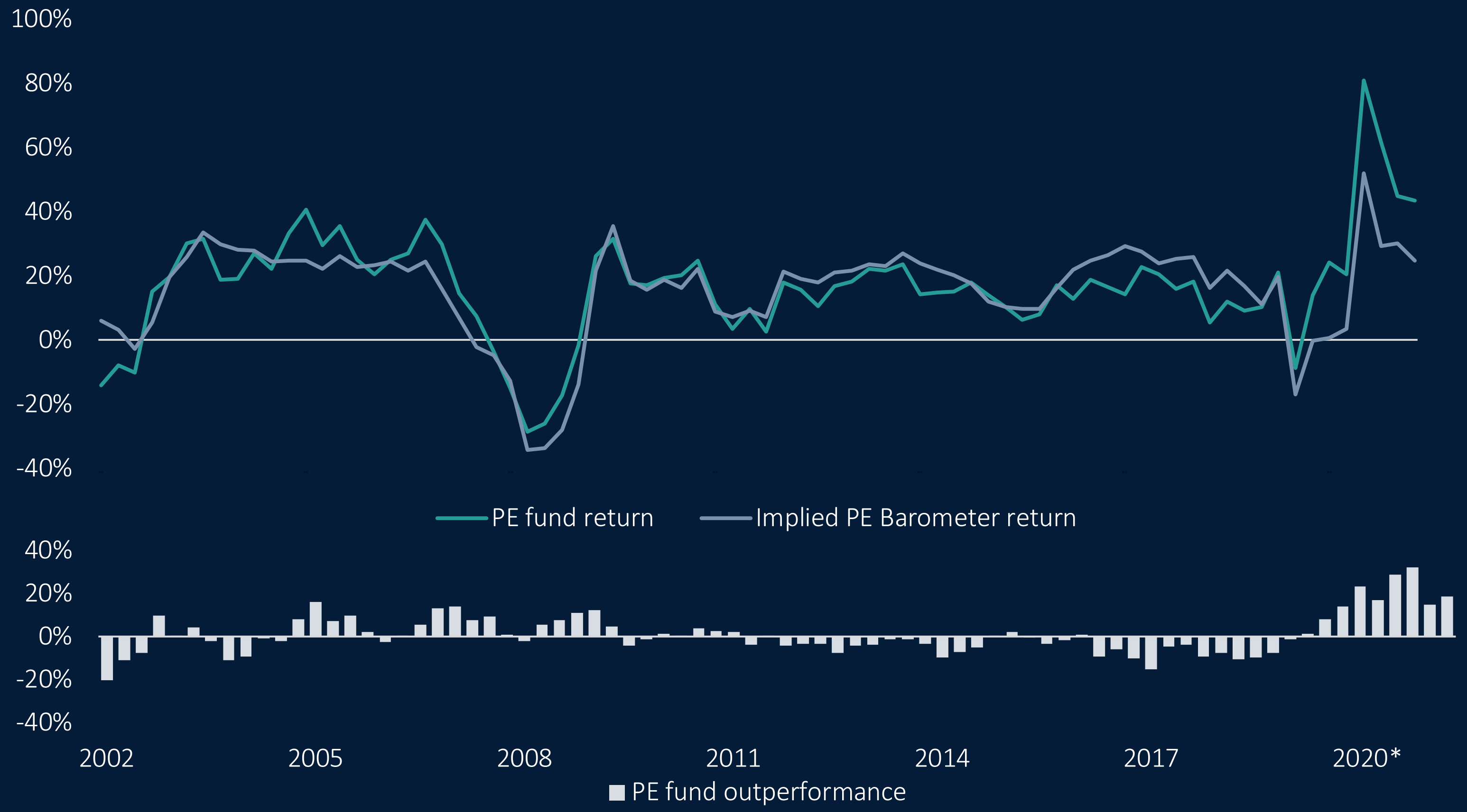
Quarterly PE fund returns



Source: PitchBook | Geography: US
*As of March 31, 2022
Note: The Q1 2022 return is the implied return based on the PitchBook PE Barometer.

…which were not justified based on the fundamental economic and market drivers of PE returns…

Rolling 1-year returns



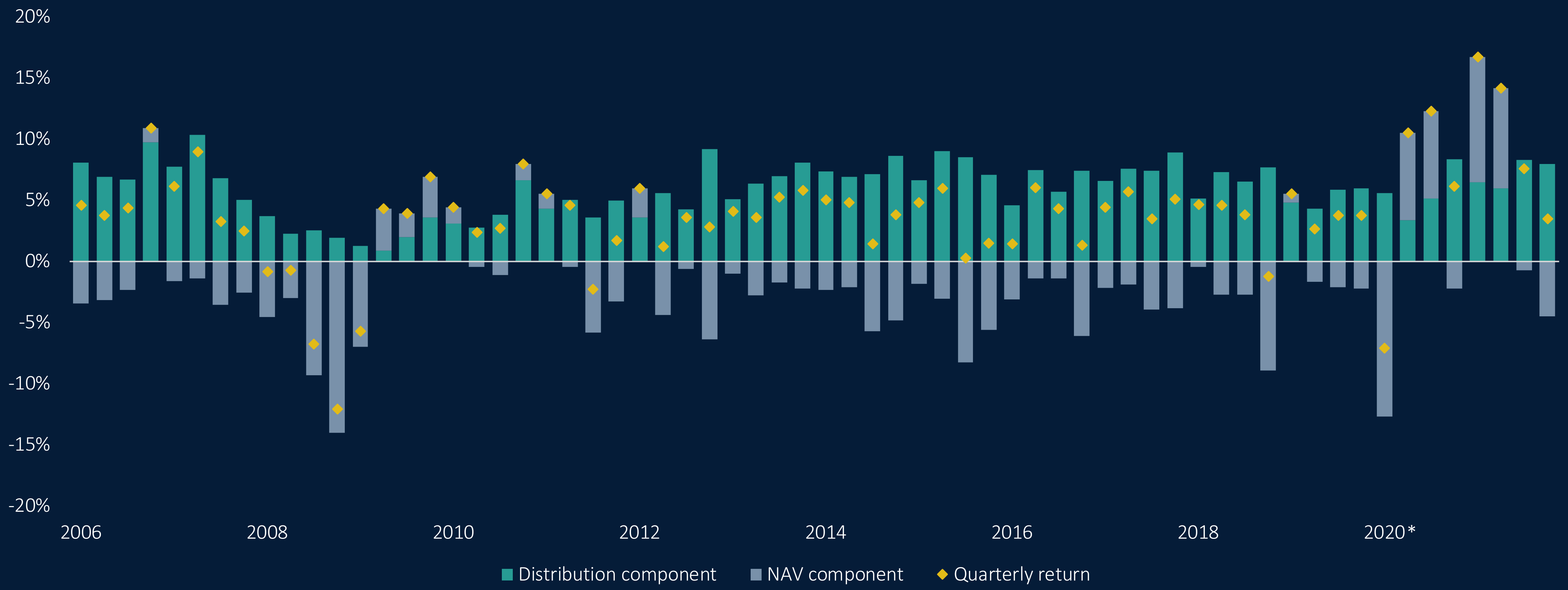
Source: PitchBook | Geography: US
*As of December 31, 2021

Our 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, starting in Q3 2020, PE fund returns have been considerably higher than the implied returns based on the PE barometer. We expect that the sell-off in public equities will act as a trigger to unwind the recent divergence as PE assets with elevated valuations are marked to market.

For more information on the PitchBook PE Barometer, please see this webpage.

…and were fueled instead by unrealized gains, which are likely to be marked down in the next few quarters given the market's reassessment of asset valuations.

Quarterly PE fund return attribution



Source: PitchBook | Geography: US
*As of December 31, 2021

Glossary

VIX (CBOE, p9) – A measure of the 30-day expected volatility calculated from S&P 500 option contracts.

Corporate high-yield option-adjusted spreads (ICE BofA Indices, p9) – The difference between the yield on a corporate high-yield bond index and the yield of a duration-matched Treasury bond. It is a measure of the extra return investors require to accept the credit risk of high-yield borrowers.

Market-implied fed funds rate (CME Group, p13) – The derived yield from the price of fed fund futures contract, which are valued based on the fed funds rate set by the Federal Reserve. Current prices of contracts to be settled in the future represents the market's views of the Fed's interest rate policy between now and when the contract expires.

Headline CPI (BLS, p14) – A measure of the average change in the prices paid by urban consumers over time for a market basket of consumer goods and services.

Core CPI (BLS, p14) – A measure of the average change in the priced paid by urban consumers over time for a market basket of consumer goods and services, excluding food and energy-related items.

Consumer inflation expectations (NY Fed, p14) – the expected rate of inflation over the next three years based on a survey of consumers.

Market inflation expectations (FRED, p14) – the difference between the 5-year nominal Treasury yield and the 5-year inflation-protected Treasury (TIPS) yield, also known as the breakeven inflation rate.

PitchBook

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