APOLLO

Beyond 60/40: Private Assets In an Era of High Public Valuations

March 2025

Matt O'Mara
Partner, Co-Head, Apollo Aligned Alternatives

A combination of elevated public stock and bond valuations, recalcitrant inflation, and the prospect of "higher for longer" interest rates in the United States has put many investors on high alert as they position portfolios for 2025 and beyond. In this paper, we detail how the current environment could translate into new challenges for traditional 60/40 portfolio allocations while at the same time offering an attractive entry point to private markets.

Despite a strong correction in early March, the S&P 500 index has experienced a dramatic run since the end of the pandemic, and equity valuations, as of this writing, remain at very lofty levels. The story is similar in public fixed income, as credit spreads remain tight by historical standards.

Of course, history has proven that markets can change direction at a moment's notice, and the arrival of a new presidential administration determined to quickly implement aggressive policy goals could make markets more volatile in the weeks and months to come. But given current valuations, we believe it would take a massive drawdown to bring public assets back to historic averages.

While strong performance for both stocks and bonds has been very good for investors with 60/40 portfolios—they delivered high double-digit returns in each of the past two years—the question facing investors now is: Can this performance continue? History says very unlikely.

KEY TAKEAWAYS

- Valuations in public markets remain at lofty levels, despite a pullback in March. Persistent inflation could keep interest rates higher for longer.
- High valuations and an elevated rate environment, combined with other factors like strong correlations between stocks and bonds, could create challenges for investors with 60/40 portfolio allocations.
- Periods of high public equity valuations have historically represented attractive entry points to private markets. A balanced portfolio of alternatives has meaningfully outperformed following past periods of elevated public equity valuations and interest rates.
- Adding private markets to a 60/40 portfolio has historically enhanced returns while minimizing volatility, boosting returns per unit of risk across market cycles.

ATLWAA-20250321-4341472-13701564

Historically, when valuations in public stocks are elevated, performance over the subsequent three-year period weakens. Based on past data, current forward P/E levels on the S&P 500 suggest investors can expect annualized returns for stocks of only about 3.0% over the next three years (more on that later). Equity markets have also become highly concentrated, raising concerns that a lack of diversification is increasing risks in public equity markets—and for 60/40 portfolios.

Soaring valuations and high levels of concentration in stocks are not the only things that could cause concerns for 60/40 portfolios. As of this writing, the Federal Reserve is keeping policy on hold on the back of stubbornly high inflation (consumer price index, or CPI, stood at annualized 3.0% rate in January, above the Fed's 2% target) and a strong US economy. Many of the policy goals expressed by the Trump administration—namely higher tariffs, lower taxes, and lower immigration—point to inflationary pressures if implemented. As of this writing, we continue to believe that interest rates will remain higher for longer. But we are not expecting a recession in 2025.

If rates remain higher for a prolonged period of time, we could experience a market environment similar to 2022, when both equities and bond posted double-digit declines. The 60/40 portfolio fell 17% that year, the worst annual performance for the traditional allocation in decades. Fast forward two years, and persistently high levels of correlation between stocks and bonds have left the 60/40 susceptible to the same dynamics. Risks could even be more pronounced today, given higher valuations and extreme concentration in public equity markets.

We believe adding an allocation to private markets can help position portfolios for such an eventuality. Introducing private markets to a 60/40 portfolio has historically enhanced risk-adjusted returns regardless of short-term market conditions and across the market cycle. We believe the current environment represents a particularly attractive opportunity. Historically, a balanced portfolio of private assets has outperformed following periods of extremely high equity valuations and high interest rates. What's more, a diversified private markets portfolio actually outperformed more over the subsequent 10-year period as starting equity valuations and interest rates climbed.

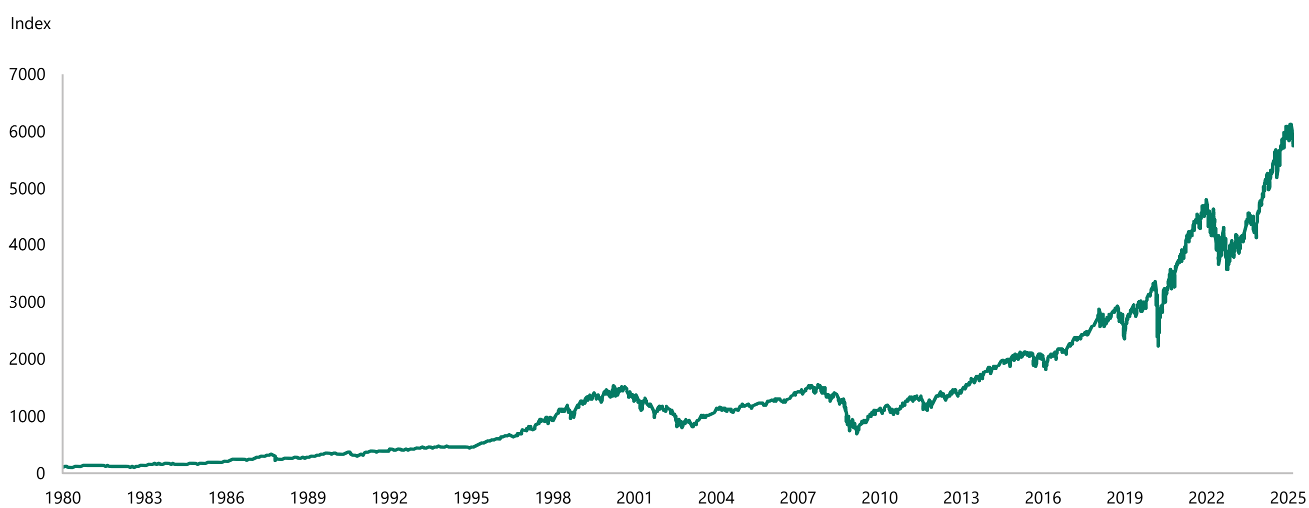
We believe the historic outperformance of a balanced private market portfolio in the wake of periods of elevated valuations in stocks and bonds, combined with the inflation-protection characteristics inherent in infrastructure and other private assets, make private markets an attractive alternative to public assets in the today's market environment.

Valuations in public markets remain at lofty levels

The S&P 500 rose more than 20% in both 2023 and 2024. That's the first time the index topped the 20% threshold in consecutive years since 1998, more than two decades ago. That unusually strong run has capped off a surge that started after the trough during the COVID-19 pandemic (**Exhibit 1**). To put that performance in perspective, $1,000 invested in an S&P 500 index fund on March 16, 2020, the nadir of the pandemic sell-off, would be worth $2,367 as of this writing, an annualized return of 18.9%.

Exhibit 1: US public equities have experienced a historic run since the global pandemic

S&P 500 Index



Data as of March 10, 2025.

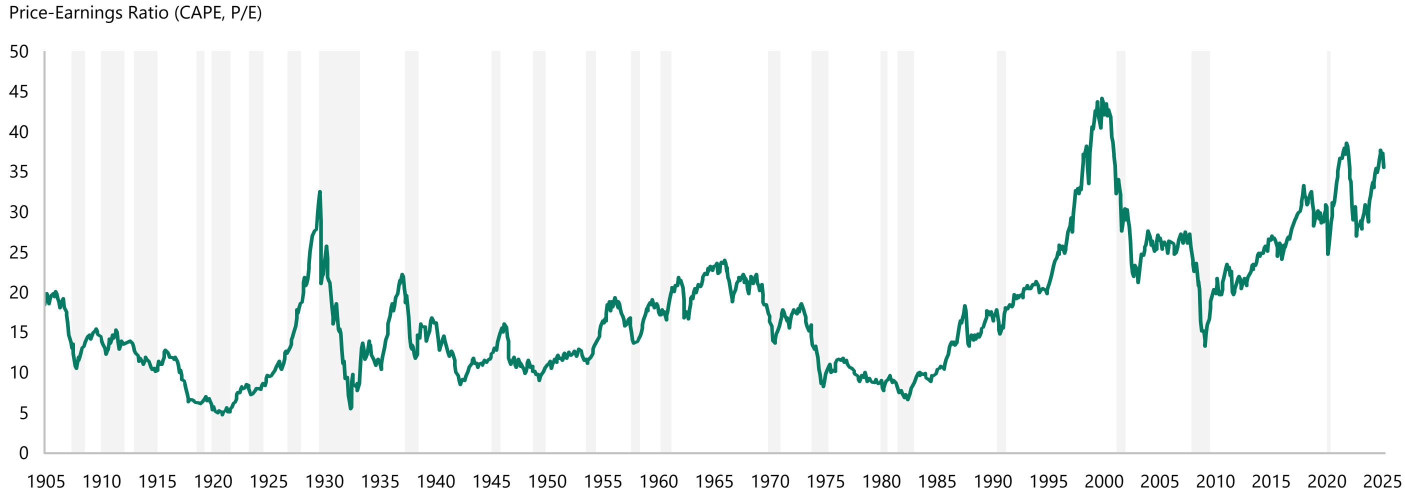
Sources: Bloomberg, Apollo Chief Economist

Strong annualized returns over the course of four years have pushed public equity valuations close to historic highs. One way to analyze if stocks are cheap or expensive is to remove the effects of the short-term business cycle by looking at the 10-year average of earnings. That value is expressed in the CAPE Ratio, which is tracked for the S&P 500 in **Exhibit 2**. As the chart illustrates, based on the long-term trend in the CAPE ratio, stocks are very expensive as of this writing. The CAPE Ratio has climbed to 35.6, significantly above its long-term average of 17, and close to all-time highs. Previously, the only times the CAPE ratio reached similar levels were in 2020, just before the COVID market collapse, and in 2000, just before the dot-com crash.

This conclusion is supported with more traditional valuation methods like price-to-book ratio and forward P/E ratio (**Exhibit 3**). Similarly, the only times in recent history that valuations approached these levels were in advance of the dot-com crash and the global pandemic.

Exhibit 2: Strong performance has pushed US stocks to lofty valuations…

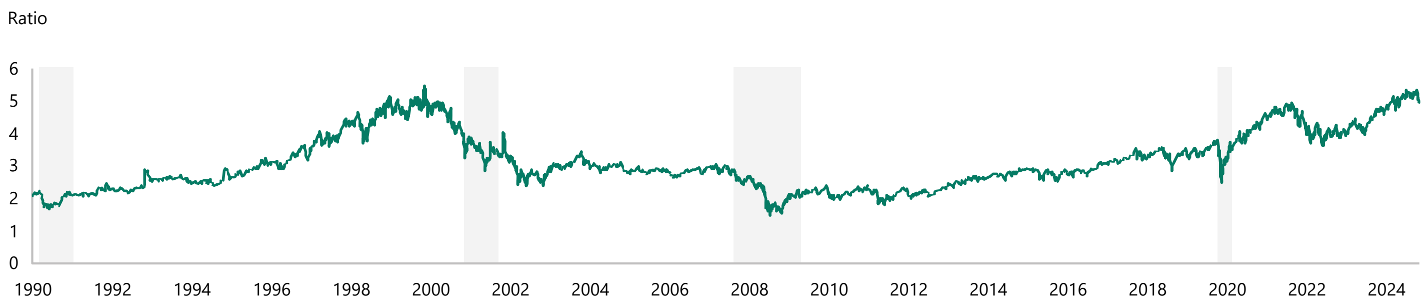
Shiller cyclically adjusted price earnings ratio (CAPE) – S&P 500 Index



Data as of March 1, 2025.
Sources: Robert J. Shiller, Apollo Chief Economist

Exhibit 3: …with prices looking expensive by any and all measures

Price-to-book ratio – S&P 500 Index



S&P 500 Forward PE

Data as of March 10, 2025.
Sources: Bloomberg, Apollo Chief Economist

What does history tell us about returns after periods of high valuations?

Given that recent performance has pushed stocks to levels considered expensive by historic standards, the relevant question today is: How likely is it that this strong performance will continue? To address that question, we tracked historic forward P/E ratios on the S&P 500. Using each reading of average forward P/E as a starting point, we looked at how stocks performed in the following three-year period. **Exhibit 4** illustrates a clear downward-sloping best-fit line, with subsequent three-year annualized returns falling as starting forward P/E rises.

In other words, as valuations rise, subsequent performance declines. Based on history, today's forward P/E level of roughly 20 suggests that the three-year subsequent annualized return for stocks could be about 3.0%.

Concentration in equity markets is another cause of concern

Elevated valuations are not the only risk facing equity markets. US stock market performance has also become more dependent on price behavior of fewer stocks. As illustrated in **Exhibit 5**, concentration within the S&P 500 is at the highest level since at least 1995.

Exhibit 4: Can public equities continue to deliver similar gains in the next few years ahead? History says very unlikely.

Subsequent 3-year return on S&P 500 Index based on forward P/E ratio

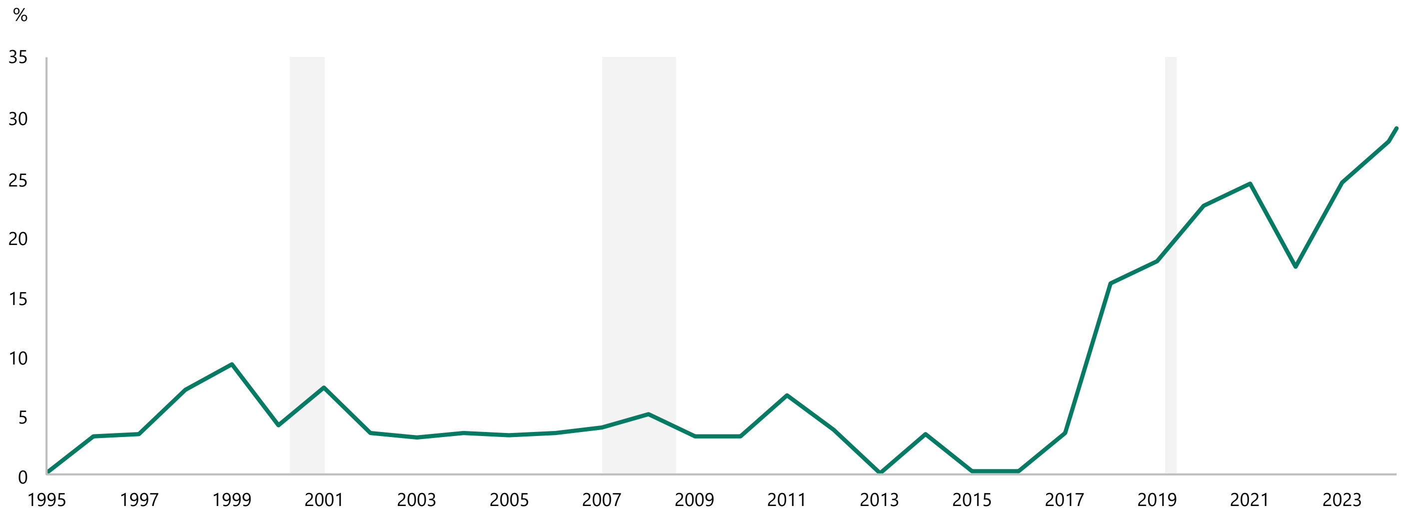
Note: 3 year subsequent annualized return = -0.0145* Forward P/E + 0.3454; R^2 = 0.2156.
Data as of March 10, 2025.
Sources: Bloomberg, Apollo Chief Economist

> Current forward PE levels suggest that subsequent annualized three-year returns could be about 3%.

Due to rising levels of concentration, investors in the S&P 500 could be significantly over-exposed to a handful of companies that account for a growing portion of the index—most of which come from the tech sector (**Exhibit 6**). NVDIA's market cap alone is now bigger than the GDP of countries such as Italy and Canada. More broadly, equity markets at these concentration levels are not providing the same level of diversification to investment portfolios that they have historically.

Exhibit 5: It's not just high valuations; concentration is also a growing concern

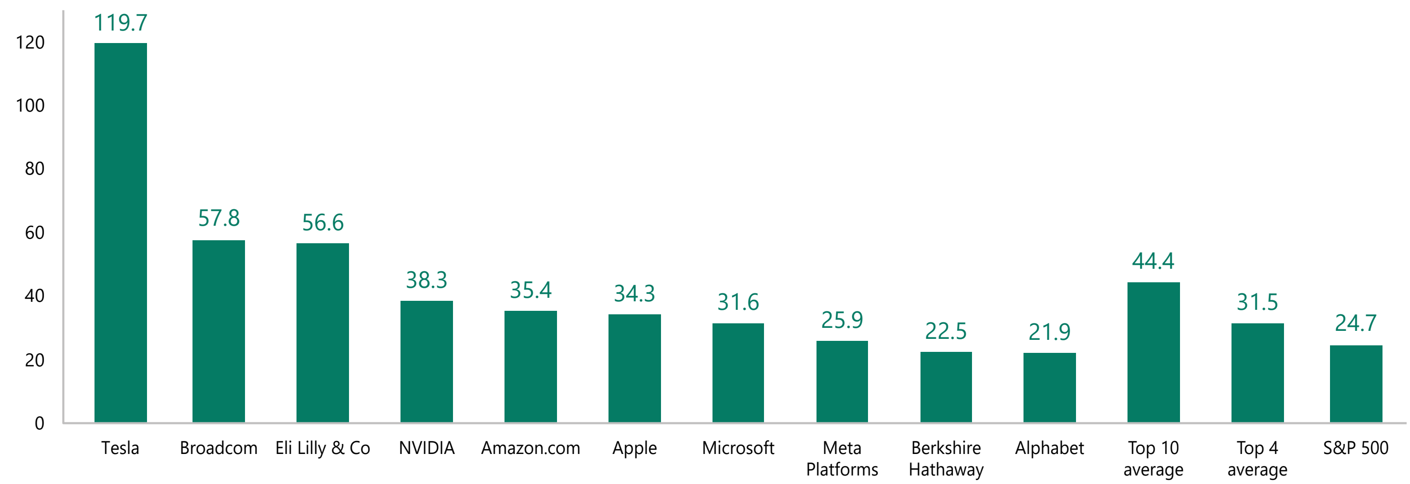
Combined weight of stocks with a weight of 3% or more of the S&P 500 Index



Data as of Feb. 2, 2025.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 6: The average P/E ratio of the top 10 companies in the S&P has risen to more than 44

Trailing P/E ratio of top 10 companies in S&P 500 by market cap



Data as of March 10, 2025.
Source: Apollo Chief Economist

Are expensive public markets providing adequate compensation for risk?

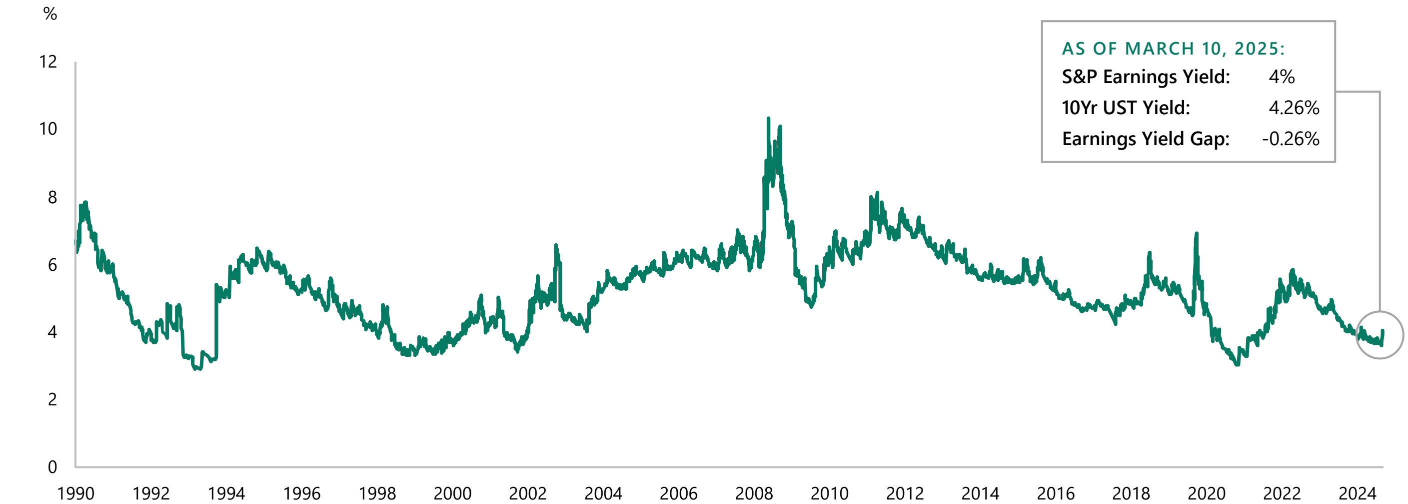
Taking all these developments into account, are investors getting adequately compensated for the risks they are taking in buying stocks at these high valuations? Not according to the equity risk premium, which has fallen well into negative territory (**Exhibit 7**). As of this writing, the S&P 500 index's earnings yield (the opposite of the P/E ratio) had dropped to 4.0% while the yield on the 10-year Treasury was at 4.26%.

The result is an earnings yield gap of -0.26%. In other words, investors are paying to take risk, as opposed to being paid to do so.

The story is much the same in fixed income. Credit spreads rallied coming into 2025, with many segments of the market—including US investment grade and high yield corporates, EM corporates and CLO A-BBB tranches—still trading at or near post-COVID tights (**Exhibit 8**). The rally in credit spreads has been driven by a combination of robust economic growth, strong fixed income demand, and the US election results.

Exhibit 7: Risk premium negative as S&P 500 earnings yield falls well below 10-yr Treasury yield

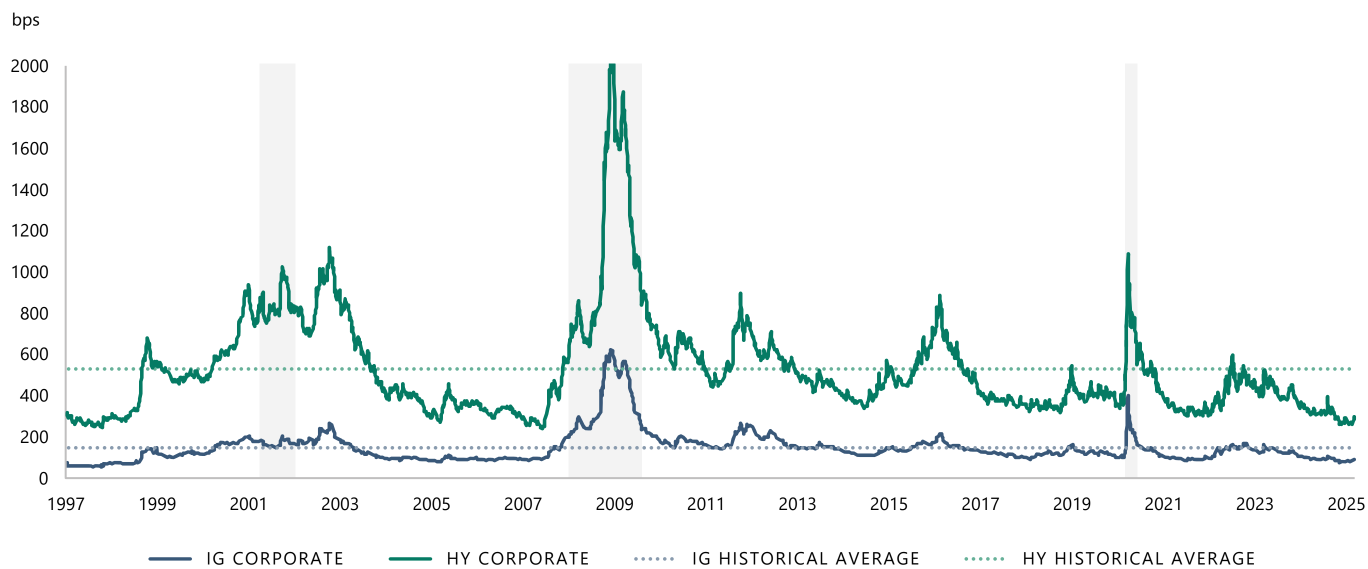
Earnings yield on S&P 500 Index



Data as of March 10, 2025.
Source: Apollo Chief Economist

Exhibit 8: Public credit spreads are also tight

US investment grade and high yield spreads



Data as of March 7, 2025.
Sources: ICE BofA, Bloomberg, Apollo Chief Economist

We expect credit fundamentals to remain robust throughout 2025. This strength, combined with elevated all-in yields and steep yield curves, can continue to attract inflows into credit. Those inflows can in turn support valuations and keep spreads tight, even though room for further compression is getting more limited. We believe spreads at these levels parallel the low risk premia observed in public equity markets.

Troubling Signs for 60/40 Portfolios

The outcome of this extended run of above-average returns and high valuations across equity and fixed income has been two years of strong performance for 60/40 portfolios (**Exhibit 9**). However, we believe risks are mounting for the 60/40.

As of this writing, we do not see a recession in the US in 2025. On the surface, that should be good news for investors. However, we remain focused on one of the main consequences of consistent economic strength: higher interest rates.

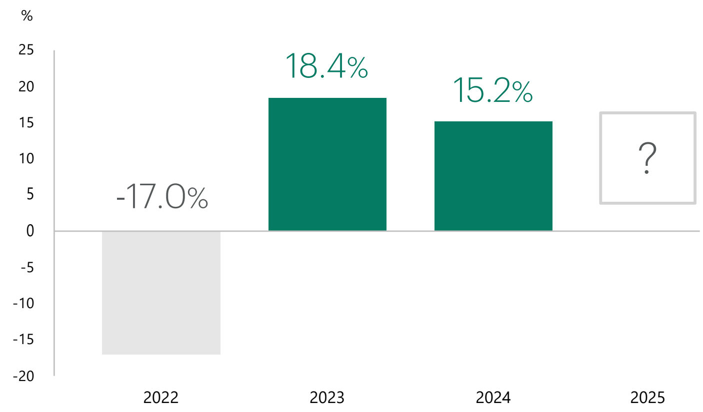
We believe interest rates will remain higher for longer on a relative basis. Continued strength in the US economy is being fueled by three factors.

First, the economy has been less sensitive to Fed rate increases in this cycle (**Exhibit 10**). It has now been roughly three years since the Fed started raising interest rates in March 2022, but hard data as of this writing had not shown signs of a meaningful slowdown.

We believe one key reason economic growth persisted throughout the Fed's tightening phase is that the US economy has demonstrated less sensitivity to higher rates. For example, US homebuyers locked in low long-term mortgage rates during the period of rock-bottom interest rates. Similarly, corporate borrowing is now dominated by fixed-rate debt. As a result, behaviors among both groups were less affected by higher rates.

Exhibit 9: Strong performance for 60/40 portfolios in past 2 years, but mounting risk

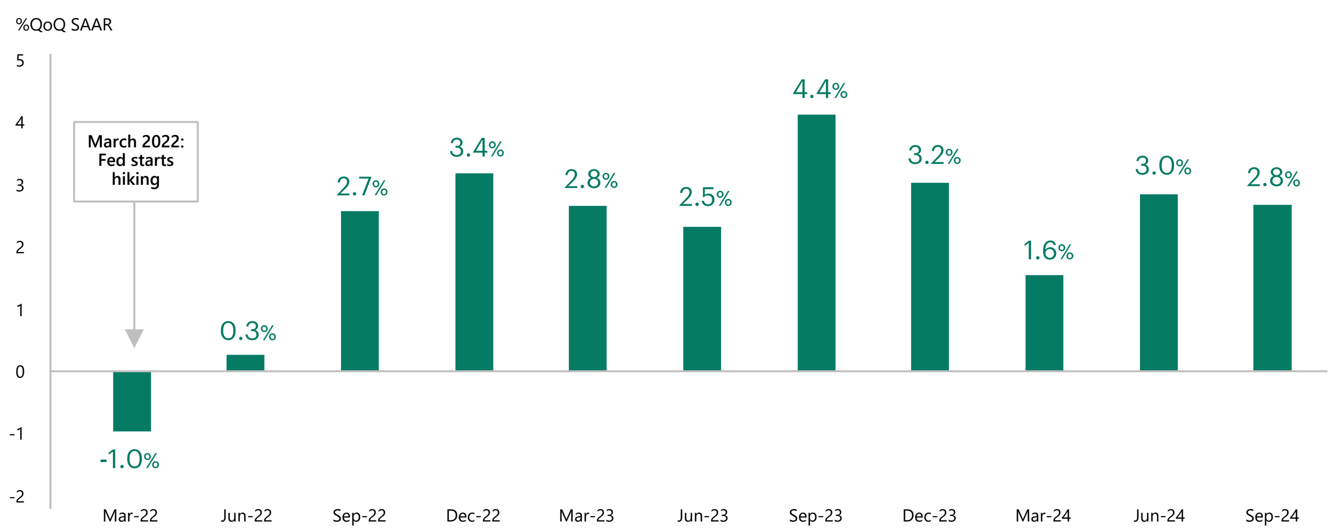
Bloomberg US EQ:FI 60:40 Index



Data as of Jan. 3, 2025.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 10: The economy has been less sensitive to the Fed raising rates in this cycle

US real GDP growth



Data as of September 2024.
Sources: BEA, Haver Analytics, Apollo Chief Economist

Second, over the past several years, the AI boom has generated a wave of corporate spending on data centers and other key artificial intelligence components. The so-called "Magnificent Seven" alone are approaching $50 billion in combined capital spending (**Exhibit 11**).

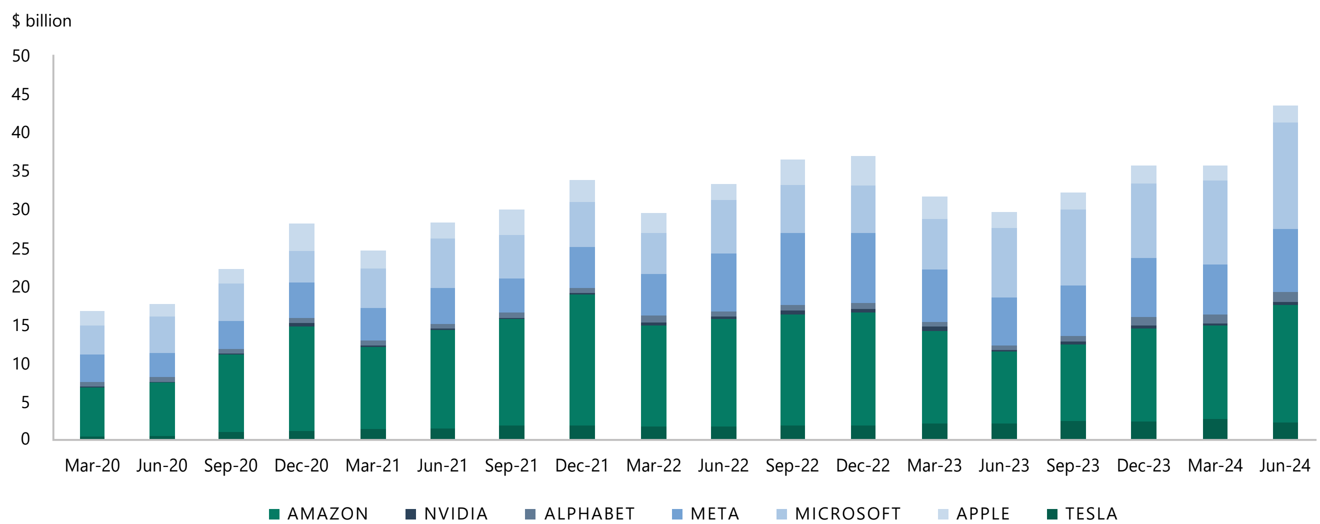
Third, fiscal policy has been strongly stimulative (**Exhibit 12**). Policies like the CHIPS Act, the Inflation Reduction Act, and the Infrastructure Act are extremely supportive for the US economy. These policies have contributed to a boom in the construction of everything from semiconductors to electric vehicles, batteries, solar panels, and windmills.

From a growth perspective, the positive effects of this fiscal policy have outweighed the negative effects of Fed hikes.

The resilience of the US economy is an underlying positive force. But inflation remains stubbornly above the Fed's 2% annual target. And many of the Trump administration's stated policy goals—including higher tariffs, lower taxes, and reduced immigration—could intensity upward inflationary pressures if enacted. If so, Fed rates could remain higher for longer, which, in turn, could undermine the current strength of the economy.

Exhibit 11: Strong demand for data centers and AI has generated a corporate spending wave

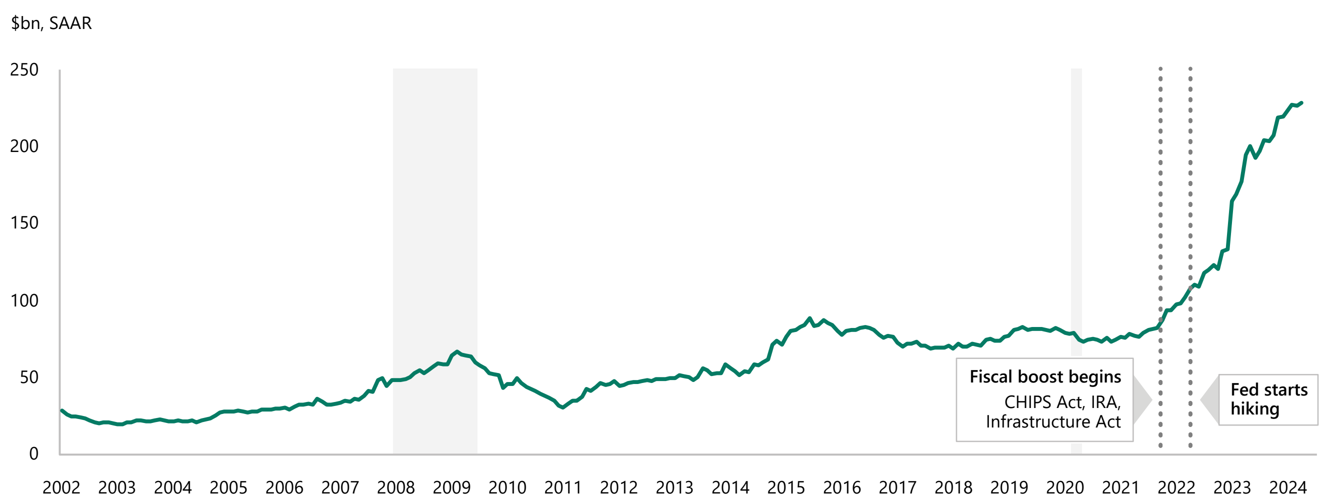
Capital spending of the Magnificent Seven



Data as of June 2024.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 12: Fiscal policy is stimulative

US construction spending on manufacturing



Data as of April 2024.
Sources: Census Bureau, Haver Analytics, Apollo Chief Economist

The information herein is provided for educational and discussion purposes only and should not be construed as financial or investment advice, nor should any information in this document be relied on when making an investment decision. Opinions and views expressed reflect the current opinions and views of the authors and Apollo Analysts as of the date hereof and are subject to change. Please see the end of this document for important disclosure information.

With GDP at 2.3% in Q4 2024, core inflation at 3.3% for January 2025, and the prospects of increased inflationary pressure to come, we believe markets should be paying close attention to this growth/inflation/rates dynamic.

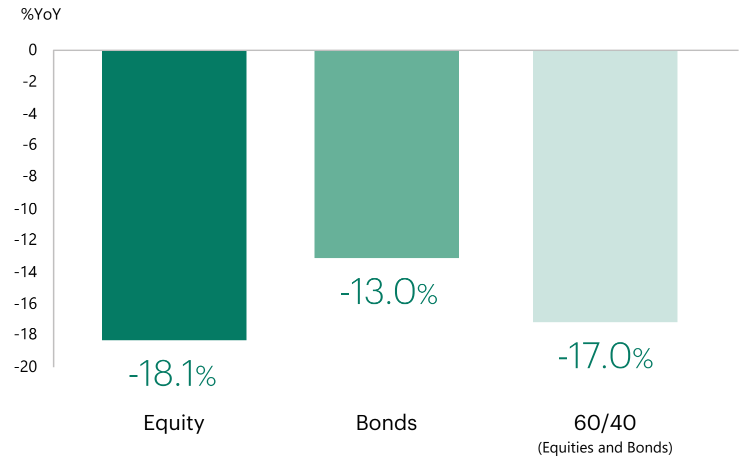
All of this is starting to look familiar. A scenario of high inflation, relatively high interest rates and falling stock prices would resemble the environment in 2022, one of the worst years in history for 60/40 portfolios (**Exhibit 13**).

There is another factor that remains in place from 2022: the strong correlation between equity and fixed income performance. Historically, the negative correlation between these two asset classes provided diversification and a natural hedge within the traditional 60/40 portfolio framework. But that relationship has broken down in recent years. For example, in 2022, stocks and bonds fell together; in 2023 and 2024, they rose together. Today, the three-year rolling correlations between stocks and bonds stand at some of the highest levels in decades (**Exhibit 14**).

The bottom line is that there could be significant downside risks to the 60/40 portfolio ahead. As a result, it might be time to consider alternatives that could leave portfolios better positioned.

Exhibit 13: 2022 was one of the worst years on record for the 60/40 portfolio

Performance of a 60/40 investment portfolio 2022



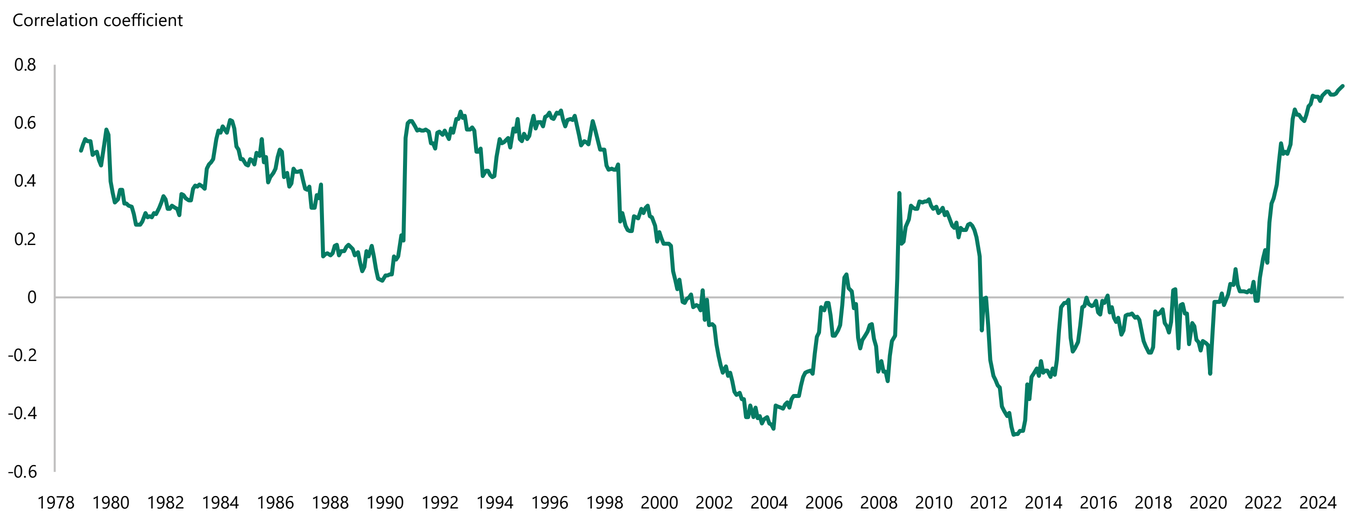
Data as of December 2022.

Equity represented by the Bloomberg US Large Cap Index. Bonds represented by the Bloomberg US Agg Total Return Value Unhedged USD. 60/40 portfolio composed of 60% equity benchmark and 40% bond benchmark.

Sources: Bloomberg, Apollo Chief Economist

Exhibit 14: High correlation between stocks and bonds is another risk factor for 60/40 portfolios

36-month rolling correlation between US stocks and bonds



Data as of January 16, 2025.

Note: Chart shows 36-month rolling correlation between the S&P 500 Index and the Bloomberg US Agg Total Return Value Unhedged Index.

Sources: Bloomberg, Apollo Chief Economist

2025: A Favorable Entry Point to Private Markets

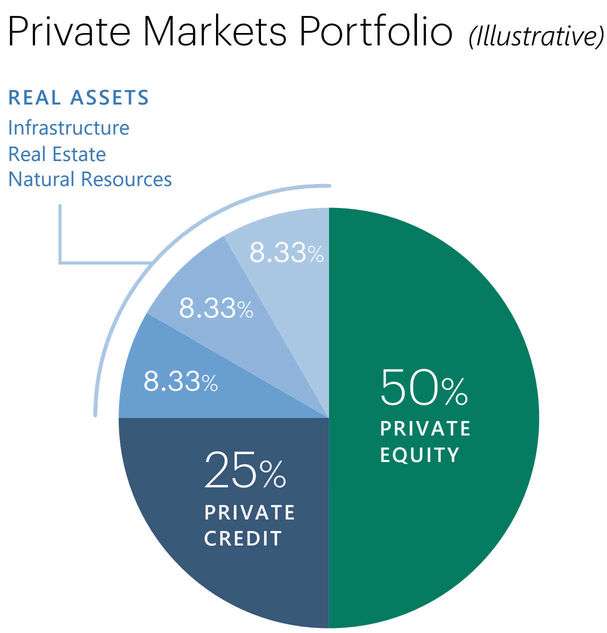
We believe a balanced private markets portfolio can provide an alternative to expensive public assets. We believe that is true at any point in the market cycle and in any set of conditions. However, we think the market environment in 2025 could represent a particularly attractive entry point to private markets.

To test those hypotheses, we created an illustrative private markets portfolio. In constructing a portfolio that could serve as an effective alternative to expensive public assets, we established four goals that the portfolio would have to achieve. It would have to:

1. Deliver returns on par with or in excess of public equities;
2. Generate those returns at lower levels of volatility;
3. Provide enhanced protection against inflation; and
4. Expand the investable universe to increase opportunities for investors.

In keeping with those goals, we created a portfolio comprising 50% private equity, 25% private credit, and 25% real assets, the last of which was evenly divided among infrastructure, real estate, and natural resources (**Exhibit 15**).

Exhibit 15: We believe a balanced private markets portfolio can provide an alternative to expensive public assets



For illustrative purposes only.
Source: Apollo analysts

We then tested the historic performance of our illustrative private markets portfolio. We had two goals: To measure the performance of the portfolio against the 60/40 portfolio itself, and to determine the impact of altering a 60/40 portfolio by replacing a portion of public markets exposures with the private markets portfolio. For our experiment, we replaced 10 percentage points of public equity exposure and 10 percentage points of fixed income exposure. The result is a 50/30/20 portfolio.

Exhibit 16 illustrates the outcome of our analysis. In the period from January 2008 (roughly the end of the Global Financial Crisis) to June 2024, a 50/30/20 portfolio outperformed the 60/40 in terms of annualized returns, and it did so at significantly lower levels of volatility.

Exhibit 16: Adding private markets to a 60/40 portfolio has historically enhanced returns while minimizing volatility, boosting returns per unit of risk

JANUARY 2008–JUNE 2024	60/40	Private Markets Portfolio (rebalanced)	50/30/20
Annualized Returns	7.6%	9.1%	8.1%
Standard Deviation	10.7%	6.9%	9.9%
Sharpe Ratio	0.71	1.32	0.82

Note: Private markets portfolio comprises 50% private equity (as measured by Preqin Private Equity Index), 25% private credit (as measured by Preqin Private Debt Index), and 25% real assets (represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI). 60/40 portfolio comprises 60% public equites (S&P 500 Index) and 40% public bonds (Bloomberg Aggregate Index). 50/30/20 portfolio comprises 50% public equity, 30% public bonds, and 20% private markets portfolio. Rebalanced portfolio was rebalanced on a quarterly basis.

Sources: Bloomberg, Preqin

The private markets portfolio has also demonstrated a positive correlation to inflation, meaning it can also help protect portfolios from the negative effects of rising prices (**Exhibit 17**).

From these outcomes, we believe that replacing some public market exposures in a 60/40 portfolio with a balanced portfolio of private assets can enhance risk-adjusted returns over a long-term horizon, regardless of current conditions.

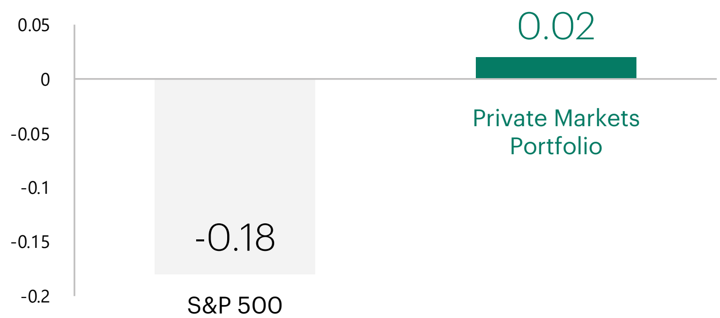
Next, we wanted to measure the impact of adding a balanced private markets portfolio in today's market environment of elevated public market valuations. To do so, we identified the CAPE ratio of the S&P 500 at the end of each year from 2000 to 2013. We then sorted those years by CAPE to identify years of higher and lower public stock valuations. Finally, we calculated the average annual performance of both the S&P 500 and the private markets portfolio over the subsequent 10-year period starting in each year.

The outcome illustrates that the private markets portfolio has historically outperformed public equities following periods of elevated public equity valuations (**Exhibit 18**). When CAPE ratios are extremely low, the S&P 500 has historically outperformed the private markets portfolio over the subsequent 10-year period. However, once the CAPE ratio hits any level of 26 or higher, the private markets portfolio has outperformed. For example, in 2000, CAPE ended the year at 37.0. Over the next 10 years, annual returns on the private markets portfolio averaged 8.6% and annual returns on the S&P 500 averaged just 1.7%. This is particularly remarkable given that the CAPE ratio was north of 38 as of this writing.

Exhibit 17: Exposure to a diversified portfolio of private assets can help protect against persistent inflation

Correlation to Inflation

(January 2008–June 2024)



Note: The S&P 500 is represented by the S&P 500 Total Return Index. Private markets portfolio comprises 50% private equity (as measured by Preqin Private Equity Index), 25% private credit (as measured by Preqin Private Debt Index), and 25% real assets (represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI).

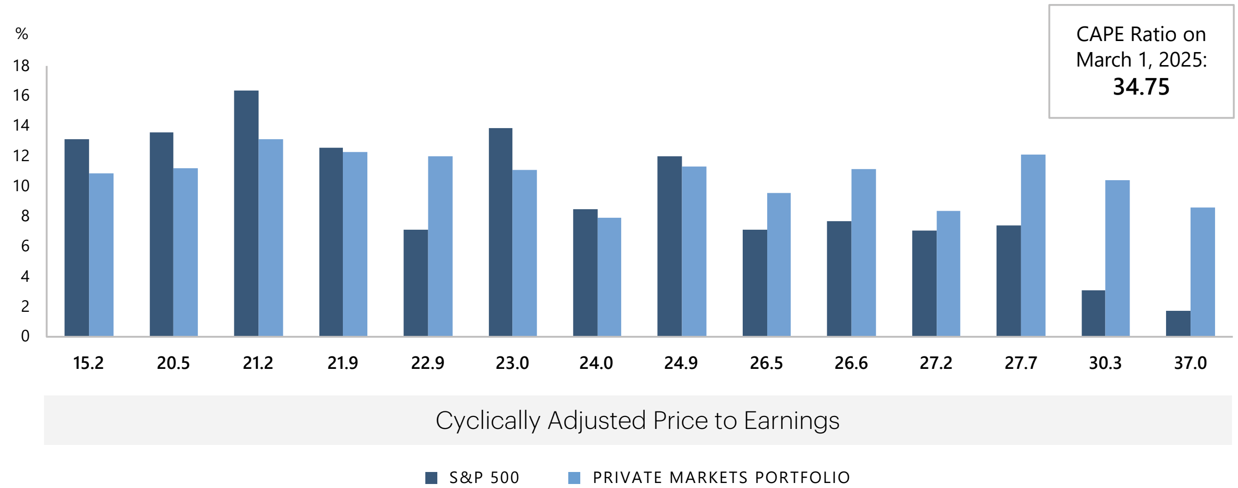
Sources: Bloomberg, Preqin

Exhibit 19 presents that same data in scatterplot form. This chart makes clear that the private markets portfolio has been less sensitive to cyclical fluctuations in public market valuations. For that reason, it historically outperforms stocks after periods of elevated valuations. Additionally, the private markets portfolio has outperformed by an expanding margin as the starting CAPE ratio increases, particularly notable since, as noted, the current S&P 500 CAPE ratio is above 38.

> The private markets portfolio has historically outperformed public equities following periods of elevated public equity valuations.

Exhibit 18: High public stock valuations can provide an attractive entry point to private markets

Annualized 10-Year Forward Returns
(periods starting 2000–2013)

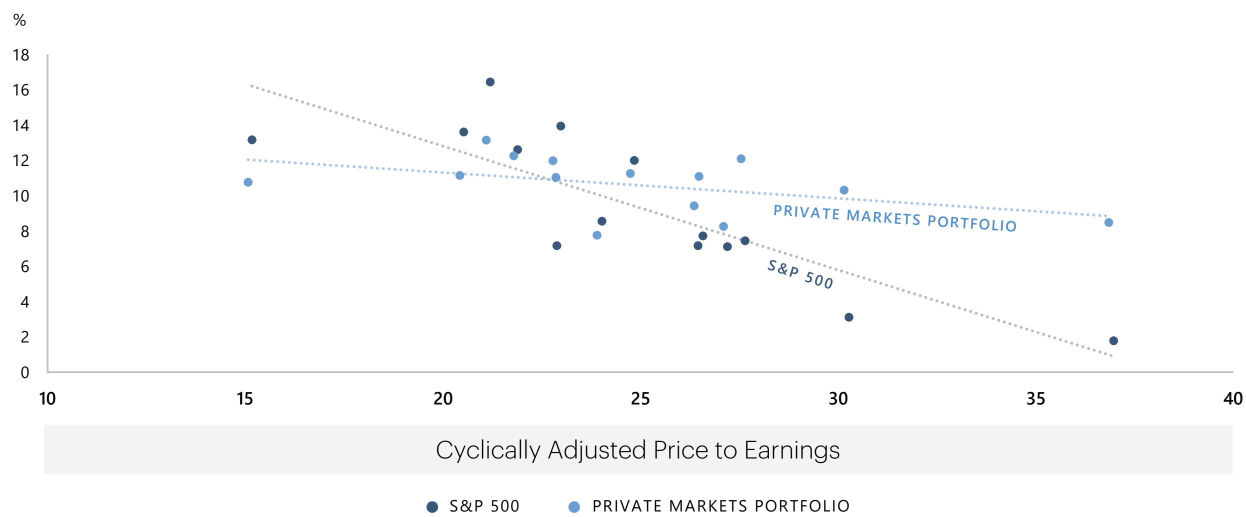


Note: Chart shows 10-year forward annualized performance of the S&P 500 index and the private markets portfolio, comprised of 50% private equity, 25% private credit, and 25% real assets based on the closing level of the cyclically adjusted price to earnings ratio (CAPE PE) on December 31 of each given year (i.e., the starting point). For example, the CAPE PE was at 15.17 on December 31, 2008, and the annualized performance of the S&P 500 index for the subsequent 10 years was 13.1%. Performance of the private market portfolio measured by the following proxies: Preqin Private Equity Index, Preqin Private Debt Index; real assets represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI.

Sources: Bloomberg, Preqin

Exhibit 19: Historically, the private markets portfolio outperformed more as public valuations climbed

Annualized 10-Year Forward Returns
(periods starting 2000–2013)



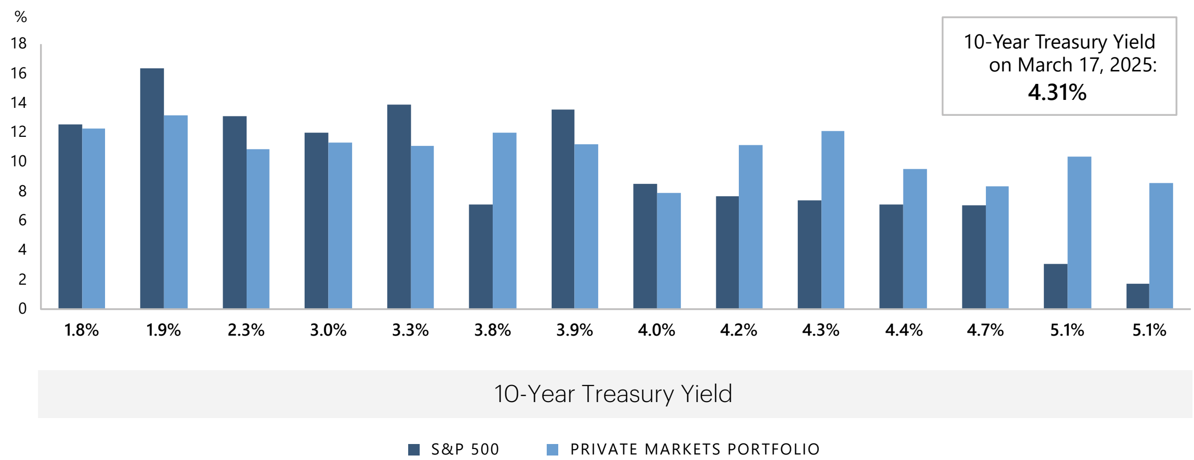
Note: Chart shows 10-year forward annualized performance of the S&P 500 index and the private markets portfolio, comprised of 50% private equity, 25% private credit, and 25% real assets based on the closing level of the cyclically adjusted price to earnings ratio (CAPE PE) on December 31 of each given year (i.e., the starting point). For example, the CAPE PE was at 15.17 on December 31, 2008, and the annualized performance of the S&P 500 index for the subsequent 10 years was 13.1%. Performance of the private market portfolio measured by the following proxies: Preqin Private Equity Index, Preqin Private Debt Index; real assets represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI. Source: Bloomberg, Preqin

The story is much the same with interest rates: the private markets portfolio has historically outperformed public equities following periods of elevated rates. To make that determination, we repeated our 10-year performance analysis replacing CAPE ratios with 10-year treasury yields. The outcome: In the period from 2000 to 2013, whenever the 10-year treasury yield hit 4.2% or higher, the private markets portfolio outperformed the S&P 500 in the subsequent 10 years (**Exhibit 20**).

That performance gap got bigger as yields increased (**Exhibit 21**). The flatter line for the private markets portfolio in the scatterplot illustrates that the private portfolio has historically done a better job of maintaining consistent, robust returns over the subsequent 10-year period as starting interest rates rise. Again, that finding seems especially relevant today, given the current 10-year treasury yield of 4.6%.

Exhibit 20: Private markets also historically outperformed following a period of high interest rates

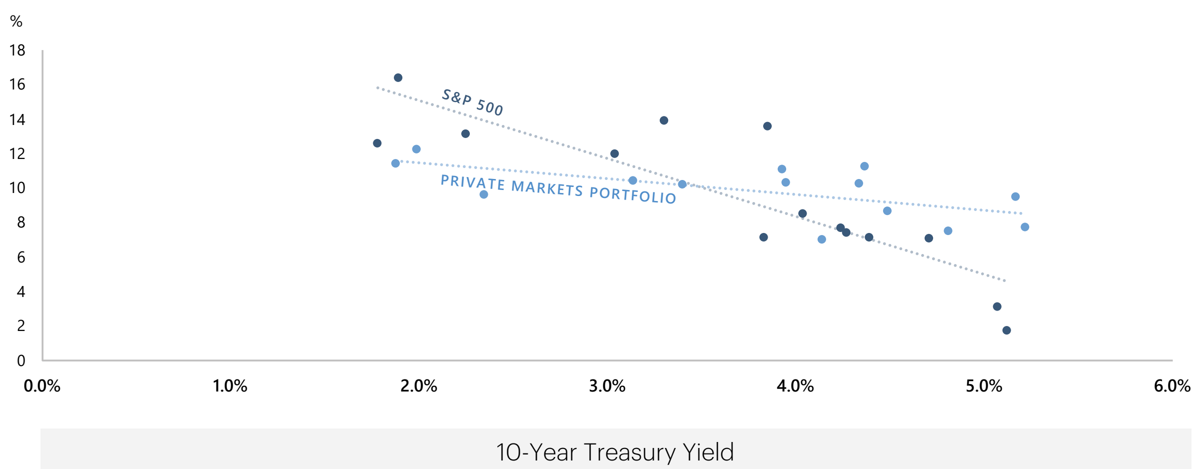
Annualized 10-Year Forward Returns
(periods starting 2000–2013)



Note: Chart shows 10-year forward annualized performance of the S&P 500 index and the private markets portfolio, comprised of 50% private equity, 25% private credit, and 25% real assets based on the closing yield of 10-year Treasury bond on December 31 of each given year (i.e., the starting point). For example, the 10-year Treasury yield was at 5.12% on December 31, 2000, and the annualized performance of the S&P 500 index for the subsequent 10 years was 1.7%. Performance of the private market portfolio measured by the following proxies: Preqin Private Equity Index, Preqin Private Debt Index; real assets represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI. Source: Bloomberg, Preqin

Exhibit 21: The private markets portfolio historically outperformed more as interest rates climbed

Annualized 10-Year Forward Returns
(periods starting 2000–2013)



Note: Chart shows 10-year forward annualized performance of the S&P 500 index and the private markets portfolio, comprised of 50% private equity, 25% private credit, and 25% real assets based on the closing yield of 10-year Treasury bond on December 31 of each given year (i.e., the starting point). For example, the 10-year Treasury yield was at 5.12% on December 31, 2000, and the annualized performance of the S&P 500 index for the subsequent 10 years was 1.7%. Performance of the private market portfolio measured by the following proxies: Preqin Private Equity Index, Preqin Private Debt Index; real assets represented by three indices equally weighted: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI. Source: Bloomberg, Preqin

Conclusion

No matter how you measure, public stocks and bonds are expensive. Current public market valuations, combined with stubborn inflation and other factors like the prospect of higher-for-longer interest rates and unusually high levels of correlation between public equities and fixed income, are creating a set of conditions not unlike those that materialized in 2022, the worst year on record for the 60/40 portfolio.

We believe that adding a balanced allocation of private assets can help better position portfolios for this environment. Historically, integrating private markets into a portfolio has improved risk-adjusted returns over a long-term horizon, regardless of current conditions.

However, we believe today's market environment could represent a particularly attractive entry point. A balanced private markets portfolio has historically outperformed public equities following periods of elevated stock market valuations, and after periods of high interest rates. In addition, inflation-resistant features of a balanced private asset allocation have the potential to help protect portfolios against a potential resurgence in inflation.

ABOUT THE AUTHOR

Matt O’Mara
Partner, Co-Head,
Apollo Aligned Alternatives

Matthew O’Mara is Partner and Co-Head of Apollo Aligned Alternatives (“AAA”). Prior to joining in 2012, Matt was a credit analyst focused on leveraged lending at OneWest Bank and at Four Corners Capital/Macquarie Funds Group. Previously, Matt was with Newell Associates where he managed large cap public equity portfolios.

A graduate of Stanford University, Matt holds a BA in Economics and received his MBA from the Marshall School of Business. He is a CFA charterholder.

Important Disclosure Information

This presentation is for educational and discussion purposes only and should not be treated as research. This presentation may not be distributed, transmitted or otherwise communicated to others, in whole or in part, without the express written consent of Apollo Global Management, Inc. (together with its subsidiaries, “Apollo”). The views and opinions expressed in this presentation are the views and opinions of the authors of the content. They do not necessarily reflect the views and opinions of Apollo and are subject to change at any time without notice. Further, Apollo and its affiliates may have positions (long or short) or engage in securities transactions that are not consistent with the information and views expressed in this presentation. There can be no assurance that an investment strategy will be successful. Historic market trends are not reliable indicators of actual future market behavior or future performance of any particular investment which may differ materially, and should not be relied upon as such.

This presentation does not constitute an offer of any service or product of Apollo. It is not an invitation by or on behalf of Apollo to any person to buy or sell any security or to adopt any investment strategy, and shall not form the basis of, nor may it accompany nor form part of, any right or contract to buy or sell any security or to adopt any investment strategy. Nothing herein should be taken as investment advice or a recommendation to enter into any transaction. Hyperlinks to third-party websites in this presentation are provided for reader convenience only. Unless otherwise noted, information included herein is presented as of the dates indicated. This is not complete and the information contained herein may change at any time without notice. Apollo does not have any responsibility to update the presentation to account for such changes.

Apollo has not made any representation or warranty, expressed or implied, with respect to fairness, correctness, accuracy, reasonableness, or completeness of any of the information contained herein (including but not limited to information obtained from third parties unrelated to Apollo), and expressly disclaims any responsibility or liability therefore.

The information contained herein is not intended to provide, and should not be relied upon for, accounting, legal or tax advice or investment recommendations. Investors should make an independent investigation of the information contained herein, including consulting their tax, legal, accounting or other advisors about such information. Apollo does not act for you and is not responsible for providing you with the protections afforded to its clients.

Certain information contained herein may be “forward looking” in nature. Due to various risks and uncertainties, actual events or results may differ materially from those reflected or contemplated in such forward-looking information. As such, undue reliance should not be placed on such information. Forward-looking statements may be identified by the use of terminology including, but not limited to, “may”, “will”, “should”, “expect”, “anticipate”, “target”, “project”, “estimate”, “intend”, “continue” or “believe” or the negatives thereof or other variations thereon or comparable terminology.

The Standard & Poor’s 500 (“S&P 500”) Index is a market capitalization-weighted index of the 500 largest US publicly traded companies by market value. Index performance and yield data are shown for illustrative purposes only and have limitations when used for comparison or for other purposes due to, among other matters, volatility, credit or other factors (such as number of investments, recycling or reinvestment of distributions, and types of assets). It may not be possible to directly invest in one or more of these indices and the holdings of any strategy may differ markedly from the holdings of any such index in terms of levels of diversification, types of securities or assets represented and other significant factors. Indices are unmanaged, do not charge any fees or expenses, assume reinvestment of income and do not employ special investment techniques such as leveraging or short selling. No such index is indicative of the future results of any strategy or fund.

Additional information may be available upon request.

Past performance is not necessarily indicative of future results.

To learn more, visit ApolloAcademy.com.