APOLLO

Building Resilience: Selecting the Right Assets for an Alternatives Portfolio

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Higher correlation among asset classes has become a key feature of the post zero-interest-rate world. Prices for equities and bonds, for example, have moved up and down in virtual tandem since the Federal Reserve kicked off a tightening cycle in March 2022 (after almost 15 years of very low rates), which has brought US base rates from virtually zero to around 5.5% by April 2024.

These increased correlations are undermining the effectiveness of the 60/40 portfolio. The 60/40 construction has been the default setting for investor portfolios because it worked. For decades the negative correlation between stocks and bonds helped protect investors from volatility. When those asset classes began moving together in 2022, the diversification benefits traditionally associated with the 60/40 portfolio dissipated, resulting in historic losses. When markets rebounded in 2023, equities and fixed income again moved in lockstep, leaving investors questioning how prepared their portfolios are for what many believe will be a coming period of continued market volatility.

KEY TAKEAWAYS

- Traditional portfolio diversification techniques are becoming less effective as correlations among asset classes heighten.
- Persistent upside risks to inflation and downside risks to growth point to continued market volatility in the remainder of 2024 and beyond.
- Amid market uncertainty, investors are turning to private assets to diversify portfolios and help manage volatility.
- But not all alternatives are created equal. Investors can create resilience by targeting assets with certain inherent traits and exposure to specific investment factors.
- We believe that focusing on cash-flow generating assets at attractive valuations can maximize the volatility-dampening effect of an alternatives portfolio and enhance long-term risk-adjusted potential returns.

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As we have written in previous papers,[1] we believe alternatives—especially private assets—represent an important, but oft under-allocated component of investors' portfolios. At a time when many are struggling with increased correlation, reduced diversity, and higher volatility, adding an allocation to alternatives can allow investors the opportunity to trade volatility risk for illiquidity (or semi-liquidity) risk. This tradeoff has helped alternatives deliver higher historic risk-adjusted returns than public markets.[2]

That said, it is important to acknowledge that not all alternatives are created equal. Investors planning to add or expand allocations to alternatives should understand the key sources of risk and return within the various options of alternatives and ensure that the alternative investments they select can provide exposure to those traits likely to help mitigate volatility and add to diversification of the portfolio. We believe investors who adopt this approach can maximize diversification and return benefits through effective asset selection.

So, how can investors approach asset selection in alternatives?

We believe that the performance of private markets exhibits a similar factor-investing dynamic as public markets. In particular, we believe that private markets demonstrate the same cyclical patterns between growth and value that characterize public markets. There might be lagging effects due to the different liquidity profiles, but the forces acting upon them are, in our view, similar. If so, the additional diversification achieved by adding alternatives to a 60/40 portfolio might not be enough to generate a less-volatile outcome. In other words, we believe that there are other *factors* involved.

In that light, investors could, in our view, adopt a "factor-aware" approach when selecting alternative assets for their portfolios. Specifically, we believe that, when it comes to building an allocation with the potential to mitigate volatility and enhance long-term risk adjusted returns, two factors stand out: cash-flows/dividends and value. A focus on assets that can generate cash flows throughout the business cycle can help make portfolios more resistant to market volatility, particularly interest-rate driven volatility. Investors can enhance the volatility-dampening characteristic of their portfolio by adopting a value orientation, which we believe can offer potential alpha creation at lower levels of volatility.

To demonstrate the potential benefits of that approach, we will start by examining the recent performance of the standard 60/40 portfolio, and analyze how increased correlation among asset classes and other developments are eroding the effectiveness of traditional portfolio diversification techniques. We will then assess the risk that the weakening performance of those diversification methods poses to investors by taking a close look at the macroeconomic environment and trying to estimate the volatility levels facing investors in the near-to-intermediate term. Next, we will discuss one of the most common strategies investors are using to counter volatility in this new environment—increasing allocations to alternative asset classes. Finally, we will discuss maximizing the volatility-dampening features of an alternatives allocation by selecting alternative assets with a focus on cash flows and value. We believe that adding exposures to alternative assets with this type of factor awareness has the potential to make portfolios more resilient and better able to withstand the ups and downs of the business cycle and, ultimately, to enhance potential risk-adjusted returns and terminal values.

[1] O'Mara, Matt. "How Alternatives Can Address Your 60/40 Portfolio Blues;" June 2022. Available at: https://apolloacademy.com/wp-content/uploads/filr/2959/Apollo-Alternatives-White-Paper.pdf

O'Mara, Matt. "Beyond Beta: How to Use Alternatives to Replace Public Equity;" May 2023. Available at: https://apolloacademy.com/wp-content/uploads/2023/05/Apollo-Beyond-Beta-White-Paper-May-2023.pdf

[2] Based on a comparison of the performance of a portfolio of alternatives including hedge funds, real estate, and private equity, with each receiving an equal weight and portfolios rebalanced at the start of the year, versus a portfolio of equities, as represented by the S&P 500 Total Return Index and bonds, as represented by the Bloomberg U.S. Aggregate Total Return Index, from 1989 through Q3 2023. Data are based on availability as of February 29, 2024. Source: Guide to Alternatives, Q4 2023, J.P. Morgan Asset Management. Available at: https://am.jpmorgan.com/us/en/asset-management/institutional/insights/market-insights/guide-to-alternatives/

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The 60/40 Conundrum

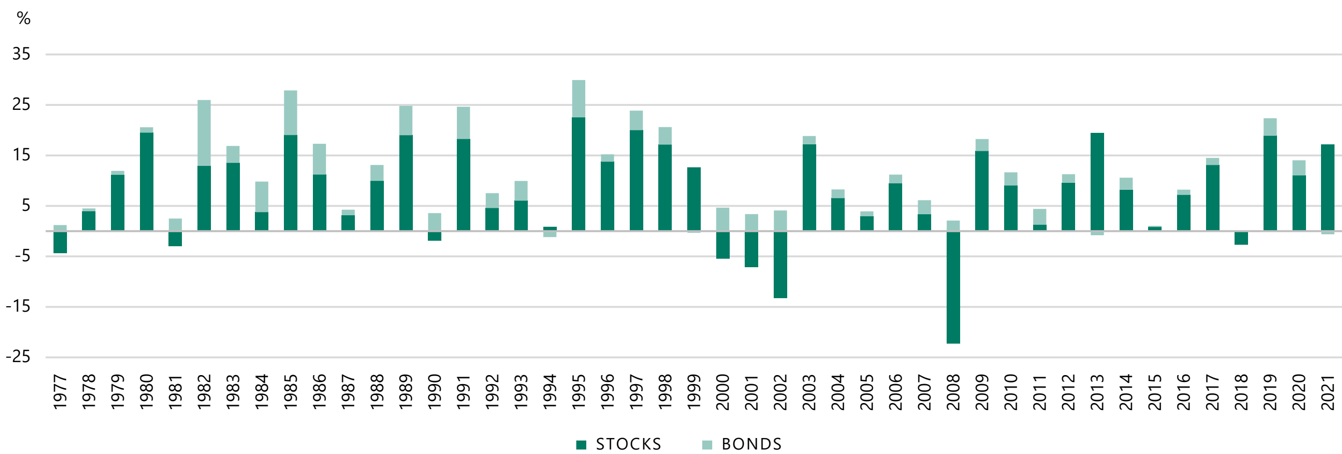
The 60/40 portfolio became the standard allocation for investors for one reason: because it worked. The inverse correlation between high-performing stocks and lower-volatility bonds helped the 60/40 portfolio offset volatility and produce strong returns for more than four decades.

As shown in **Exhibit 1,** between 1977 and 2021, any year of negative equity performance featured positive returns in bonds—and vice versa. There were years where both were positive, but never a year where both were negative. That pattern held true through nine years in which either equity or bonds produced negative results and across six economic recessions, including the Dot-Com bust and the Global Financial Crisis.

In 2022, that longstanding trend came to an end when the Fed raised its target rate from zero to 5.5%, sending both equity and debt markets into sharp drawdowns. The sudden structural shift in the Fed's monetary regime resulted in an 18.1% negative return for equities and 13.0% negative returns for fixed income. That 2022 performance represented the first year on record in which both asset classes delivered not only negative returns, but double-digit negative returns. As shown in **Exhibit 2,** the result for investors with 60/40 portfolios was a painful 16.1% negative return.

Exhibit 1: The 60/40 portfolio had a strong run delivering returns and minimizing volatility...

Performance of a 60/40 investment portfolio (1977–2021)



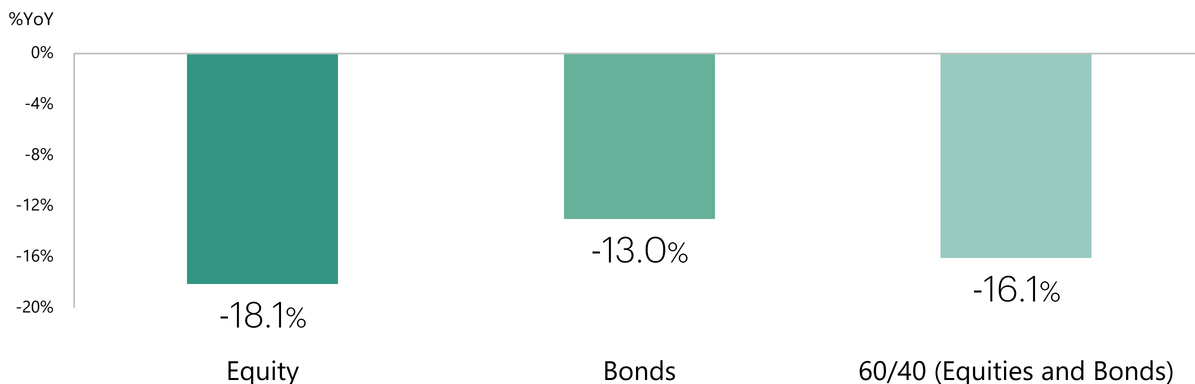
Data as of December 2021.

Equity represented by the S&P 500 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.

Source: Bloomberg, Apollo Chief Economist

Exhibit 2: ...but it hit a snag when the Fed changed the monetary regime and correlations rose

Performance of a 60/40 investment portfolio (2022)



Data as of December 2022.

Equity represented by the S&P 500 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.

Source: Bloomberg, Apollo Chief Economist

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Investors relying on 60/40 portfolios got some fast and welcomed relief in 2023, as both stocks and bonds rebounded into positive territory (**Exhibit 3**). However, we believe this performance does not necessarily represent an all-clear sign for the 60/40 portfolio. Both stocks and bonds were positively correlated, which added to volatility, and—although we understand that two years of exacerbated correlation does not necessarily imply the "death knell" of the 60/40 model—we see three trends that warrant close attention:

1. A series of macroeconomic and market indicators suggest that volatility levels across capital markets could remain elevated in months and even years to come.
2. Throughout the recent history of the 60/40 portfolio, it was the inverse correlation between stocks and bonds that helped mitigate volatility and drive performance. In 2022, stocks and bonds fell together. In 2023, they rose together. If that correlation between stocks and bonds persists, it will likely continue to undermine the volatility-dampening nature of the 60/40 model.
3. Public equity markets are becoming increasingly concentrated, which we believe could set the stage for higher levels of volatility for the asset class on a structural level.

Macro uncertainty, asset correlation likely to keep volatility high in 2024

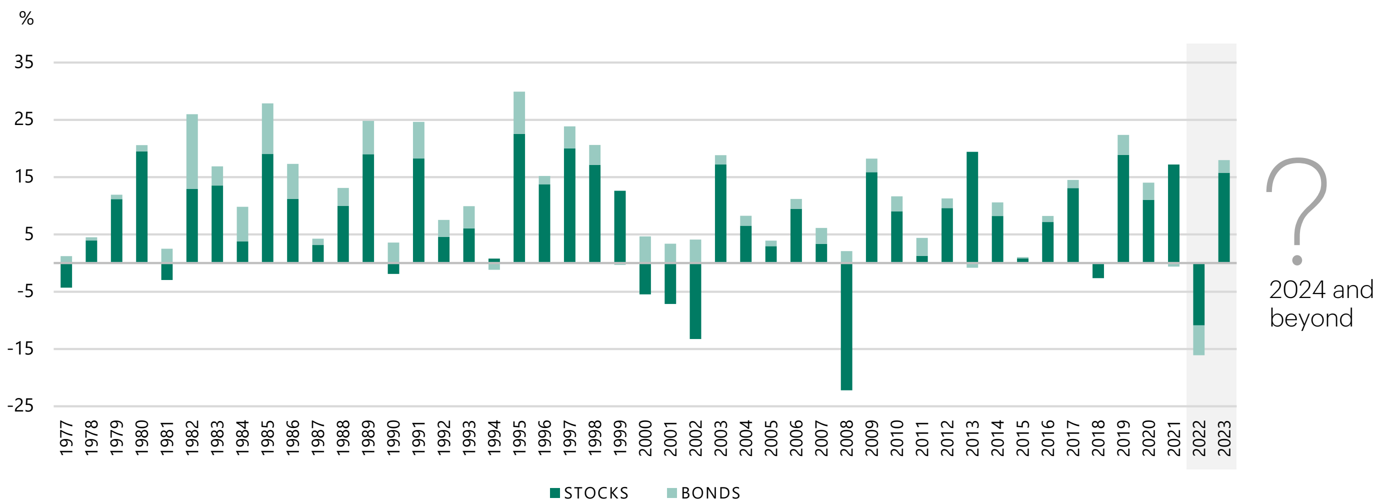
The aftermath of the COVID-19 pandemic brought an end to an extended period of placid market conditions and exposed investors to volatility levels seldom experienced over the previous decade. The tailwinds that had benefitted markets for so long have now dissipated, and potentially turned into headwinds.

The Federal Reserve unleashed unprecedented monetary stimulus to help the US economy rebound from the Global Financial Crisis of 2008. Because the pace of the subsequent recovery remained unusually slow, the Fed left much of that stimulus in place for more than 10 years. When COVID-19 shuttered the global economy in 2020, the Fed responded with even more firepower—all of which kept interest rates depressed while liquidity levels remained high for a prolonged period of time.

Although these efforts were undeniably successful in fending off a catastrophic economic downturn, they also helped introduce the new risk of inflation. A surge in inflation in 2021 brought a sudden end to the extended period of accommodative monetary policy that had benefitted companies, consumers, and investors. The FOMC raised rates at every meeting from March 2022 to May 2023, pushing the target rate from zero-0.25% to 5.25%-5.5%. With inflation cooling and concerns of an economic slowdown mounting, Fed officials in December 2023 seemed to "pivot," signaling that rate cuts might be forthcoming.

Exhibit 3: Despite a rebound, the viability of 60/40 model is still in doubt as stocks and bond remained correlated in 2023 (this time, to the upside)

Performance of a 60/40 investment portfolio (1977–2023)



Data as of December 2023.

Equity represented by the S&P 500 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.

Source: Bloomberg, Apollo Chief Economist

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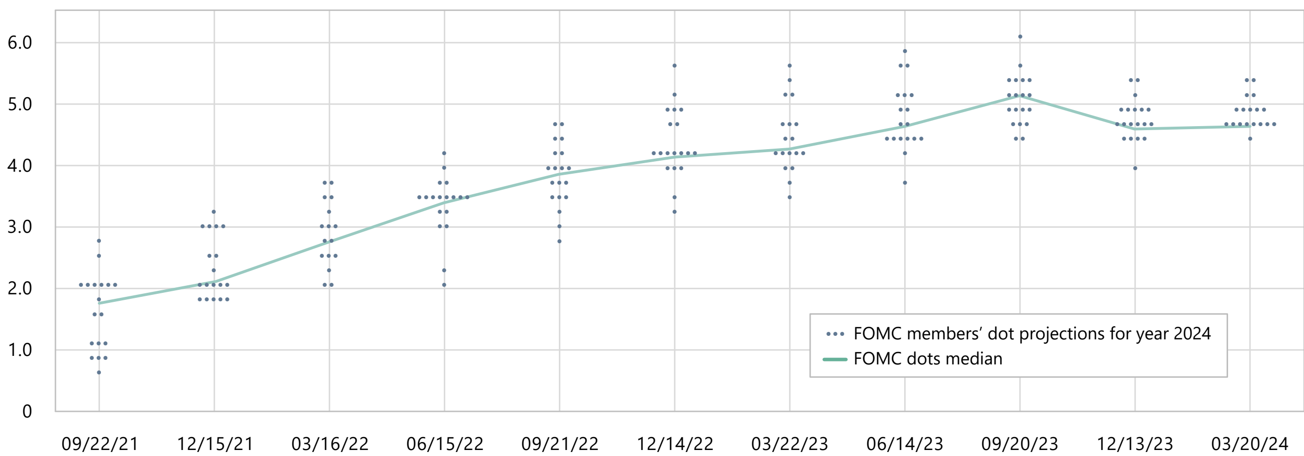
That said, given lingering concerns about inflationary pressures, we don't expect rates to return to the low pre-2022 levels any time soon; in fact, we expect them to remain higher for longer.

We believe that an uncertain macroeconomic backdrop—i.e., timing of potential Fed rate cuts, soft vs. hard landing—is likely to keep asset-price volatility unusually high for the remainder of 2024 and potentially beyond. Take, for example, the outlook for base rates in the US. As shown in **Exhibit 4**, Fed officials have considerably increased their expectations for the federal funds rates since September 2021, with the latest available reading as of this writing pointing to an average expected base rate of 4.6% by year end, still much higher than the below-2% average seen in 2021.

The Fed is projecting rates at these elevated levels because inflation remains above its 2% target. **Exhibit 5** tracks the Headline Consumer Price Index (CPI) going back to 2010. The chart illustrates the prolonged period of moderation that came to a dramatic end in 2021 as the impact of stimulative monetary and fiscal policy began to materialize and pandemic supply-chain disruptions pushed up prices globally. Although the pace of inflation began to moderate in 2023, that downward trend leveled off in Q1 2024, leaving the measure higher than its historic average and well above the Fed's target.

Exhibit 4: Fed "pivot" signals rate cuts in 2024, but outlook remains uncertain

Projected fed funds target rate, end of 2024



Data as of March 21, 2024.
Sources: Bloomberg, Federal Reserve Board

Exhibit 5: Inflation is sticky above the Fed's 2% inflation target

Headline CPI

Data as of March 19, 2024.
Sources: BLS, Haver Analytics, Apollo Chief Economist

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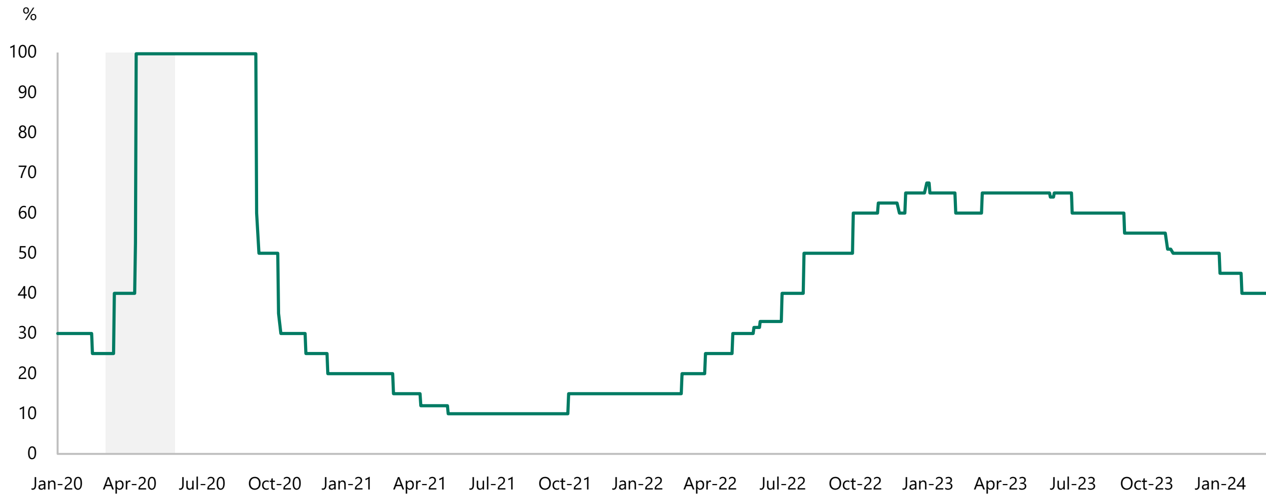
Due in part to persistently high inflation and elevated rates, economists still see a chance of a recession in the United States this year. As shown in **Exhibit 6**, forecasters put the probability of a recession before the end of 2024 at roughly 40%.

In our view, this combination of economic uncertainty, stubborn inflation, and higher rates makes it highly likely that markets will remain volatile in the near to medium term.

Those looking for clues about how well a 60/40 construction will work to diversify portfolios and help mitigate the negative impacts of that volatility should closely watch correlations between public stocks and bonds. As shown in **Exhibit 7**, the sharp increase in correlations that first appeared in 2022—and persisted into 2023—has not yet subsided.

Exhibit 6: Forecasters still see a meaningful chance of a US recession in 2024

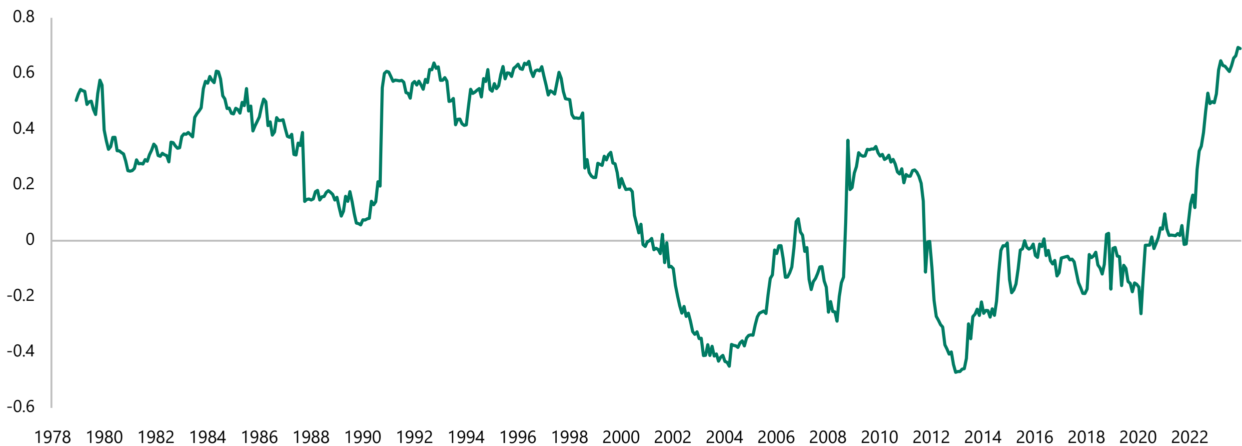
Probability of US recession in the next 12 months



Data as of March 25, 2024.
Sources: Bloomberg, Apollo Chief Economist

Exhibit 7: Finding diversification in public markets has become more difficult as correlations have risen...

Rolling three-year correlations between stocks and bonds



Data as of December 2023.
Sources: Bloomberg, Apollo Chief Economist

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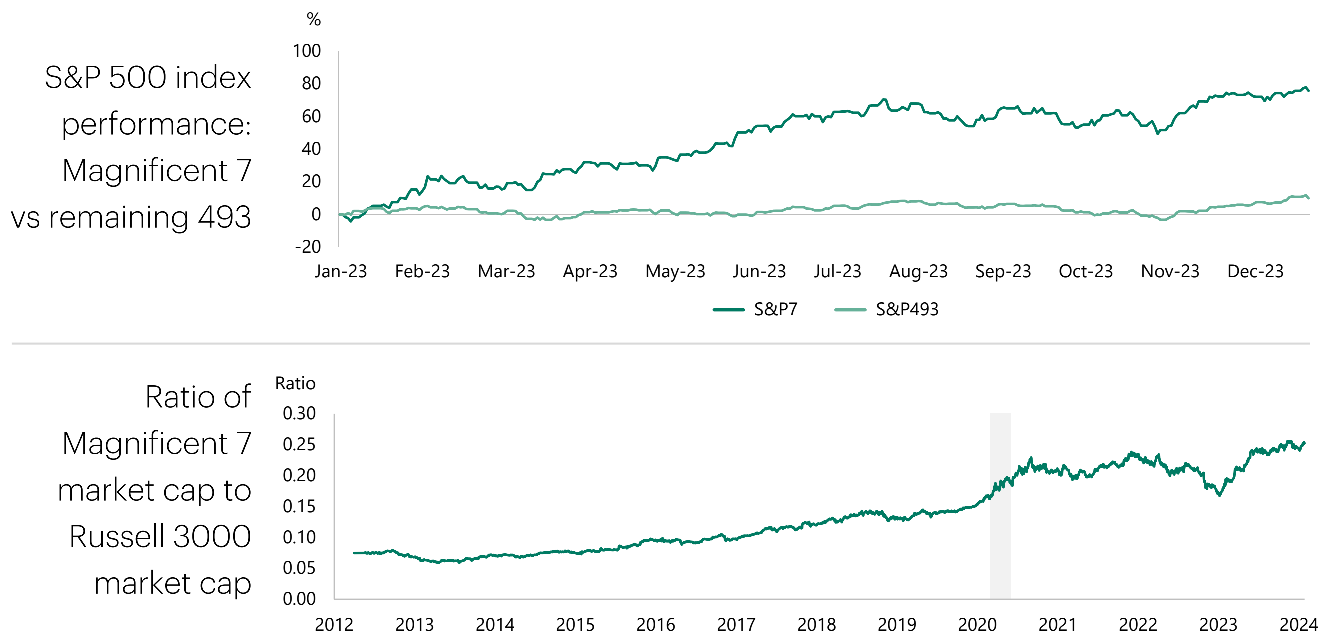
Trends unfolding within the public equity markets are another important factor for those considering the effectiveness of traditional portfolio diversification strategies today. Specifically, rising rates of concentration have the potential to increase volatility in public stocks. As **Exhibit 8** illustrates, the performance of seven stocks often referred to as the "Magnificent Seven" (Alphabet, Amazon, Apple, Meta, Microsoft, NVDIA and Tesla) has dramatically outpaced that of the rest of the market, accounting for an increasingly large portion of overall gains for the S&P 500 in 2023.

That outperformance significantly increased concentration in a broader equity marketplace that was already highly concentrated relative to recent historic averages. Today, the combined market cap of the Magnificent Seven is bigger than the stock markets of most major industrialized countries and, as **Exhibit 8** shows, accounts for about one quarter of the overall equity market capitalization in the United States.

We believe increased concentration in stocks could set the stage for elevated levels of volatility within equities. Meanwhile, inflation and other economic and non-economic forces seem to be aligning to keep interest rates higher for longer. Those rates are contributing to rising delinquency rates, declining corporate coverage ratios, increasing default rates, a slowdown in bank lending, and a series of other trends that point to the possibility of an economic slowdown. With rising levels of correlation, concentration, and volatility, we are less confident that public markets alone will be able to provide the diversification investors need for their retirement portfolios. The question now is: How do investors manage volatility and minimize downside risk in this new environment?

Exhibit 8: ...and public equity markets have become increasingly concentrated



Percentage change (top) from Jan 1, 2023. Data as of December 20, 2023. Market cap (bottom) as of January 29, 2024. The S&P Magnificent 7 includes Apple, Microsoft, Alphabet, Amazon, NVIDIA, Meta, and Tesla.

Sources: Bloomberg, Apollo Chief Economist

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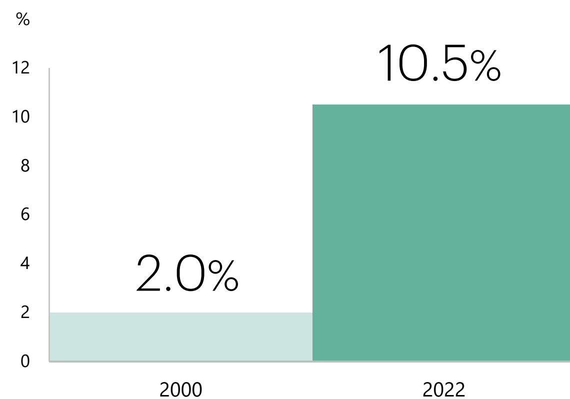
Alternatives can help, but selecting right assets is key to building resilience

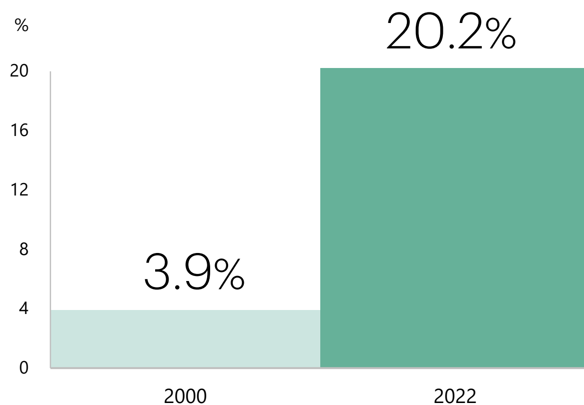
With traditional diversification strategies proving less effective, growing numbers of investors are turning to alternative asset classes as a means of mitigating the impact of volatility on their portfolios. Adding uncorrelated or less correlated alternatives can certainly help enhance diversification benefits, minimizing downside risk and portfolio volatility. And in fact, as shown in **Exhibit 9**, investor demand for less-correlated assets and better potential risk-adjusted returns has fueled dramatic growth in both private equity and private debt.

Shifting allocations from public assets to private assets has unlocked a vastly larger and expanding universe of potential investments. From 2000 to 2022, the number of private-equity backed companies in the country jumped from just 354 to more than 11,000.[3] By contrast, there were only about 4,641 public companies in the United States at the start of 2024. In addition to the larger opportunity set in equity and debt, investors in private markets are also using real estate, infrastructure, and other private assets to diversify their portfolios.

Historic data show that adding an allocation to private assets can improve risk-adjusted returns. **Exhibit 10** depicts the impact of adding various allocations of alternative assets to a standard 60/40 portfolio. Replacing even a relatively modest portion of equity and bond allocations with a diversified portfolio of alternatives can push the efficient frontier up and to the left, meaning that the portfolio generates more return per each unit of risk.

Exhibit 9: Investors are turning to private assets as a means of diversifying portfolios





Data as of December 31, 2022.
Sources: Preqin, Bloomberg, Apollo Chief Economist

> Shifting allocations from public assets to private assets has unlocked a vastly larger and expanding universe of potential investments.

[3] Apollo Analysts. Source: Nasdaq, NYSE, Pitchbook

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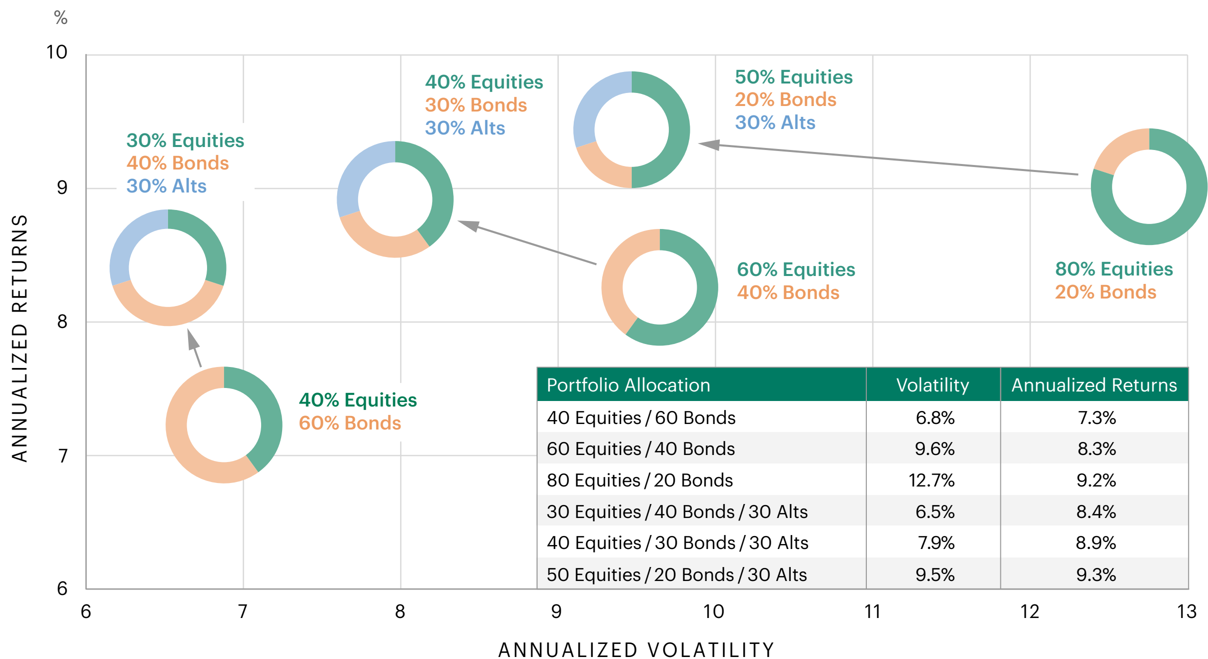
Exhibit 10: Adding an allocation to alternatives can create strong diversification benefits

Annualized volatility and returns, 1989–3Q 2023



Portfolio Allocation	Volatility	Annualized Returns
40 Equities / 60 Bonds	6.8%	7.3%
60 Equities / 40 Bonds	9.6%	8.3%
80 Equities / 20 Bonds	12.7%	9.2%
30 Equities / 40 Bonds / 30 Alts	6.5%	8.4%
40 Equities / 30 Bonds / 30 Alts	7.9%	8.9%
50 Equities / 20 Bonds / 30 Alts	9.5%	9.3%

Data based on availability as of February 29, 2024.

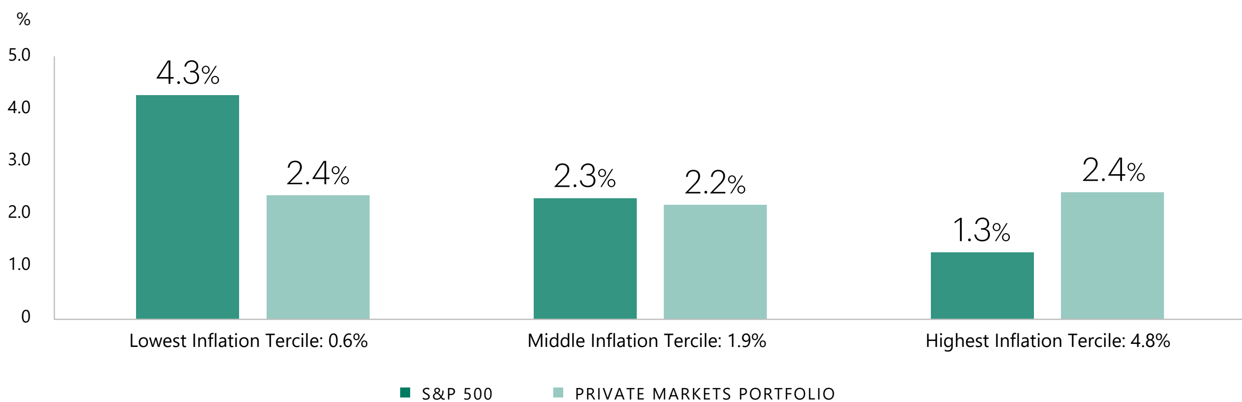
Alts include hedge funds, real estate, and private equity, with each receiving an equal weight. Portfolios are rebalanced at the start of the year.
For illustrative purposes only. **Past performance is not necessarily indicative of future results.**

Sources: Bloomberg, Burgiss, HFRI, NCREIF, Standard & Poor's, FactSet, J.P. Morgan Asset Management

Of course, merely adding an allocation to alternatives to a portfolio will not necessarily guarantee lower volatility. Not all alternatives are the same. Some have higher sensitivity to interest rates and other factors, and some have lower sensitivity. To minimize volatility, we believe in adding alternatives that have the "right" characteristics to be more resilient in the face of these risks. For example, as **Exhibit 11** illustrates, a diversified portfolio of alternatives focused on traditional private equity, private credit, and real assets has historically delivered relatively consistent performance across periods of high, low, and moderate inflation. Those steady results can serve as a counterweight to investment returns from equities, which tend to be strongest during times of low inflation and weakest when inflation is high. For that reason, targeting these asset classes can be an effective means of protecting a portfolio against inflation.

Exhibit 11: A balanced portfolio of alternatives can also enhance inflation protection

Quarterly returns of a public equity vs private markets portfolio (Q1 2008-Q3 2023)



Data as of September 30, 2023.

Sources: Bloomberg, US Bureau of Labor Statistics (for US Consumer Price Index, CPI), Preqin Private Equity, Preqin Private Debt. Real assets equally weight three indices: Preqin Natural Resources, Preqin Infrastructure, NCREIF NPI. Private markets portfolio is 50% Private Equity, 25% Private Debt, 25% Real Assets.

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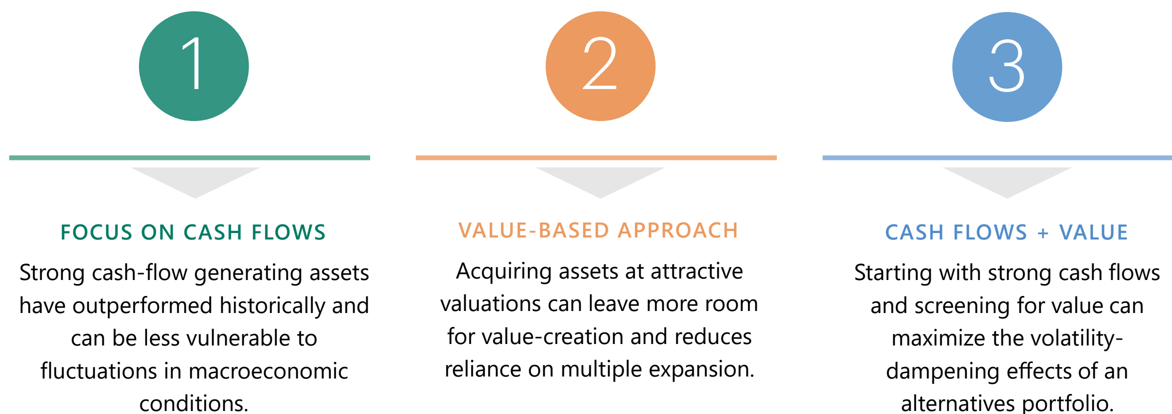
In our view, investors should consider not only selecting the right asset classes, but the right individual strategies. We believe investors can use effective investment selection to meaningfully enhance the diversification benefits, volatility-dampening characteristics, and overall potential performance of an alternatives portfolio.

So how can investors approach investment selection in private markets? We believe performance in private markets exhibits factor-investing dynamics akin to those seen in public markets. Although effects might lag in private markets due to differing liquidity profiles, the forces acting upon them can be similar. Specifically, we believe private markets demonstrate cyclical patterns between growth and value resembling those that characterize public markets. For that reason, we believe a "factor-aware" approach should be adopted when selecting investments in public and private assets.

In other words, we believe that investors should be cognizant of the potential impact of factors in private markets, and that they should seek out assets that provide exposures to factors they see as most beneficial to the portfolio as a whole.

In this light, we believe two key factors stand out in their potential to lower portfolio volatility: Cash-flow generating assets and close attention to valuation. Investors who employ a selection process that begins by identifying assets with strong cash flows and then screens for purchase price and value can maximize the volatility-dampening effects of an alternatives portfolio (**Exhibit 12**). On the other hand, investments that are focused on inadequate capital structures for the economic environment (i.e., companies with poor or no cash flows and high debt levels in a time of higher borrowing costs) are unlikely to dampen volatility as much as one would expect.

Exhibit 12: Creating a resilient alternatives portfolio requires focus on key volatility-dampening investment factors



Source: Apollo analysts

> We believe two key factors stand out in their potential to lower portfolio volatility: cash-flow generating assets and close attention to valuation.

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Strong cash flows: a key element to a resilient portfolio

We believe that adding exposures to cash-flow generating assets can help make portfolios more resistant to market volatility. As private and alternative assets are added to portfolios, we believe focus should be placed on cash-flow generating assets that can help portfolios better withstand the ups and downs of the business cycle.

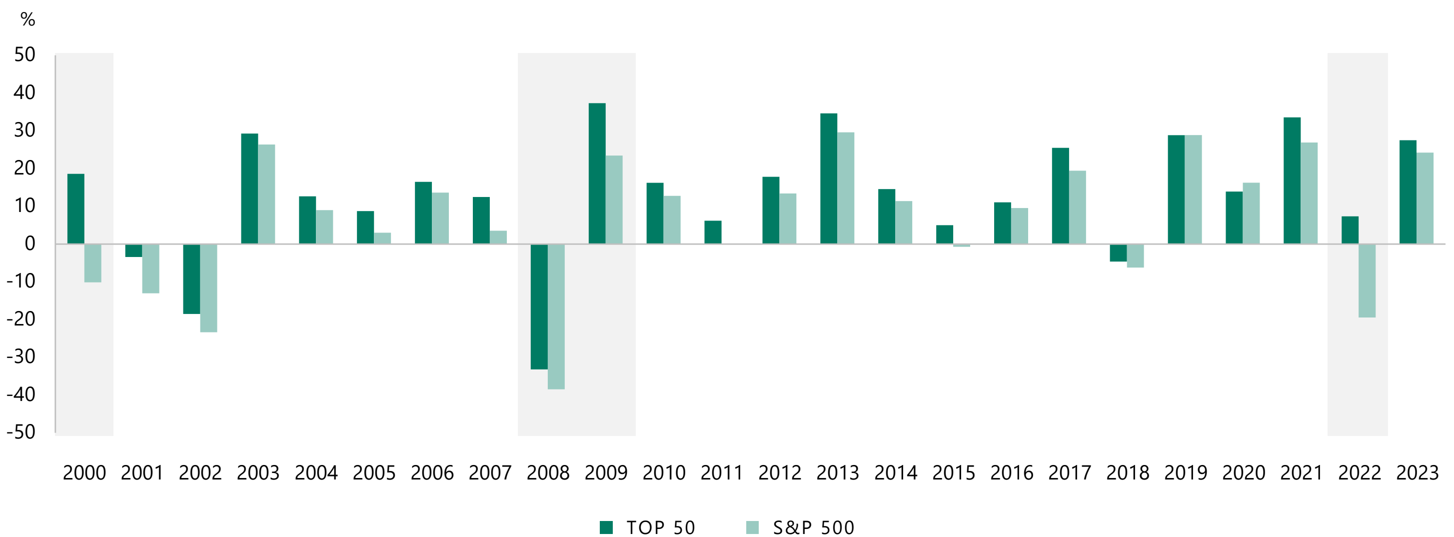
Robust cash flows are generally indicative of companies with strong businesses, or companies whose future performance is more predictable because they refrain from allocating capital to riskier growth projects. Companies and securities that pay out consistent dividends (or cash flows) also tend to have lower duration (i.e., less sensitivity to interest rates) and, therefore, will usually exhibit lower levels of volatility.

What do we mean by a company's "duration"? When investors are trying to determine how much a company is worth today, they often use what's known as a discounted cash flow (DCF) model to calculate the present value of future earnings. The model is based on growth assumptions for the company's future earnings and a discount rate, which is used to value those future earnings in today's dollars. The "growthier" the company, the more likely it is that its cash flows are to be realized farther out in the future. The higher the discount rate—usually based on a stock or fixed-income benchmark—the lower the present value of the enterprise. In other words, when discount rates rise (as a result of higher interest rates), the present value of future earnings tend to fall. And the farther out those earnings are, the higher the negative impact of higher discount rates on the company's present value. Low duration companies, by contrast, have front-loaded cash flows. So when rates rise, their present value is much less negatively impacted and therefor have less volatility.

How does all that translate into investment results? **Exhibit 13** compares annual returns from the S&P 500 index against the annual returns of a cohort of the top 50 cash-flow generators in the S&P for each year on a trailing 12-month basis. As the chart depicts, the top 50 cash-flow generators outperformed the overall index in almost every year since 2000 (returns were essentially equal in 2019).

Exhibit 13: Companies that generate strong cash flows have historically outperformed...

Top 50 S&P 500 cash-flow generators versus overall S&P 500 (annual returns)



Data as of December 31, 2023.

Top 50 is an equal-weighted cohort composed of the top 50 companies ranked by trailing 12-month free cash flows in each year.

Sources: Bloomberg, Apollo Chief Economist

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As **Exhibit 14** shows, the strongest cash-flow generators outperformed the broader index by a wide margin over the period, generating more than six percentage points in excess returns and producing those returns with less volatility. These results support our belief that a focus on cash flows in the investment selection process can help enhance long-term risk-adjusted returns.

The value factor: purchase price matters

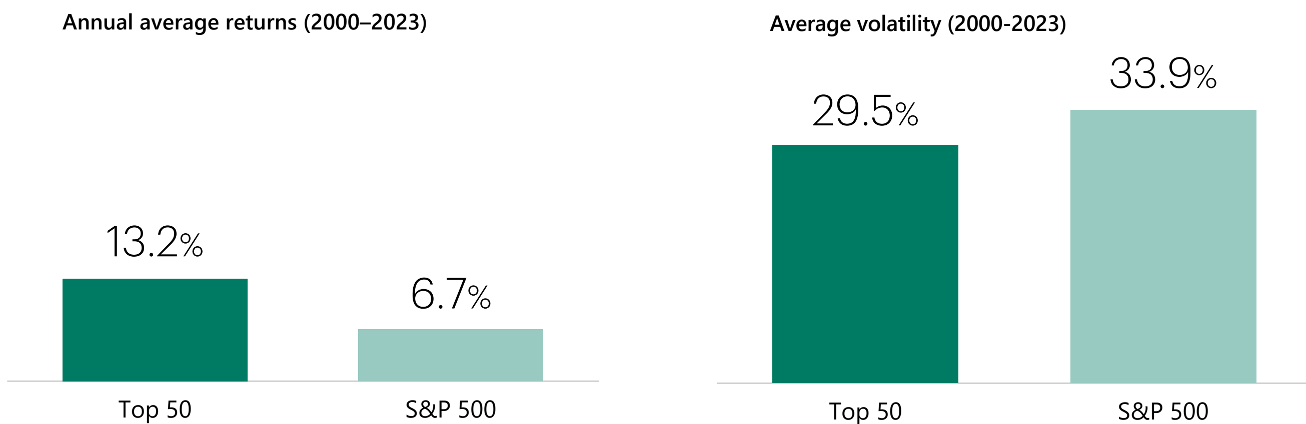
We believe investors can maximize the positive impacts of cash-flow generating assets by adding another layer of "factor awareness": a value orientation.

During the period of historically low interest rates from roughly 2009 to 2022, many alternatives managers increased their focus on growth potential and de-emphasized cash flows as a priority in their investment selection process. Often these investments were financed by high levels of debt. In the "Goldilocks" environment, this growth-based strategy worked.

This pattern mirrored trends in public equity markets, which experienced an extended "growth cycle" during this period. **Exhibit 15** illustrates both the duration of the growth cycle that began in roughly 2018, and the persistent historic rotation of leading factors in public markets among growth, value, momentum, and dividends.

Exhibit 14: ...which can suggest that a focus on cash-flow generation can minimize volatility and enhance potential returns over time

Top 50 S&P 500 cash-flow generators versus overall S&P 500 (annual returns)



Data as of December 31, 2023.

Top 50 is an equal-weighted cohort composed of the top 50 companies ranked by trailing 12-month free cash flows in each year. Average annual volatility calculated as average of the 260-day volatility for Top 50 cash flow cohort as measured by standard deviation and average of the entire S&P 500 sample for each year.

Sources: Bloomberg, Apollo Chief Economist

Exhibit 15: In both public and private markets, factor leadership changes over time

Public equity market performance by investment factor

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
4.6 (Dividend)	-13.3 (Dividend)	33.4 (Value)	15.3 (Momentum)	17.6 (Momentum)	22.0 (Value)	16.3 (Momentum)	-27.6 (Dividend)	36.7 (Growth)	16.7 (Momentum)	14.3 (Dividend)	17.3 (Growth)
-11.8 (Value)	-13.7 (Momentum)	24.8 (Growth)	14.6 (Value)	6.0 (Value)	21.1 (Dividend)	11.6 (Growth)	-35.4 (Value)	18.4 (Dividend)	16.5 (Growth)	4.1 (Momentum)	15.0 (Value)
-13.3 (Growth)	-22.6 (Value)	24.4 (Momentum)	11.8 (Dividend)	5.4 (Growth)	9.6 (Momentum)	0.5 (Value)	-39.0 (Growth)	18.0 (Value)	15.9 (Dividend)	2.4 (Growth)	12.6 (Momentum)
-18.6 (Momentum)	-23.0 (Growth)	24.3 (Dividend)	6.8 (Growth)	3.7 (Dividend)	8.9 (Growth)	0.0 (Dividend)	-41.7 (Momentum)	15.9 (Momentum)	14.4 (Value)	1.5 (Value)	10.6 (Dividend)

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
32.8 (Growth)	14.9 (Dividend)	7.8 (Momentum)	16.9 (Value)	35.8 (Momentum)	-2.0 (Growth)	37.7 (Growth)	43.1 (Growth)	27.2 (Value)	-3.8 (Dividend)	46.7 (Growth)
32.3 (Value)	14.4 (Growth)	4.6 (Growth)	16.3 (Dividend)	28.7 (Growth)	-2.3 (Dividend)	26.0 (Momentum)	28.1 (Momentum)	26.2 (Growth)	-6.2 (Value)	9.2 (Value)
32.2 (Momentum)	13.2 (Momentum)	0.7 (Dividend)	6.5 (Growth)	19.5 (Dividend)	-3.0 (Momentum)	25.7 (Value)	1.7 (Dividend)	21.9 (Dividend)	-19.0 (Momentum)	7.8 (Momentum)
28.9 (Dividend)	12.3 (Value)	-1.9 (Value)	3.4 (Momentum)	15.4 (Value)	-7.2 (Value)	22.5 (Dividend)	0.9 (Value)	12.1 (Momentum)	-32.0 (Growth)	6.8 (Dividend)

VALUE GROWTH MOMENTUM DIVIDEND

Data as of December 31, 2023.

Factors represented by the following indexes: MSCI USA High Dividend Yield Gross Total Return USD Index, MSCI USA Momentum Price Return USD Index, MSCI USA Value Gross Total Return USD Index, MSCI USA Growth. Gross Total Return USD Index.

Sources: Bloomberg, Apollo Chief Economist

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As **Exhibit 15** shows, growth strategies outperformed value for extended periods during the past decade. Over this timeframe, outperformance in private markets has also been driven by assets demonstrating many of the characteristics that define growth assets in public markets. Like their public market counterparts, private market investors have relied on multiple expansion as a primary source of alpha. As a result, many investors have (consciously or unconsciously) built private market portfolios heavily weighted to growth.

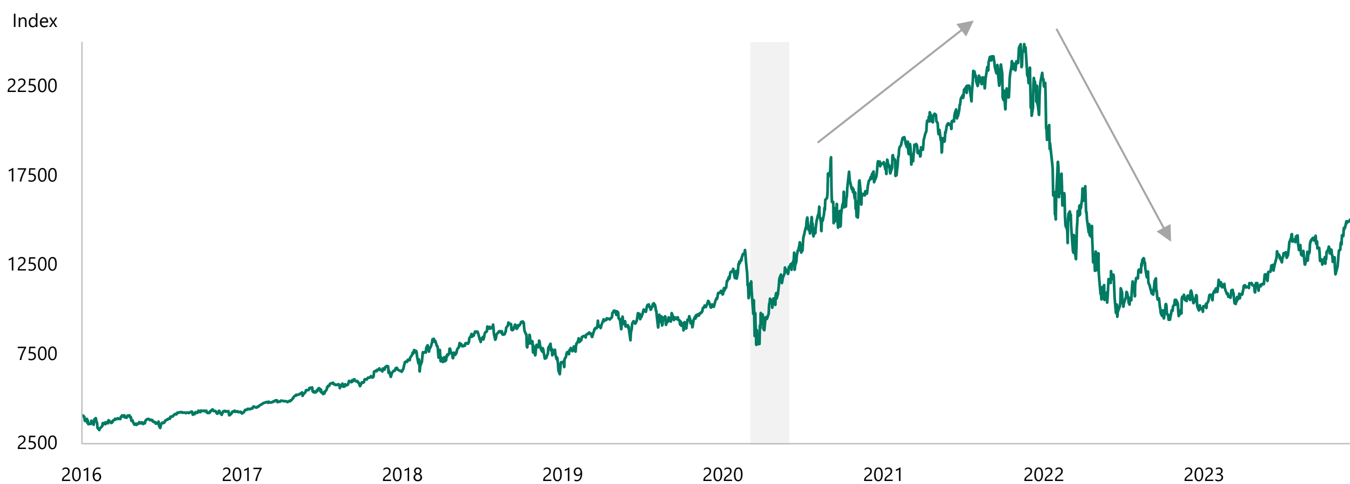
Portfolios tilted toward growth could leave investors more exposed to volatility risk. This is corollary to the duration analysis we discussed previously. This is how it works: In general, growth stocks have higher price-to-earnings ratios than value stocks (because their growth potential is expected to be unlocked farther out in the future). The farther out the earnings expectations, the more they are affected by changes in the discount rate. As rates rise, the discount rate goes up, depressing the present value of future earnings. The end result is often lower valuations and more volatility for "growth" companies in the short run. By contrast, "value" companies—whose earnings are front-loaded rather than projected out in the future—tend to feel less of an impact when rates rise and, as result, experience lower levels of volatility.

Private market investors should be aware of the "factor-based" nuances that exist within their portfolios because we believe that the cyclical rotations among factors that characterize public markets also exist in private markets. Due to the more limited liquidity in private markets these effects might be slower to unfold and more difficult to observe. But, in our view, the factor-based forces working upon both markets are similar. For example, **Exhibit 16** illustrates the dramatic rise and fall in venture capital valuations, which can be viewed as a private market proxy for the growth and momentum factors.

The existence of factor-based cyclicality in private markets has both short- and long-term implications for investors. In the short-term, we believe the macro-economic trends discussed earlier this paper suggest strongly that the conditions that enabled investors to capitalize on growth and momentum-based approaches in private markets are no longer in place. Over a longer-term horizon, we believe a focus on value creates opportunities for reliable and repeatable alpha creation at lower levels of volatility. In other words, purchase price matters in private markets, and it is critical for investors to avoid overpriced assets—in any market environment.

Exhibit 16: Using venture capital performance as a growth proxy can provide further support for the impact of factor investing in private markets

US venture capital valuations are down 50% from their peak



Data as of November 29, 2023.

Note: The Refinitiv Venture Capital Index is designed to measure the value of the US-based venture private company universe in which venture capital funds invest.

Sources: Bloomberg, Apollo Chief Economist

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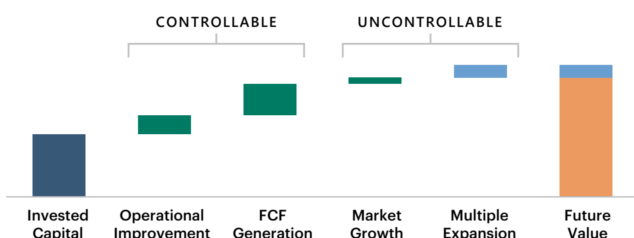
Exhibit 17 is an illustrative representation of the value creation process in private equity. The chart on the left depicts the value creation process for a value-based investor with a strong focus on pricing discipline. The chart on the right depicts the value creation process for the broader private equity market. As one would expect, the value-based investor has lower amounts of deployed capital, lower average multiples, and less leverage. As a result, these investors are less reliant on market growth and multiple expansion as drivers of value. Instead, the lower purchase price and leverage can give the investors more leeway to create value through operational improvements and free cash-flow generation—factors that are under their direct control. Similar dynamics exist in private credit. In the low-rate era, many yield-searching investors were tempted to move down the capital structure and into assets with borrower-friendly covenants (**Exhibit 18**). In a value-based approach, investors maintain discipline, seeking out opportunities to invest in companies with strong credit ratings and cash flows, at higher levels of seniority in the capital structure, with significant levels of equity support—an approach that we believe will create opportunities to generate attractive long-term returns with enhanced downside protection and capital preservation.

Exhibit 17: Cash flows + value: Building resilience with a "factor-aware" approach

In private equity, a value-based approach can unlock opportunities for value creation

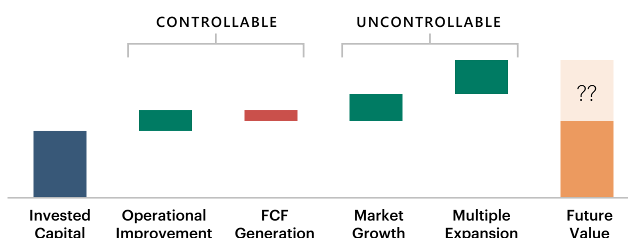
Illustrative Value Creation Bridge with Pricing Discipline



Differentiated Strategy to Build Value Across Cycles

Average Creation Multiple	~6-7x Purchase Price
Average Leverage	~4x at entry
Base Case	Underpinned by cash flow and readily achievable operational improvements

Illustrative Value Creation Bridge for the Broader Market



Common Strategy, Highly Correlated to Market Cycles

Average Creation Multiple	~11.5x Purchase Price
Average Leverage	~6x at entry
Base Case	Reliance on continued top-line growth, persistently low rates, and multiple expansion at exit

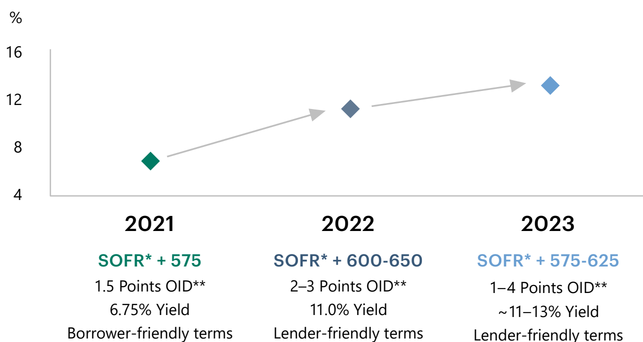
For illustrative purposes only.

Source: Apollo Analysts

Exhibit 18: Private Credit: Focus on attractive returns while prioritizing downside protection and capital preservation

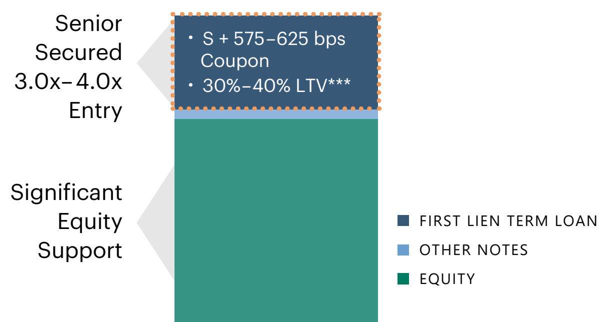
Emphasis on credit quality, high cash flows, selectivity, and seniority in capital structure

YIELDS AND LENDER PROTECTION



2021	2022	2023
SOFR* + 575	SOFR* + 600-650	SOFR* + 575-625
1.5 Points OID**	2–3 Points OID**	1–4 Points OID**
6.75% Yield	11.0% Yield	~11–13% Yield
Borrower-friendly terms	Lender-friendly terms	Lender-friendly terms

ILLUSTRATIVE CAPITAL STRUCTURE



Data as of December 2023. PitchBook LCD defines Large Corporate Issuers as those with EBITDA of over $50 million.

*SOFR is a broad measure of the interest rates banks pay each other for short-term loans collateralized by United States Treasury securities. **The original issue discount (OID) is the difference between the original face value amount and the discounted price paid for a bond. OID bonds have the potential for gains since investors can buy the bonds for a lower price than their face value. ***The loan-to-value ratio (LTV) is the ratio of a loan to the value of an asset purchased.

Sources: Apollo Analysts as of December 2023 and PitchBook LCD as of September 2023

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MANAGING VOLATILITY: ADDITIONAL CONSIDERATIONS

Portfolios with a cash-flow focus and value orientation can be made more resilient through traditional diversification and management techniques:

- Asset class diversification still plays an important role: Although we are living through a period of heightened correlation, we still believe in building a portfolio of assets spanning asset classes. The key is attention to relative value at any given point in time.
- Flexibility is your friend: The value in a flexible, dynamic alternatives portfolio stems from the ability to allow managers to make the above-mentioned relative-value decisions. If equity is less attractive at one part of the cycle, it might be best to instead look to deploy the incremental dollar into credit and vice versa.
- Vintage diversification matters too: The value, pricing dynamics, and underwriting conditions of private-market investments can vary year to year, creating differences in vintages. That is why we believe vintage management is important as well to mitigate volatility in alternatives portfolios. The end goal is to achieve the risk/return objective by navigating across asset classes, strategies, sectors, in a manner that makes the portfolio as whole not tied to any one specific market environment.

Conclusion

As correlation among asset classes heightens, traditional portfolio diversification techniques are becoming less effective. Amid persistent inflation risks and economic uncertainty, investors are turning to private assets to diversify portfolios and help manage elevated levels of volatility. As investors establish and expand allocations to alternatives, they should keep in mind that not all alternatives are created equal.

Investors can create resilience within their private-markets portfolios by targeting assets with certain inherent traits and exposure to specific investment factors. We believe focusing on cash-flow generating assets at attractive valuations can help maximize the volatility-dampening characteristics of an alternatives portfolio and enhance risk-adjusted returns over a long-term horizon.

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The Standard & Poor's 500 ("S&P 500") Index is a market-capitalization-weighted index of the 500 largest U.S. publicly traded companies by market value.

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