

Summary

- Today's market environment calls for an active review of time-honored approaches to endowment investing, in our view.
- In our 2022 paper on the endowment model, we presented a philosophy for endowment and foundation (E&F) management that advocated for some of the model's traditional components while incorporating new elements that we believe better serve institutions in the modern environment.
 We proposed a focus on factor diversification to solve for exposure concentration, cost-efficiency by blending active with index, and being more innovative in private markets portfolios by seeking differentiated alpha sources, being selective with managers, and investing directly through co-investments.
- Today, a new market regime has emerged, one that has further underscored many of our original tenets, while illuminating further steps endowments can take to better prepare for an era of economic uncertainty, elevated inflation, and interest rate volatility.
- As we build on the principles outlined in our original paper, we see four key actions that E&Fs should consider:
 - Refining **diversification**, including the approach to fixed income and hedge funds, can help bolster portfolio resilience.
 - Taking a **dynamic approach** that incorporates top-down views of the macro environment is a must.
 - Adding incrementally and selectively to **skilled active managers** to seek much-needed excess return as the beta tailwinds of the low-rate era subside.
 - Building **opportunistic alternatives portfolios** that are flexible and expand the toolkit to better complement the public portfolio and target improved net-of-fee outcomes.

For institutions that either have "endowment style" portfolios or, on the other end of the spectrum, currently employ an all-passive or public-markets-only portfolio, we believe these actions can help improve net-of-fee returns and offer additional levers to help E&Fs meet their spending and target return objectives.

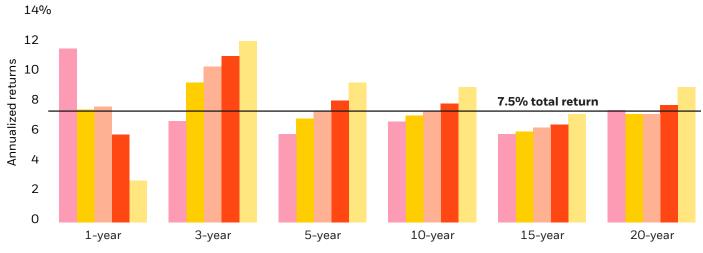


It's a new era for endowment and foundation investors. The prior decade had benign inflation, above-average equity returns post-Global Financial Crisis (GFC), muted interest rate volatility, and low dispersion between individual securities. Now, we're in a new regime characterized by a greater variance in overall economic outcomes, driven by elevated long-term inflation and U.S. 10-year Treasury rates touching 4% for the first time since 2008.

Higher inflation has also increased operating expenses for endowments, foundations, and their beneficiaries, putting additional pressure on investments to outperform. However, consistent returns may be less likely than they were in the period from the GFC to the onset of the COVID pandemic in early 2020. According to BlackRock's long-term capital markets assumptions,² a global 70/30 index portfolio is now expected to return just 6.4% annually. For E&Fs, which typically target CPI +4%-5%, this undershoots the target return by 100-300 basis points, depending on the organization's goal and long-run inflation assumption. Furthermore, historical results have been mixed: As the chart below illustrates, the largest endowments, with their bias toward alternatives, have outperformed a simple 70/30 benchmark over time, while smaller institutions with less access to alternatives have struggled to produce the same results.

There are two important messages to take from the chart: 1) Index investing alone has not been sufficient to meet the high return goals of nonprofits over the last 20 years, and 2) Larger institutions, with access to high-quality alternatives have, on average, met their total return objective and outperformed their smaller competitors.

Figure 1: Endowment investing by institution size (AUM) vs. total return targets and the public market alternative (70/30)



■ Global 70/30 ● AUM of \$251M-\$500M cohort ■ AUM of \$500M-\$1B cohort ■ AUM of \$1B-\$5B cohort

AUM of over \$5B cohort

Source: Global 70/30 data represented by 70% MSCI ACWI/30% Global Agg returns. Average net annualized return data for June 30, 2003—June 30, 2023. Endowment returns based on 2023 NACUBO-Commonfund study of endowments. For \$251M-\$500M, n=102; \$501M-\$1B, n=77; \$1B-\$5B, n=109; \$5B+, n=29. Black line is representative of a 7.5% total return hurdle. For illustrative purposes only. Index returns are for illustrative purposes only and do not represent actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index.

1 Unless otherwise noted, source for all information is BlackRock, as of September 2024. 2 Source: BlackRock Investment Institute and Aladdin. BlackRock expected return information is based on BlackRock's long-term (20-year) capital market assumptions as of March 2024 which are subject to change. Hypothetical performance does not guarantee future results.

But is it as simple as just adding alternatives? As the one-year return in the chart above shows, patience is required: There are periods of time when portfolios that make heavier use of alternatives may lag public market equivalents. In 2023, public equity markets rebounded quickly into the end of the June 30 fiscal year, returning 24.6% in the U.S.³ and 19.4% globally⁴ for the trailing 12 months, and little else could keep pace.

Where does that leave E&Fs going forward? We see four steps that institutions could take to address the challenges of the new regime:

- 1 Refine diversification
- Take a dynamic approach to the whole portfolio
- Embrace active management selectively
- Be flexible and opportunistic with the illiquidity budget within the private markets portfolio

In the following pages, we explore each of these steps in detail.

What is the "new regime?"

We see ourselves in a <u>new regime</u> marked by a much wider range of potential outcomes. This is a shift from the pre-COVID years, when institutions could rely on broad asset classes to deliver returns, and momentary periods of volatility were quickly buffered by central bank intervention. Moreover, in the prior regime, less competition in alternative asset classes made it easier to get strong returns. Simply being early to managers and holding onto capacity could generate the necessary results. Now, the fierce competition for the best deals and managers necessitates having the resources and expertise to source and evaluate new managers and to negotiate complex opportunities in an environment where every basis point counts.

Now, between supply-chain constraints, geopolitical tension, and central banks facing the tradeoff of taming inflation or stalling growth, there is a wider band of uncertainty. With this backdrop combined with higher financing costs, it is even more critical than usual to find top-performing alternative managers who are positioned to navigate and capitalize on the market environment. Even strong growth numbers in the U.S. may be a bit misleading — we believe these are in part signs of an economy recovering from the pandemic shock.

We see a new regime emerging, where the macroeconomic backdrop drives markets more directly than before, defined by three main structural changes:

- 1) Shifting interest rate environment: Future policy rates remain uncertain as central banks have used monetary policy to grapple with keeping inflation from resurging. We anticipate this may lead to a higher policy rate than the pre-pandemic norm.
- 2) Growth uncertainty: Investors face a complex and evolving landscape with unpredictable and wide-ranging potential economic outcomes. While consumer data remains strong, the impact of higher rates is yet to be fully absorbed. Meanwhile, the increasing demand for climate resilience, supply chain shifts due to geopolitical fragmentation, and the challenges central banks face in managing inflation all complicate the forward-looking picture.
- 3) Increased volatility: The previous period of accommodative monetary policy created a rising tide that lifted all boats. Now, as businesses face more challenging conditions including rising input costs and tighter financing, business models matter, and we expect a higher dispersion of outcomes. In this regime, dynamic investment expertise to capitalize on opportunities in periods of volatility may give portfolios an additional edge.

Refining diversification

E&Fs have historically held fixed income and hedge fund strategies to help diversify equity risk, but over the last ten years the cost of that protection has risen as equities delivered annual returns above 10% while hedge funds and global bonds were often at mid-to-low single digits. While much of that pain was due to the 2022 sell-off, we believe the question is not whether endowments should be using fixed income and hedge funds as risk dampeners, but how they should be utilizing them.

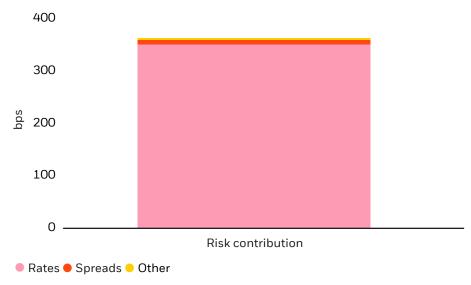
Fixed income in the new regime

In today's market, we find that bonds have an important role to play. In addition to potential diversification benefits, for E&Fs, bonds are also an important liquidity source for spending and private market capital calls, particularly in periods of stress. The rapid rise in rates also creates a more constructive entry point — today, real yields on 10-year U.S. Treasuries are at the highest levels since before the GFC.

We think the new regime calls for a dynamic approach to investing, rather than a "set-it-and-forget-it" mentality. That approach starts with recognizing the dynamics of the leading bond market indices, which can be driven in large part by interest rate risk, even when they appear to be more diversified. This dynamic has only increased in recent years. As indices are issuance-weighted, the weight to U.S. Treasuries and the overall benchmark duration have gone up over the last 10 years as the U.S. government issued more debt and more issuers locked in longer-term debt at lower yields.

While we like interest rates for the diversification they may provide, we believe it's critical for investors to understand how much exposure they have. The chart below analyzes the Bloomberg Global Aggregate Bond Index (Hedged) by its primary risk drivers. Using BlackRock's proprietary risk platform, Aladdin®, we can see that despite the index holding 32% in corporate bonds and securitized assets, we calculate that nearly 96% of the total risk is coming from interest rates (in pink).

Figure 2: Bloomberg Global Aggregate Bond (Hedged USD) Index: Contribution to total risk by factor (bps)



Source: BlackRock and Aladdin as of June 30, 2024 using a one-year time horizon and 84% confidence level.

Meanwhile, interest rate dynamics have arguably been distorted in recent years. The Federal Reserve still holds over 30% of outstanding 10+ year Treasuries, thereby removing significant supply and creating scarcity. We estimate that the 10-year U.S. Treasury yield could be 200 basis points higher than current levels without the net easing effects of the Fed's balance sheet and ongoing reinvestment.

To estimate these effects of net easing and reinvestment, we adopt the methodology from a 2022 Kansas City Fed research paper. This approach involves multiplying the Fed's duration-adjusted balance sheet size by a range of estimates from the macroeconomic literature of the yield impact of the Fed's holdings. That allows us to estimate a range of potential easing effects along with a median estimate. Those results, shown in the graphic below, are historically consistent with the Kansas City Fed researchers' findings but extend through to the first quarter of 2024, and show the downward pressure that the Fed's purchases have had on 10-year yields.

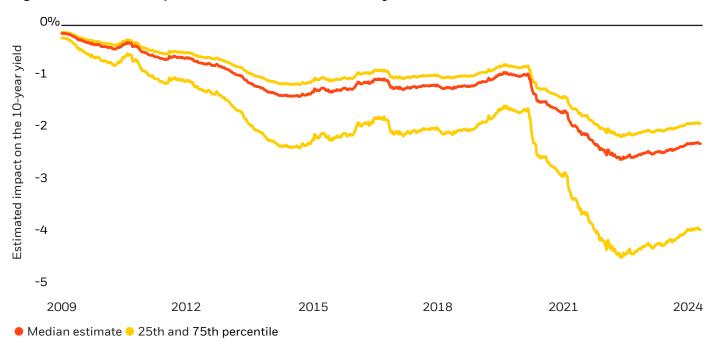


Figure 3: Estimated impact of federal balance sheet on yields

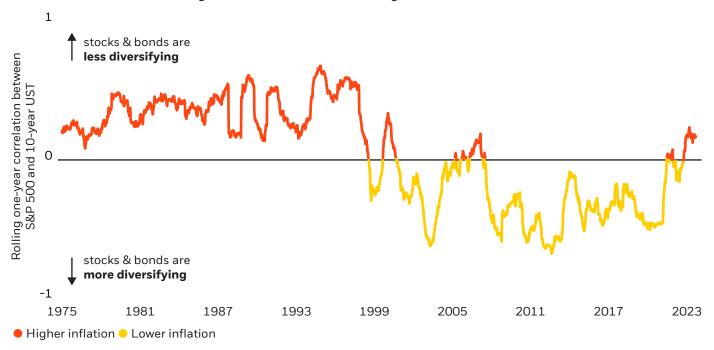
 $Source: BlackRock\ with\ data\ from\ the\ Federal\ Reserve,\ March\ 2024.$

While this favors shorter- and medium-term fixed income in the current environment, the fixed-income universe is huge, and the risk-reward profile of different assets can shift sharply and suddenly. We believe being nimble and prepared to act when opportunity presents itself is critical for long-term success as we enter a new regime for fixed income investing.

Given these dynamics, fixed income markets may remain more volatile than they were in the post-GFC period. We employ a more active approach, as skilled managers should be able to take advantage of the rapid changes in bond yields, the changing shape of the yield curve, and have the potential to find and select mispriced credits and sectors to add excess returns.

Figure 4: A shift in the macro regime calls for new sources of return

Stocks and bonds have moved together when inflation is above target



The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy. Source: BlackRock with data from Refinitiv Datastream, MSCI, and Morningstar Direct as of December 31, 2023.

Honing hedge funds

As inflation picked up in 2022 and 2023, we saw a positive correlation between stocks and bonds, as would be expected in a high-inflation environment. While we expect inflation to continue to soften, the fact that bonds do not always offer diversification to the stock market remains a risk. While we have enjoyed negative correlations for most of the last 25 years, they are not a given. Against this backdrop, we think it's critical to build portfolios that include additional diversifiers to equity markets.

Whatever happens in the fixed income market, returns from bonds historically rely on directional market factors, including interest rate risk, credit risk, and others. Hedge funds, on the other hand, have reaffirmed over recent years that they can deliver uncorrelated returns and play important roles in portfolios. This offers confidence that they are equipped to mitigate against the downside and capitalize on the uncertainty that is likely to surround us in the new market regime. As such, we believe a dynamically managed and rigorously sourced hedge fund portfolio, built with a focus on minimizing correlations to equities and fixed income, can provide meaningful return and diversification benefits.

Overall, hedge funds have provided attractive risk-reward outcomes over the past three decades. While we believe today's market environment offers the most attractive alpha opportunities for hedge funds in recent memory, not all managers or portfolios of hedge funds will be able to make the most of alphageneration opportunities. While the challenge is significant, we forecast that investors capable of identifying the most skilled hedge fund managers stand to benefit more today than at any point over the last few decades.

Macroeconomic and structural market forces are expected to further increase the divide between leaders and laggards in the coming years, creating a more expansive set of long and short opportunities for unconstrained investment vehicles like hedge funds. Demographic changes and emergent technologies (i.e., artificial intelligence) are having a profound impact on industries and corporate fundamentals, further amplifying the magnitude of market dispersion.

Despite popular attention to the contrary, a backdrop of higher interest rates does not necessarily imperil hedge funds. In fact, we believe it can provide a tailwind in the form of increased baseline returns for many strategies, as well as higher volatility and mispricing, which can lead to greater alpha opportunities. What is critical, however, is to manage a portfolio of hedge funds actively — adjusting manager allocations to benefit from this tailwind.

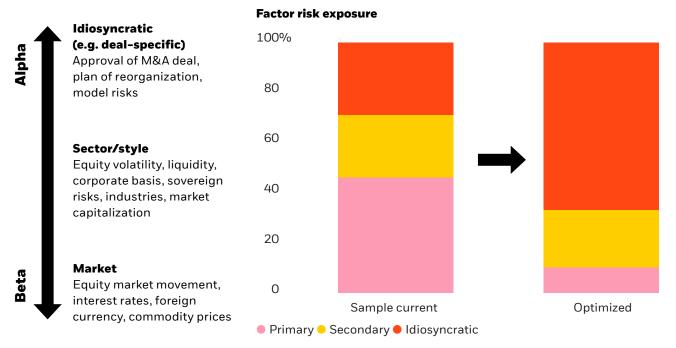
We do not believe all hedge funds will benefit equally. Choosing the *right* hedge funds is both critical and challenging, as the universe encompasses more than 8,000 funds,⁹ with a high degree of return dispersion within and across strategies. Good outcomes are predicated upon identifying and accessing the most skilled managers with the ability to evaluate a wide range of data, leverage deeply established professional networks, and experience investing across strategies and through multiple market cycles. As highlighted in our 2022 paper, there is a wide dispersion in manager performance by subsector in hedge funds, and, in many ways, success is defined as much by choosing the right strategies and subcategories as by avoiding the wrong ones.

Those adept at utilizing technology and data, together with the fundamental acumen to take informed views, we find, are best positioned to evaluate the risk factors for a particular hedge fund. We employ a portfolio construction approach that seeks to minimize directional market betas and identify persistent idiosyncratic drivers — sources of return that have little to no correlation to markets. This method helps investors to validate the sources of return derived solely from manager skill and construct resilient portfolios with exposure to high-conviction hedge funds: Investors shouldn't pay for a fund that is consistently taking market exposure when that market exposure can be achieved through other, cheaper means.

9 Source: HFR Industry Reports, ©HFR, Inc., April 1, 2024.



Figure 5: Breakdown of the optimal risk allocation within a hedge fund portfolio



Source: BlackRock. For illustrative purposes only. Note that the above portfolio information is hypothetical and illustrative based on the current market environment; it does not reflect actual positions proposed. Strategies and targets depend upon a variety of factors, including prevailing market conditions and investment availability. There is no guarantee that they will be achieved or that any particular investment will meet the target criteria.

In our view, E&Fs should focus on hedge funds that can demonstrate an edge in delivering strong and persistent alpha over the long term, with limited sensitivity to primary market factors, such as the direction of equity market and interest rate moves. This has not necessarily been the approach favored by endowments, which have often let equity bias creep into their hedge fund returns. We note, for example, that in 2022, as equity markets sold off over 16%, 10 endowments saw their hedge fund sleeves down an average of 5%. 11 This outcome may be below or above a particular institution's expectation, but it certainly suggests these portfolios had more directional risk than we recommend taking.

In the chart above, we highlight our view on the breakdown of the optimal risk allocation within a hedge fund portfolio. We suggest minimizing primary factor risk (i.e. exposures to equity/fixed income), diversifying across secondary factors which are most unique to hedge funds (i.e. merger-arb spreads, equity volatility), and, most importantly, focus on idiosyncratic sources of return (i.e. deal-specific M&A, reorganization).

We believe that remaining committed to sourcing managers that have demonstrated durable, competitive advantages in inefficient areas of capital markets will increase the return potential of a hedge fund allocation, while maintaining the desired diversification benefits.

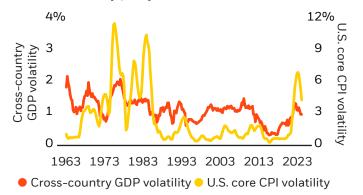
The importance of being dynamic

Endowments and foundations tend to be split when it comes to the question of whether to embrace dynamism in managing portfolios. Some E&Fs use a dynamic approach, which incorporates top-down views of the macroeconomic environment, while others remain focused on bottom-up manager selection. In an environment like the new regime, we believe that just employing static asset allocation and manager selection is too limited of an approach. Instead, we recommend that E&Fs take advantage of what is an increasingly thematic and macroeconomic-driven market. For BlackRock, this means preparing to take advantage of views that may emerge within a 3–12-month horizon.

As mentioned at the start of this paper, BlackRock's capital market expectations for 70/30 portfolios now undershoot an E&F's typical return target by 100–300 basis points, as a result of lower return forecasts for many asset classes. In this environment, we believe it's increasingly critical to add additional uncorrelated returns through dynamic allocation. As seen in the first chart below, macroeconomic volatility has risen around the world, and we believe it will remain elevated for years to come. In the second chart, we see greater geographic dispersion now than in previous periods, highlighting the additional return investors could capture by successfully allocating across regional markets. These dynamics are likely to provide a supportive backdrop for skilled tactical investors to add meaningful value.

Figure 6: Macro volatility will likely continue for years to come

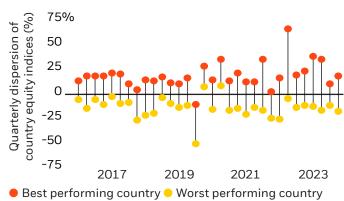
We face a return to more varied economic patterns as the focus of monetary policy shifts



Source: Refinitiv Datastream, MSCI, and BlackRock calculations. As of March 31, 2024. Global GDP Volatility measures how individual developed countries' quarterly GDP changes deviate from the average GDP change of all developed countries, using a 3-yr rolling average. U.S. Core CPI Volatility measures the standard deviation of year-over-year U.S. Core CPI using a 3-yr rolling window. GDP: Gross Domestic Product. CPI: Consumer Price Index. Neither asset allocation nor diversification can guarantee profit or prevent loss.

Figure 7: A shift in the macro regime calls for new sources of return

Equity dispersion amongst countries creates opportunities for investors



The figures shown relate to past performance. Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy. Source: BlackRock with data from Refinitiv Datastream, MSCI, and Morningstar Direct as of December 31, 2023.

That said, forming tactical views and putting them into practice is one of the most challenging elements of portfolio management. We find that it requires a global information advantage, a wide breadth of implementation tools, and sophisticated risk technology to size positions appropriately. When done prudently, it can be an important source of uncorrelated additional return. However, it is also one that endowments have not always been able to take advantage of. Governance has often been the challenge — trying to implement dynamic changes via a quarterly investment committee cycle often delays implementation to the point where much of the value in the trade has been lost.

Bringing tactical asset allocation to life

2020 COVID shock

At the onset of the pandemic, we closely tracked and projected the global progression of COVID cases, utilizing fast-moving data sources like restaurant reservations to help gauge the real-time impact on economic growth in individual countries and regions. Our analysis, combined with the expectation of substantial fiscal and monetary responses from policymakers, enabled us to look beyond the immediate economic damage. We identified areas where markets were pricing in a more pessimistic outlook than we surmised was warranted, leading us to conclude that the recent sell-off in equity markets presented a timely opportunity to increase our equity risk.

To further refine our decisions and the timing of asset allocation changes, we employed our "What's Priced In" framework, which examines a broad array of growth-pricing factors to assess the extent of economic slowdown embedded in current asset prices, essentially determining how much bad news each equity market was pricing in at the time. The chart below shows how different markets priced in the impact to changes in Leading Economic Indicators (LEI).

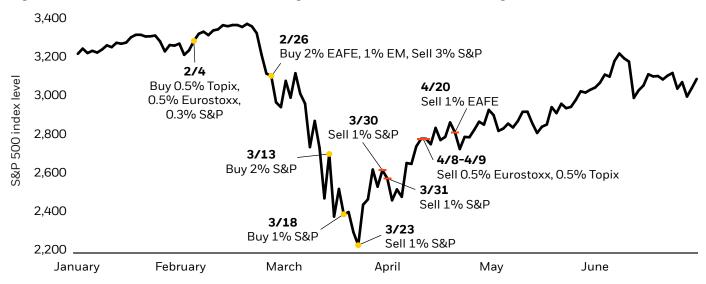
Global United States Euro-Zone Japan Australia Canada United Kingdom

Figure 8: Growth shock priced by markets, March 2020

Source: BlackRock, using data from Bloomberg, Datastream, Have Analytics, as of March 5, 2020. LEI refers to a systematic composite Leading Economic Indicator model.

As illustrated in Figure 9 on the next page, we increased our equity overweight as the market was selling off, adding to equities in different regions where we thought the most bad news was priced in. Once central banks announced their globally coordinated emergency plans on March 23rd and equity markets started to rebound, we began reducing these equity overweights as market pricing normalized.

Figure 9: Tactical investment decisions on global equities: Q1 2020 through Q2 2020



Source: BlackRock as of December 31, 2020. Buys and sells represent changes to equity positioning for the LifePath Dynamic 2030 vintage, which is representative of the broader suite. S&P 500 Index Level shows the price level of the S&P 500 Index as of each day. The percentage weightings illustrated above represent notional market value of exposures. "S&P" represents S&P 500 Index futures. "Nikkei" represents futures on the Nikkei Index, a measure of the Japanese stock market. "Topix" represents futures on the TOPIX, a major Japanese stock index. "EAFE" represents futures on the MSCI EAFE Index, an international equity index. "EM" represents futures on the MSCI Emerging Markets Index. "Eurostoxx" represents futures on the Euro Stoxx 50, an index of Eurozone stocks. The portfolios may incorporate other positioning across other equity regions and asset classes over these periods. Past performance is not indicative of future results.

2022 inflation mispricing

At the beginning of 2022, we were well-positioned to take advantage of the policy normalization that was expected from central banks in the U.S. and EU. This stance was based on our observation that growth and inflation data had been firming at a rate increasingly inconsistent with the then-prevailing loose monetary policy. As demand for goods and services increased in 2021, we evaluated our proprietary inflation tools, which suggested that price pressures were not transient and were becoming increasingly broad-based. We took the view that central banks had misdiagnosed the inflation backdrop in 2021 and went underweight fixed income in major developed markets (U.S., Germany and Japan) to profit from decisive hawkishness in 2022. These positions were additive throughout the year as the European Central Bank and the Federal Reserve embarked on aggressive tightening cycles.

Importantly, even though our objective is to add value, our approach is to appropriately size our tactical views. Even with high-conviction trades, we do not take major bets with single positions, preferring to seek to "make a little bit of money in a lot of ways," as this has been shown to be more successful over time. 12 As noted above, we'll also often leg in and out of positions in an effort to manage risk. We construct our tactical program to be a) well-diversified, b) uncorrelated, and c) adding a total risk budget of 100-200 basis points per annum above the endowment's benchmark volatility.

Introducing the endowment analyzer

Making well-informed strategic and dynamic decisions begins with a thorough understanding of how portfolios are currently positioned across multiple risk factors, how these risk factors interact with each other, and how the overall portfolio may respond to a variety of different economic scenarios, including market shocks. Only when E&Fs are equipped with these insights, in our view, can they begin to see what changes may be required to best position their portfolios in the current market environment and for the range of potential forward-looking scenarios. To stay abreast of changes in the portfolio and the market, it is critical to have the ability to gather these insights and to update forward-looking views on an ongoing basis.

To that end, our <u>Total Portfolio Workbench</u> tool, featuring an endowment analyzer function, leverages BlackRock's Aladdin® Risk platform and peer data to help nonprofits get a better picture of the forward-looking expectations for their investment programs. This capability empowers institutions to see the impact that their strategic asset allocation decisions may have on long-term outcomes as well as the influence of different market exposures and a range of stress scenarios on those outcomes.

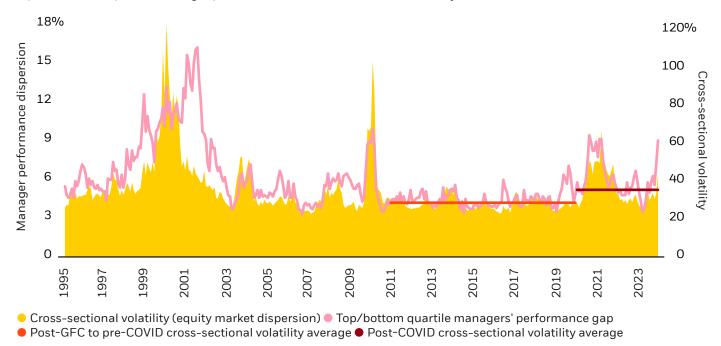
Increasing active in the new regime

The endowment model has long favored active management, even in the public market segments of the portfolio. In our 2022 paper, we laid out BlackRock's philosophy of balancing the cost-effectiveness, transparency, and liquidity of passive management with active management in the areas of the portfolio where it has the highest likelihood of adding value. Today, we note that while our core belief in the benefits that index-based investing brings to the portfolio is unchanged, we are modestly increasing our use of active management in public market portfolios, layering in more unconstrained managers that are well-equipped to navigate the changing opportunity set without being tethered to a benchmark.

While index strategies performed well in the era from the GFC through COVID (2009–2023), in the post-pandemic era we now see greater dispersion in earnings estimates, valuations, and stock returns, suggesting greater opportunity for skilled managers to generate alpha. Of course, capturing the alpha available from active management requires picking the right managers. As seen in the Figure 10 chart, both cross-sectional volatility and the gap between top- and bottom-quartile managers have risen significantly, indicating that the new market environment may be particularly ripe for skilled active managers, and that picking the right ones is more important than ever.

Figure 10: Elevated U.S. manager dispersion

Top-vs. bottom-quartile manager performance and cross-sectional volatility, 1995-2023



Source: BlackRock Risk and Quantitative Analysis, with data from FactSet, April 2024. Chart shows manager performance dispersion in top versus bottom quartile of the eVestment U.S. Large Cap Core category (pink line) and cross-sectional volatility (yellow) using security returns of Russell 1000 index constituents.

We also believe in taking a broad view of the opportunity set when it comes to active management. The traditional endowment model's concentrated, fundamentally oriented, value-focused approach to U.S. public equities, for example, has lagged behind growth stocks, disappointing some institutions. This experience highlights some of our fundamental beliefs in active manager selection. It is critical to understand the inherent biases in manager styles; to select skilled managers positioned to seek consistent, uncorrelated excess returns; and to ensure that the overall blend of managers is complementary. We also believe in taking a wider view of the alpha toolkit, incorporating managers that invest in more than a single "style box," looking beyond value-biased fundamental managers, and considering alpha extension (long-oriented managers with relaxed constraints around leverage and shorting), and portable alpha.

In particular, we currently make greater use of unconstrained and globally-oriented strategies. As mentioned, in the new regime, markets can be increasingly driven by thematic events, and we believe in allocating risk budget to skilled managers who can take advantage. Notably, these managers, as well as all others who take a high level of deviation from their respective benchmarks, may require longer holding periods for their active views to bear positive excess returns.

Additionally, we believe that E&Fs should look to source a diversified set of managers across fundamental (i.e. not just value-biased managers) and systematic strategies that have delivered consistent and uncorrelated alpha. As many quant strategies are more fee-efficient than fundamental ones and carry lower factor betas, they can be a source of uncorrelated and attractive net-of-fee returns. Blending high-performing, complementary quantitative and fundamental strategies can result in a more robust total equity allocation.

Ultimately, our view in the relative attractiveness of active management in this environment is more evidence that a "set-it-and-forget-it" approach does not work in the new regime. We constantly reevaluate our portfolio construction assumptions, and, as new market conditions unfold, so does our balance of index vs. active management. Whether active or index, we believe it's essential to have the tools to understand what's driving returns, so investors can better construct diversified portfolios and only pay for active returns where managers are providing value above index and index-like replacements.

Build more opportunistic illiquid portfolios

Endowments and foundations were among the early pioneers to recognize the potential of private markets to deliver high returns, meaningful alpha, and exposure to differentiated return drivers. He ut in recent years, many E&Fs haven't gotten everything they hoped for from their private assets. Segments of the real assets complex have struggled, private equity distributions have slowed, and, as a result, some E&Fs are finding themselves overallocated to private markets. Depending on the liquidity of the rest of their portfolio, the impact can also lead to some challenges meeting spending needs in a period of stress.

Despite the challenging environment for some alternatives in recent years, we believe that private assets continue to have a critical role to play and that there are several steps E&Fs can take to build private markets portfolios that are positioned for the new regime.

Confronting high fees and low liquidity in private equity

The first step can be to approach private equity (PE) differently. While PE will continue to be the main driver of illiquid returns, there are multiple ways to invest in the asset class. Rather than restricting themselves to primary funds, we encourage E&Fs to utilize PE direct co-investment programs and secondaries.

Co-investments can deploy capital more quickly and in a more focused manner than traditional primary funds, allowing for greater precision in portfolio construction. Direct co-investments can also be much more fee-effective, allowing the asset class to work harder for investors, and, given the pace of deployment, can reduce the impact of the J-curve. To manage risk, it's important to size these transactions appropriately and to achieve deal diversification by sector, size, and vintage. Transactions also must be sourced, well-negotiated and monitored, and due diligence must be conducted by a robust private equity team to ensure they are not subject to negative selection bias from managers.

Secondaries can provide additional diversification by getting a "slice of history" into the portfolio, reducing costs, and putting capital to work faster. Furthermore, they present a compelling opportunity in the current environment. While slowing distributions, low-transaction volumes, and the lack of exit opportunities in PE markets have presented a headwind for liquidity, they have also created attractive opportunities for buyers on the secondary market. An estimated 75% of PE portfolios are net-cash-flow negative, leading many limited partners to turn to secondaries for liquidity and to meet distribution requirements. These factors present favorable conditions to acquire diversified pools of assets at discounted rates.

The example below shows how the addition of direct co-investments and secondaries impacts the cash flows and NAV development on which the J-curve ultimately depends. The solid lines represent NAV, distributed, and called capital, respectively. The starting point is the scenario in orange: A program with a three-year investment period consisting of 100% primary funds. We then add direct co-investments and secondaries until we arrive at a balanced portfolio, shown in yellow, consisting of 50% primary funds, 25% direct co-investments, and 25% secondaries. We also present a portfolio consisting of 50% direct co-investments and 50% secondaries, shown in pink, to isolate the benefits of adding these investments alongside a portfolio of primary funds. When gradually adding co-investments and secondaries, capital is called more quickly, and, consequently, NAV builds up more quickly and to higher values. Direct co-investments and secondaries, in addition to often providing higher performance than primary funds, generally also have shorter holding periods, so capital is distributed more quickly, and they can provide the portfolio greater flexibility.

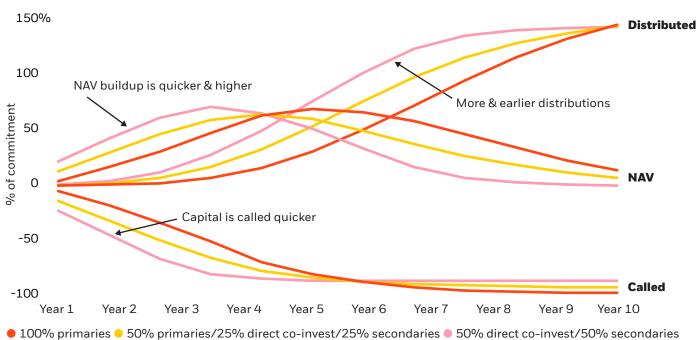


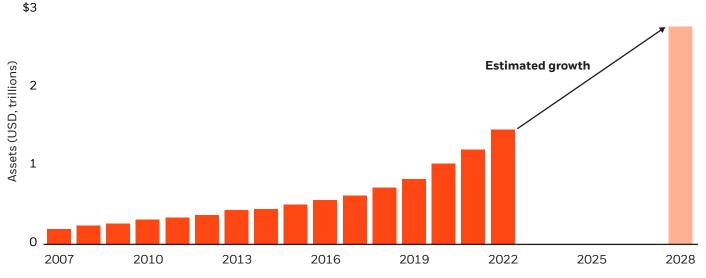
Figure 11: Impact of direct co-investments and secondaries on the J-curve

Source: BlackRock as of June 30, 2024. This chart sets forth the forecasted cash flows and the expected development of the net assets, using BlackRock's proprietary private equity simulation engine and the assumptions referenced throughout this material. The projections of NAV and cash flow should be used by the client as a guide to plan commitments to reach a target invested level. They are not intended to be a representation of expected returns and should not be relied on in this context. Private equity funds are long term assets and returns may vary significantly from the assumptions shown above. Additionally, the above list of assumptions does not include all assumptions that may have been applied to a particular model and that the models themselves do not factor in every performance factor that can have a significant impact on a client's cash flow projections. Since many potential scenarios exist, it is impossible to show all of the potential circumstances that would yield similar results. Actual events will vary and perhaps differ materially from those assumed.

Private credit complements the picture

In addition to approaching private equity differently, we also think E&Fs should include investments that have the potential to return capital more quickly, such as direct lending, opportunistic credit, and distressed situations. We believe that private credit has a secular tailwind, as much of the opportunity in these assets is being driven by regional banks curtailing their lending due to regulatory capital requirements. While much attention has been paid to private credit in recent years, we have been longtime allocators to the space in our endowment portfolios where appropriate, and we believe we're still early in the global adoption of the asset class. Preqin's estimates predict industry AUM above \$2.8 trillion in 2028, nearly double the \$1.5 trillion in 2022.

Figure 12: Global private debt assets under management



Forward looking estimates may not come to pass. BlackRock with data from Preqin as of April 2024. The chart shows the assets under management (AUM) in USD trillions of the global private debt market. The 2028 estimate is a forecast from Preqin.

Private credit offers E&Fs several potential advantages, including higher spreads than public fixed income, stronger covenants in the event of restructurings, and faster payback than PE due to regular cashflows. It may also include additional upside potential through warrants or equity options. Importantly, private credit also allows E&Fs to invest dynamically by deploying capital into distressed or opportunistic strategies when market conditions are favorable.

We are commonly asked our view on real estate considering the challenges the asset class has faced in the post-COVID era, particularly the high commercial office vacancy rates. E&Fs have historically been constructive on the asset class, holding allocations of 3-5% in private real estate, as well as additional public exposure. We have taken a discerning approach to using real estate: For those clients without exposure, we selectively add to the asset class, and for those with more established allocations, we hold for attractive opportunistic investments when the time arises. Notably, we tend to favor the more value-add areas of the real estate market over core exposure, in order to clear the return thresholds we seek in our E&Fs portfolios.

Endowments enter the infrastructure era

While the above asset classes are all well-established in the endowment portfolio, infrastructure has historically played less of a role. However, a range of structural forces is making the asset class more attractive in the new regime: 1) The transition to a low-carbon economy and a move toward increased energy independence in many parts of the world, 2) The increasing global demand for upgraded digital infrastructure like fiber broadband, cell towers and data centers, and 3) The renewed investment in logistical hubs such as airports, railways and shipping ports as supply chains are rewired. Further, large government deficits mean that 4) The mobilization of capital through public-private partnerships will be critical for funding important infrastructure projects that improve local communities.

Our endowment and foundation Outsourced Chief Investment Officer (OCIO) team has allocated to infrastructure in our endowment portfolios (where appropriate) throughout the history of our business. In addition to the market dynamics mentioned above, we like the asset class for its cashflow return, which can supplement the portfolio in periods of lower distributions from private equity. For those investors seeking sustainability components in their portfolios, there are additional tailwinds as The BlackRock Investment Institute forecasts that \$3.5T annually in energy investment is required by 2030¹⁷ to prepare for the transition to a low-carbon economy. As a result, we expect capital reallocation with rapid investment in electrification, energy infrastructure, and low-carbon technologies. These themes can be sourced from both the equity and real assets sides of the portfolio.

Illiquids in a whole portfolio context

With so many private investments to choose from, there is no single approach to constructing an illiquid portfolio that will suit all E&Fs. Different return objectives and liquidity tolerances might drive a different desired mix of private market asset classes, but we strongly believe that private markets will be necessary to meet endowment and foundations' return targets.

That said, simply adding alternatives will not be enough, and an uninformed approach will lead to some of the negative outcomes investors have seen from the asset classes. For one, we believe it is critical to build the private and public portfolios together and not to treat the private portfolio as a "bolt on" to the public one. Second, we believe it is just as important to apply significant resources — with scale, investors can achieve better access to niche managers, better ability to manage the complexity premium, better risk management, better economics, and, ultimately, better selection, which could not be more important in alternatives. In the chart below, we highlight the spread between top- and bottom-quartile managers by asset class. The significantly wider spreads, across nearly the entirety of the alternatives complex, demonstrate how critical it will be for investors to source with depth and sophistication to get the outcomes they need from these asset classes.

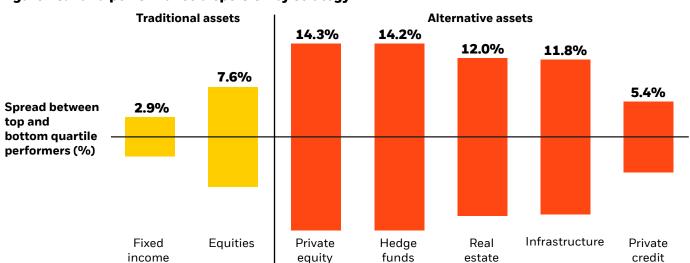


Figure 13: Fund performance dispersion by strategy

Source: BlackRock Investment Institute with data from Morningstar, Thomson Reuters, Pitchbook. December 31, 2022. Notes: The chart shows the distribution of historical returns net of fees for Fixed Income, Equity (Large Cap Equities), and Hedge Funds from January 1, 2007—December 31, 2022. Fixed Income and Large Cap Equities funds are represented by U.S.-domiciled funds tracked by Morningstar, Hedge Funds by the Thomson Reuters Lipper TASS global universe. Private Equity, Real Estate, Infrastructure (Real Assets) and Private Credit (Private Debt) represented by Pitchbook's Global Fund Performance Report as of December 31, 2022. Private Equity, Real Estate, Infrastructure (Real Assets) and Private Credit (Private Debt) distribution of historical returns are net of fees from January 1, 2004—December 31, 2022. Chart is for illustrative purposes only and does not represent the actual performance of any BlackRock portfolio. This is not a recommendation to invest in any particular financial product. Indices are unmanaged and one cannot invest directly in an index.

17 Source: BlackRock, The New Infrastructure Blueprint, July 2024.

Endowments and foundations look forward

The pressures on the investment performance of E&Fs are growing. Spending budgets rarely decrease, emergency pulls from the endowment are on the rise. Combined with persistent inflation, heightened volatility, and growth uncertainty, there is a lot to keep investment committees and staff awake at night. While there have been some calls to abandon the endowment model, we would paraphrase Mark Twain and say that "reports of its demise have been greatly exaggerated." There are elements of the endowment model that we think are likely to continue to serve E&Fs in the current environment, but evolving the approach for the new regime is critical.

By taking a dynamic approach to the overall portfolio, refining diversification in liquid and semi-liquid assets, selectively embracing active management where it can be most beneficial, and opportunistically investing in illiquid assets, we believe that E&Fs can meet the challenges confronting them today, and in the years ahead.

Authors



Edward Ng, CFA
Client CIO for Endowments,
Foundations and Healthcare



Ned Rosenman

Head of Client Engagement,
Endowments and Foundations Custom Solutions



Vinitha Kaushik, CFA Client CIO for Endowments, Foundations and Healthcare



William Jafari, CFA
Client CIO for Endowments,
Foundations and Family Offices

Important information

This material is provided for informational purposes only and is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. The opinions expressed are subject to change. References to specific securities, asset classes and financial markets are for illustrative purposes only and are not intended to be and should not be interpreted as recommendations. Reliance upon information in this material is at the sole risk and discretion of the reader. The material was prepared without regard to specific objectives, financial situation or needs of any investor.

THE INFORMATION CONTAINED HEREIN MAY BE PROPRIETARY IN NATURE AND HAS BEEN PROVIDED TO YOU ON A CONFIDENTIAL BASIS, AND MAY NOT BE REPRODUCED, COPIED OR DISTRIBUTED WITHOUT THE PRIOR CONSENT OF BLACKROCK, INC. ("BLACKROCK"). These materials are not an advertisement and are not intended for public use or dissemination.

This communication is not an offer and should not be deemed to be a contractual commitment or undertaking between the intended recipient of this communication and BlackRock but an indication of what services may be offered subject to a legally binding contract between the parties and therefore no reliance should be placed on this document or its content.

This material is not intended to be relied upon as a forecast, research or investment advice, and is not a recommendation, offer or solicitation to buy or sell any securities or to adopt any investment strategy. Any reference herein to any security and/or a particular issuer shall not constitute a recommendation to buy or sell, offer to buy, offer to sell, or a solicitation of an offer to buy or sell any such securities issued by such issuer.

Capital at risk. All financial investments involve an element of risk. Therefore, the value of the investment and the income from it will vary and the initial investment amount cannot be guaranteed.

Opinions, assumptions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. The opinions expressed are as of September 2024. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. This communication and its content represent confidential information. This material has been prepared for informational purposes only, and is not intended to provide, and should not be relied on for, accounting, legal or tax advice. You should consult your tax or legal adviser regarding such matters.

This material may contain "forward-looking" information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of yields or returns, and proposed or expected portfolio composition. Moreover, where certain historical performance information of other investment vehicles or composite accounts managed by BlackRock, Inc. and/or its subsidiaries (together, "BlackRock") has been included in this material, such performance information is presented by way of example only. No representation is made that the performance presented will be achieved, or that every assumption made in achieving, calculating or presenting either the forward-looking information or the historical performance information herein has been considered or stated in preparing this material. Any changes to assumptions that may have been made in preparing this material could have a material impact on the investment returns that are presented herein by way of example.

Past performance is not a guarantee of future results. Asset allocation and diversification strategies do not guarantee profit and may not protect against loss. Risk management and due diligence processes seek to mitigate, but cannot eliminate, risk nor do they imply low risk. Investment involves risk, including a risk of total loss. Indexes are unmanaged, are used for illustrative purposes only and are not intended to be indicative of any fund's performance. It is not possible to invest directly in an index.

Stock and bond values fluctuate in price so the value of your investment can go down depending upon market conditions. The two main risks related to fixed income investing are interest rate risk and credit risk. Typically, when interest rates rise, there is a corresponding decline in the market value of bonds. Credit risk refers to the possibility that the issuer of the bond will not be able to make principal and interest payments.

Total Portfolio Workbench Tool — IMPORTANT: The projections or other information generated by the tool regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results and are not guarantees of future results. Results may vary with each use and over time.

The tool is intended to help users think about asset allocation through a macro and style factor lens. The tool takes a user-constructed portfolio and performs a risk and return analysis that includes a calculation of the decomposition of risk across both asset classes and macro and style factors, using the Aladdin portfolio risk model. The tool also includes expected returns, using the BlackRock Investment Institute's capital market assumptions.

The tool is provided for informational purposes only, and is not intended to be relied upon as a forecast, investment-related research, investment advice, or as a recommendation, offer or solicitation to buy or sell any securities or to adopt any particular investment strategy. Results shown are for illustrative purposes only and do not reflect those of any actual accounts or strategies. The tool should not be relied upon as a primary basis for an investment decision, or for accounting, legal, or tax advice.

The tool is subject to significant limitations. The default characteristics associated with the asset classes displayed in the tool may differ from the weightings, risk exposure, and expected returns for an actual client account due to specific account guidelines, objectives, restrictions, and other factors. The results shown in the tool cannot account for the impact that economic, market, and other factors may have on the implementation and ongoing management of an actual investment portfolio. Unlike actual portfolio outcomes, the results shown in the tool do not reflect actual trading, liquidity constraints, fees, expenses, taxes and other factors that could impact future returns.

The tool is provided pursuant to the Terms of Use for access to and use of this tool, and is not provided under or pursuant to the terms of any investment management agreement or other agreement between the user and BlackRock or any of its affiliates. The tool, and any data used by the tool, is provided on an "as-is" basis. BlackRock expressly disclaims all warranties, express or implied, statutory or otherwise with respect to the tool (and any data used by the tool and the results obtained from use of the tool) including, without limitation, all warranties or merchantability, fitness for a particular purpose or use, accuracy, completeness, originality and/or non-infringement. In no event shall BlackRock have any liability for any claims, damages, obligations, liabilities or losses relating to the tool including, without limitation, any liability for any direct, indirect, special, incidental, punitive and/or consequential damages (including loss of profits or principal).

Aladdin Portfolio Risk Analysis: Charts and graphs provided herein are for illustrative purposes only. Neither BlackRock nor the Aladdin portfolio risk model can predict a portfolio's risk of loss due to, among other things, changing market conditions or other unanticipated circumstances. The Aladdin portfolio risk model is based purely on assumptions using available data and any of its predictions are subject to change. For BlackRock products, data about the specific underlying holdings are used when applying the Aladdin risk model. For third party funds, BlackRock uses underlying holdings, or in certain cases, determines appropriate proxies for relevant holdings using a combination of Morningstar and other publicly available data sources. Product specific inputs are typically based on the latest disclosed data, which may be lagged.

The BlackRock Investment Institute (BII) leverages the firm's expertise and generates proprietary research to provide insights on the global economy, markets, geopolitics, and long-term asset allocation.

The information and opinions contained in this material are derived from proprietary and non-proprietary sources deemed by BlackRock, Inc. and/ or its affiliates (together, "BlackRock") to be reliable, are not necessarily all inclusive and are not guaranteed as to accuracy. There is no guarantee that any forecasts made will come to pass. Any research in this document has been procured and may have been acted on by BlackRock for its own purpose. The results of such research are being made available only incidentally. The views expressed do not constitute investment or any other advice and are subject to change. They do not necessarily reflect the views of any company in the BlackRock Group or any part thereof. BlackRock believes that the information in this document was correct at the time of compilation, but no warranty of accuracy or reliability is given and no responsibility arising in any other way for errors and omissions (including responsibility to any person by reason of negligence) is accepted by BlackRock, its officers, employees or agents.

© 2024 BlackRock, Inc. or its affiliates. All rights reserved. **BLACKROCK** and **ALADDIN** are trademarks a trademark of BlackRock, Inc or its affiliates. All other marks are the property of their respective owners. 241385T-0924

BlackRock.