Research

Fidelity Institutional Insights

Alternative Investments and Their Roles in Multi-Asset Class Portfolios

Many investors look to alternatives to broaden the investment opportunity set and help enhance a portfolio's returns, manage downside risk, and improve diversification.

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KEY TAKEAWAYS

- The term "alternative investment" generally applies to an array of investment types that are distinct from traditional portfolio holdings, such as stocks, bonds, and cash. Categories of alternatives include liquid alternatives, private equity, private credit, real assets, and digital assets.
- Alternative investment strategies were at one time largely available only to institutional investors, but asset managers have accelerated their efforts to develop innovative investment vehicle structures that provide broader access to the potential return, risk, and diversification benefits of alternatives.
- We studied the historical investment characteristics of 18 traditional and alternative investment categories from 2005 through 2022, and ranked them based on three key metrics: annualized returns, performance amid poor public equity market returns, and diversification benefits.
- Among the alternatives we studied, we found that private alternatives demonstrated higher returns than most other asset categories, while certain liquid alternative strategies provided strong diversification benefits, especially during periods of poor public equity performance.
- In a multi-asset class context, we found that expanding the investment opportunity set to include alternative investments can provide a broad range of potential benefits to investment portfolios, including reduced volatility, improved diversification and enhanced risk-adjusted returns.

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Alternative investments can be generally defined as investments distinct from traditional portfolio holdings that include stocks, bonds, and cash. However, a broad and diverse range of asset types and investment strategies fall within the "alternatives" classification, including liquid alternatives, private equity, private credit, real assets, and digital assets. While individual categories of alternatives have distinct characteristics and can play unique roles in a portfolio, investors have generally allocated to alternatives when seeking to enhance returns, manage risk, or improve diversification.

Institutional investors have sought exposure to alternatives for decades for these reasons, and many hold significant allocations. In fact, Fidelity research has found 86% of institutional investors invest in alternative strategies, with most exposure in private assets.[1] Adoption of alternatives among financial advisors and individual investors, on the other hand, has generally been more limited. Only 26% of financial advisors invest in private assets, while a higher percentage invest in liquid alternatives.[2]

For many years, alternative investment strategies were largely available only to institutional investors. This lack of access to alternatives has been one of the major roadblocks to their widespread adoption. But asset managers have accelerated their efforts to develop and offer innovative investment vehicle structures that can grant a broader spectrum of investors access to alternatives—some in the form of mutual funds and exchange-traded funds (ETFs). In this article, we will address some of the perceptions of alternatives that may be additional barriers to their widespread adoption.

- Some investors hold the view that alternatives are too complex and point to a shortage of available research as a barrier for allocating to them. In this paper, we will highlight and define the key categories of alternatives to shed more light on these strategies.
- Another perception of alternatives is that they are challenging to access and cumbersome to own, but these hurdles may be resolved by the structure of the alternative investment strategy. We will explore some examples of investment vehicle structures available for investors to gain access to alternatives.
- Further, investors hold varied views of the risk and return profile of alternatives. We will review historical return and risk attributes of several distinct alternatives categories to illustrate their investment characteristics.

With a more comprehensive understanding of the range of alternatives and their key attributes, investors and advisors may be better equipped to determine which, if any, may be appropriate for their portfolios.

Overview of the alternative investment landscape

Categories of alternatives generally include liquid alternatives, private equity, private credit, real assets, and digital assets, each with several subcategories. Though not an exhaustive list, below is an overview of the alternative investment landscape.

Liquid Alternatives	Private Equity	Private Credit	Real Assets	Digital Assets
Equity Hedge	Generalist Private Equity	Direct Lending	Private Real Estate	Cryptocurrencies
Relative Value	Buyout	Distressed Debt	Commodities	Stablecoins
Options-based	Venture Capital	Collateralized Loan Obligations	Infrastructure	Central Bank Digital Currencies
Event Driven	Growth Equity	Mezzanine Debt	Fine Art/ Collectibles	Non-Fungible Tokens
Macro	Secondaries	Opportunistic Credit		

Note: Within each of the categories highlighted above, there may be multi-strategy funds that employ a combination of investment approaches.

Liquid alternatives

Liquid alternatives include a broad range of strategies across asset classes and investment styles. They seek to provide a combination of return enhancing, diversifying, and defensive features. These strategies invest almost exclusively in the public markets or in derivatives tied to the performance of those markets. Leverage and derivatives feature more prominently here than in other types of alternatives; this leverage can amplify returns, both positively and negatively. Liquid alternatives also usually have the flexibility to take either long or short positions; the latter seek to benefit from declining asset values. As a result of all these features, liquid alternatives may have different risk/return profiles than traditional investments, with varying levels of exposure to the equity market, as well as a range of systematic and idiosyncratic risks. **Equity hedge** strategies, such as **equity market-neutral** strategies, seek returns that are not tied to an underlying market index, typically targeting close to zero equity market exposure (zero beta). Instead, these strategies typically strive to deliver attractive, risk-adjusted returns regardless of market cycles and shorter-term dynamics. **Relative value** strategies involve buying a security perceived as undervalued and selling short a similar security perceived as overvalued to take advantage of temporary differences in price. **Convertible arbitrage** is a relative value strategy that seeks to generate diversifying returns by purchasing an undervalued convertible bond and selling short the underlying stock. **Options-based** strategies use options seeking to hedge downside risk, enhance income, or generally create a nonlinear customized payout. **Event driven** strategies seek to exploit mispricings that can occur in advance of or following corporate events, such as mergers, acquisitions, bankruptcies, and earnings calls. **Macro** strategies, including **managed futures** strategies, use analysis of business cycles, market regimes, and market trends to identify investment opportunities. These strategies can often employ systematic and discretionary approaches to invest across asset classes.

Private equity

In general, private equity is the investment in companies that are not traded in public markets; to do so, investors can make direct investments in a private company or invest in a private equity fund. Unlike traditional public equity, private equity investors typically need to hold an investment for multiple years to gain value before exiting positions. Most private equity activity is in the form of **buyouts**—the acquisition of majority stakes or full ownership positions in companies. Other private equity investments may reflect lesser ownership stakes but involve important governance and management rights. Private equity investments can occur at any time during a company's life cycle—from start-ups to established revenue-generating companies.

Venture capital is a form of private equity that typically involves acquiring a minority stake in start-up companies with high growth potential. **Growth equity** is often described as taking a significant equity interest with governance/management rights in more mature companies with the potential for accelerating earnings growth. With these rights to affect change at a company, the private equity fund manager works actively to add value by growing sales, making strategic acquisitions, and increasing operating efficiencies, which is distinct from the role of a traditional public equity fund manager. **Generalist private equity** typically reflect investments in a variety of categories. A growing proportion of the market, **secondary** investments involve the buying and selling of existing interests in private equity funds.

Private credit

Like private equity, private credit generally refers to investments that are originated or negotiated privately and are not traded on public markets. Additionally, they are often composed of higher-yielding securities. **Direct lending** falls within this category, whereby investors lend money directly to private companies. The borrowers are typically small and mid-sized private companies, while the lenders may be institutions or asset management firms. Other subsets of private credit include **distressed debt**, which refers to debt issued by companies that have defaulted, are undergoing bankruptcy, or are facing other near-term business complications.

Also in the private credit category are securitized assets, such as **collateralized loan obligations**, whereby various types of loans—generally lower-rated but senior secured corporate loans—are bundled together and sold to investors in different tranches. **Mezzanine debt** is another subset of private credit that falls between senior debt and equity in the capital structure. Mezzanine debt often contains embedded equity warrants that may be converted to equity ownership under specified circumstances. **Opportunistic credit** encompasses a range of fixed income investments that may include private investments, structured securities, or public corporate debt.

Real assets

Real assets encompass a diverse range of assets from **private real estate** to **fine art and collectibles**. Private real estate investments involve ownership stakes in commercial properties or land in a variety of sectors, such as office buildings, retail, industrial, and multi-unit housing. Private real estate debt strategies offer exposure to loans on such properties.

Private real estate equity strategies fall within four main categories that reflect their risk and return characteristics. "Core" strategies generally provide exposure to well-leased buildings in sought-after markets. These properties tend to have quality tenants with long-term leases, and therefore returns are driven by both current income and capital appreciation. "Core plus" funds invest in quality properties in desirable locations where modest capital improvements or increased occupancy rates can enhance total return.

"Value-add" strategies may offer exposure to less-desirable properties that require capital improvement or have low occupancy levels and thus tend to have higher risk and return profiles. Finally, "opportunistic" funds include challenged properties that may be vacant or very early in the development phase. Returns are generally driven by capital appreciation, and these strategies tend to be more suitable for investors with a higher tolerance for risk.

Commodities are also classified within real assets and include basic goods, raw materials, and natural resources. These may include agricultural products, precious metals, oil, and natural gas. **Infrastructure** represents physical assets that enable transportation, storage, and communication. These include bridges, marine ports, pipelines, data centers, and cell towers.

Digital assets

Digital assets, such as bitcoin, are designed to work as mediums of exchange that are stored on a decentralized ledger known as a blockchain. They are also known as **cryptocurrencies**. Investors and traders can buy and sell these assets on exchanges similar to other public securities markets. **Stablecoins** are a class of digital assets designed to offer price stability backed by a reserve asset. They are tokenized forms of fiat currency.

Central bank digital currencies (CBDCs) are government-led initiatives attempting to create natively digital fiat currency on a blockchain network. **Non-fungible tokens** (NFTs) are individually unique digital assets; unlike fungible cryptocurrencies, they cannot be traded or exchanged at equivalency. NFTs can be used to represent natively digital or real-world items, such as art, collectibles, and real estate.

The digital assets market has evolved dramatically and altered the future of capital markets, digital payments, and value storage. A range of innovative products that support the rapidly-evolving digital asset ecosystem has emerged, enabling broader adoption.

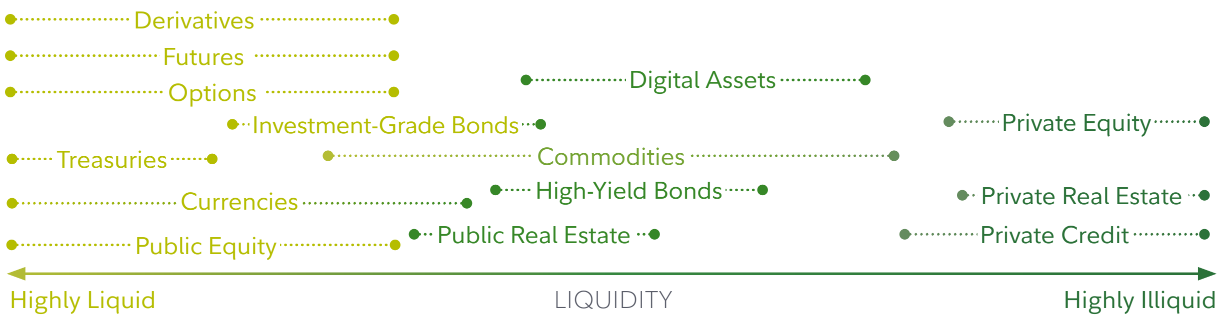
These strategies include single- and multi-token index products, actively managed multi-token strategies, and products investing in securities and digital assets, including hybrid portfolios that may include private equity.

Alternative investment vehicle structures span the liquidity spectrum

The liquidity of alternative strategies, like any investment, has two dimensions—the liquidity of the underlying assets in which the strategy invests and the liquidity terms of the vehicle structure itself. From an asset class perspective (Exhibit 1), examples of some of the most liquid assets are large cap equities or Treasuries, which can typically be easily traded and converted to cash. Meanwhile, ownership stakes in private companies via equity or debt (considered alternative asset classes) are more difficult to trade without a public market. Other examples of illiquid asset classes would include private real estate or fine art. As seen in public markets, however, the liquidity of any asset can vary based on market conditions; for example, during periods of market stress, it can be more difficult to trade high-yield bonds or even public equities.

EXHIBIT 1: Although liquidity can vary based on market conditions and other factors, alternative asset classes are generally less liquid than traditional assets, such as stocks and bonds.

General Asset Class Liquidity Ranges



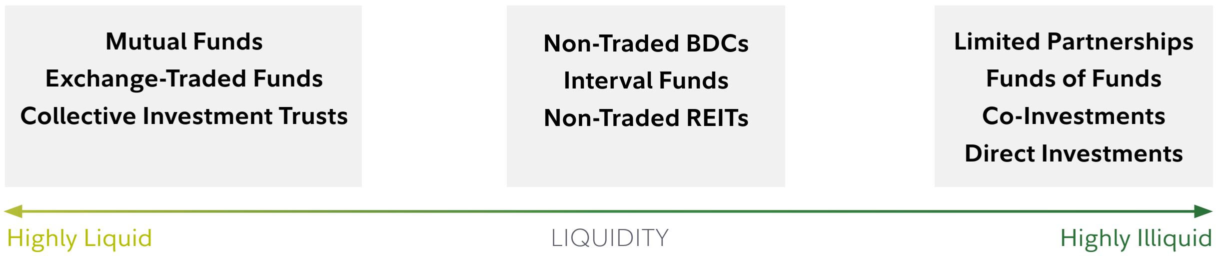
For illustrative purposes only. Source: Fidelity Investments.

The second dimension of liquidity (Exhibit 2, page 7) is determined by the investment vehicle structure and can range from highly liquid to highly illiquid. Liquid alternative strategies can be structured as mutual funds, exchange-traded funds (ETFs), and collective investment trusts (CITs) that offer daily pricing and liquidity. These liquid alternative vehicles may invest in a range of asset classes, including public and private markets. Many are hedge-fund-like strategies that seek returns that are uncorrelated with public markets, to provide investors with sources of diversification beyond traditional asset classes.

On the other end of the liquidity spectrum, investors may gain access to illiquid alternatives through direct investments or in a private vehicle structure, such as a limited partnership. These vehicles may be available only to investors that meet certain net worth, asset, and/or income minimums and can have multi-year lockup periods that limit investors' access to their capital. Because these investment vehicles may not be traded on public markets, alternative strategies offered through these structures often cannot be readily converted to cash and thus have lower levels of liquidity.

EXHIBIT 2: Alternative investments are available in several vehicle structures that range from daily liquid mutual funds and ETFs to limited partnerships that can be highly illiquid.

Examples of Alternative Investment Vehicle Structures and Their General Liquidity Terms



For illustrative purposes only. BDC: business development company. Funds of funds reflect those holding underlying private funds. Sources: Fidelity Investments, Cerulli Associates—U.S. Alternative Investments 2022: Delivering Alternative Capabilities to Retail Investors.

Between these two ends of the liquidity spectrum are several investment structures, such as interval funds and non-traded real estate investment trusts (REITs). While these vehicles tend to have at least some lockup or gate provisions that limit liquidity, shares can generally be redeemed at defined intervals, such as monthly or quarterly, often with caps on redemptions.

While institutional investors tend to be active users of illiquid alternative investments in their portfolios, many increasingly via direct investment due to their scale, financial advisors tend to invest to a greater degree in liquid alternatives on behalf of their clients.[3] Surveyed advisors cited operational efficiencies, lower costs, and daily liquidity as benefits of investing in mutual fund and ETF structures.[4] One in five financial advisors surveyed on behalf of Fidelity in 2021 reported that illiquid alternative investments are not available through their firms; however, we anticipate that the proliferation of the semi-liquid vehicle structures highlighted above will continue to improve access to different types of alternative investments over time.[5]

Importantly, investors should consider whether increased liquidity may come at a cost. If illiquid assets are offered in liquid vehicle structures, there may be trade-offs over time between greater liquidity and the underlying outcomes investors typically seek when allocating to alternatives.

Hedge Fund Strategies: Liquid or Not?

Hedge funds are investment strategies that hold underlying assets, and they are not an asset class themselves. A hedge fund strategy's underlying holdings may include stocks, bonds, derivatives, and private assets, all with varied levels of liquidity. Hedge fund strategies have traditionally been offered in an illiquid limited partnership structure with extended lockup periods, but some offer liquidity on a quarterly or more frequent basis. The growth of liquid alternatives, reflecting a diverse range of strategies for varied investor types, has helped to significantly expand access to these nontraditional hedge fund strategies and mitigate some of the challenges of investing in alternatives.

Why own alternatives?

Investors have generally allocated to alternatives seeking to enhance returns, manage risk, or improve diversification beyond that afforded by traditional asset classes. To explore the roles that individual categories of alternatives can play in multi-asset class portfolios, we analyzed historical return, risk, and correlation statistics of 18 traditional and alternative investment categories (nine each), representing alternatives with the following: liquid alternatives, private equity, private credit, and real assets from 2005 through 2022. Exhibit 3 summarizes our key findings, while Exhibits 4 through 6 provide more details.

It is important to note that alternative investment strategies generally have a much shorter historical track record than their more traditional counterparts, and thus less data than we typically evaluate when approaching strategic asset allocation decisions. The track records for bitcoin and other digital assets, in particular, are so short that we have excluded them from our quantitative analysis (see sidebar on page 13 for a discussion of digital assets for investors seeking to own bitcoin).

To analyze the returns of traditional asset classes, we use publicly available indices, which aggregate the returns of, for instance, stocks and bonds, and are not directly investable or inclusive of fees. We utilized net-of-fee returns for the nine alternative strategies, so the returns of these categories may be understated relative to the traditional asset classes in our study. But we conducted analysis to account for typical fees for the traditional asset class categories, and the results presented here did not change materially. While fees for alternatives are generally higher than most traditional asset classes, they may be offset by leverage.

Of note, the direct lending index does not reflect leverage and is gross of fees because it captures the returns of the underlying loans in the index. Therefore, for this asset class, we utilized modeling to calculate a performance return that reflects leverage and net of fees. See the Appendix on page 14 for more on those adjustments.

Our analysis begins in 2005 because that is the earliest we could obtain high-quality data for direct lending—the largest category of private credit. However, we conducted analysis on the other asset categories back to 2001 to assess the impact of the bursting of the Internet bubble.

EXHIBIT 3: Within multi-asset class portfolios, individual categories of alternatives have offered several potential benefits relative to traditional asset classes alone.

Three Potential Benefits of Alternative Investments, 2005–2022

Category Rankings

Top Quartile | Second Quartile | Third Quartile | Bottom Quartile

		Return enhancement	Lesser downside amid poor U.S. equity performance	Diversification
Liquid Alternatives	Macro	Bottom Quartile	Top Quartile	Top Quartile
	Equity Market-Neutral	Bottom Quartile	Second Quartile	Third Quartile
	Managed Futures	Bottom Quartile	Top Quartile	Top Quartile
Private Equity	Equity-Generalist	Top Quartile	Top Quartile	Third Quartile
	Buyout	Top Quartile	Second Quartile	Bottom Quartile
	Venture Capital	Top Quartile	Second Quartile	Second Quartile
Private Credit	Direct Lending	Top Quartile	Top Quartile	Third Quartile
	Distressed Debt	Second Quartile	Third Quartile	Second Quartile
Real Assets	Private Real Estate	Second Quartile	Top Quartile	Top Quartile

Past performance is no guarantee of future results. The table above reflects how the representative alternative investment categories ranked among the 18 representative traditional and alternative categories, by quartile, from 2005 through 2022. Return enhancement: Asset categories ranked based on annualized returns. Lesser downside amid poor U.S. equity performance: Asset categories ranked based on average annual returns in the worst four years of returns of the Russell 1000 Index from 2005 through 2022. Diversification: Asset categories ranked based on the lowest average correlations with the other 17 asset categories. See Exhibits 4–6 for the analysis of all 18 asset categories based on these metrics. See Appendix for index/asset category definitions. Sources: Bloomberg Finance L.P., HFR Inc., www.HFR.com, © 2023 HFR, Inc. All rights reserved, Morningstar, Burgiss, Societe Generale, Cliffwater LLC, NCREIF, Fidelity Investments, as of Dec. 31, 2022.

We found that private equity returns appear more attractive starting in 2005, because the years 2001 and 2002 were meaningfully negative for the asset category—venture capital in particular. Including these earlier years in our analysis, we found that the private equity categories still led the others based on annualized returns; however, both ranked lower in years when the U.S. large cap equity market performed poorly, which would reduce its attractiveness on our lesser downside measure summarized in Exhibit 3.

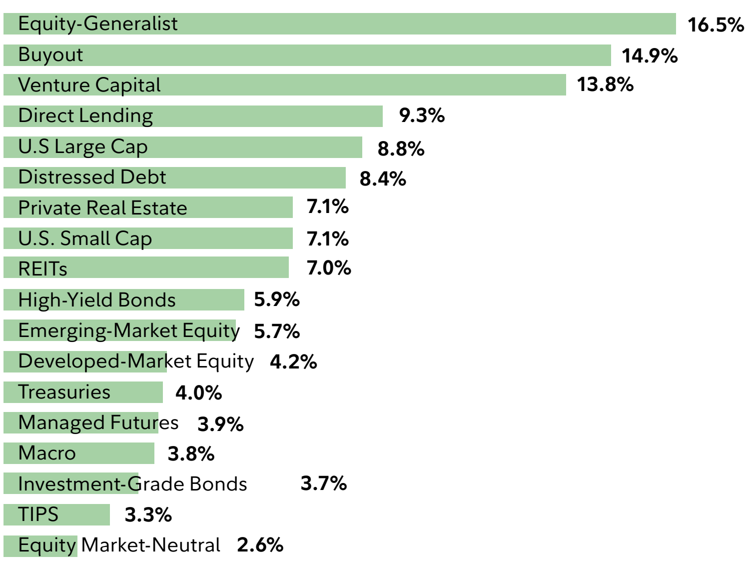
Alternatively, we note that some liquid alternative strategies such as macro and equity market-neutral experienced some return challenges during this period as a result of historically low interest rates and inflation. These strategies experienced a strong 2022 amid a structural change in monetary policy with normalizing rates and rising inflation.

Based on our analysis beginning in 2005, the returns of private equity (as represented by equity-generalist, buyout, and venture capital), were superior to all other traditional and alternative investment categories over the period studied (Exhibit 4). Importantly, private equity outperformed U.S. large cap and small cap equities, illustrating the return premium investors expect when they sacrifice liquidity by owning private versus public equities.

Investors should keep in mind that performance is just one dimension that should be considered when investing in alternatives. It is important to evaluate alternatives' performance in combination with the entire portfolio, and the role they play in balancing risk and return. For example, the strong returns of private equity categories should be balanced by the risks of the illiquidity premium, as seen in 2008.

EXHIBIT 4: Our research indicated that private equity outperformed all other traditional and alternative asset categories over the period studied.

Annualized Returns, 2005–2022



Past performance is no guarantee of future results. Traditional asset categories: U.S. large cap equity—Russell 1000 Index; U.S. small cap equity—Russell 2000 Index; developed-market equity—MSCI EAFE Index; emerging-market equity—MSCI Emerging-Market Index; Treasuries—Bloomberg US Long Treasury Index; Treasury inflation-protected securities—Bloomberg US Treasury Inflation Linked Bond Index; U.S. Investment-Grade Bonds—Bloomberg US Credit Index; high-yield bonds—ICE BofA US High Yield Index; REITs—FTSE NAREIT All Equity REIT Index. Alternative categories: liquid alternatives—HFRI Macro Total Index and HFRI EH Equity Market Neutral Index; managed futures: SG CTA Index (note, there may be managed futures strategies in both the HFR and SG indexes); private equity—equity-generalist, buyout, and venture capital reflect annual return data from Burgiss; private credit—direct lending represented by the Cliffwater Direct Lending Index, distressed debt reflects annual return data from Burgiss; real assets—private real estate represented by the NFI-ODCE Index. Burgiss Data used in this research reflects returns of U.S. private capital funds and funds of funds. See Appendix for index/asset category details. Sources: Bloomberg Finance L.P., HFR Inc., www.HFR.com, © 2023 HFR, Inc. All rights reserved, Morningstar, Burgiss, Societe Generale, Cliffwater LLC, NCREIF, Fidelity Investments, as of Dec. 31, 2022.

More recently, private companies have been waiting longer before initial public offerings and now make up a significant proportion of the global economy. With many companies going public at steep valuations and the larger number of private companies, investors continue to seek the potential opportunities in private equity highlighted here.

Private credit (represented by direct lending and distressed debt) and private real estate also boasted strong returns relative to many other asset categories over the period studied. Note that many investors look to private credit and real assets (private real estate, specifically) to enhance portfolio yields—a component of total return. Meanwhile, commodities—another real asset category—have demonstrated strong returns episodically, such as during periods of unexpectedly higher inflation.

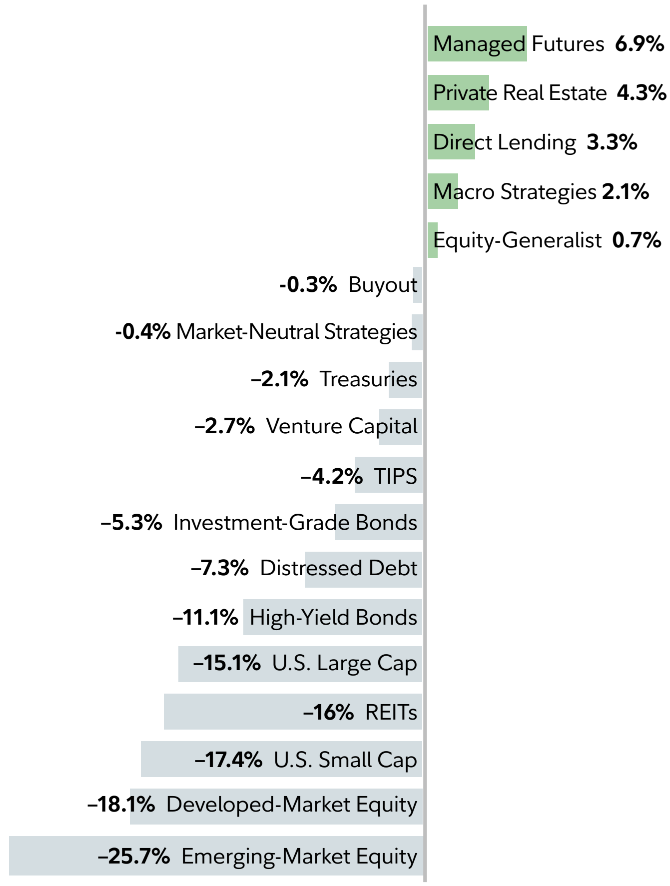
Acknowledging that some investors might argue that private equity and private credit returns may be attributable to their exposure to public markets, we also sought to isolate the residual returns that may be a result of the illiquidity premium or other factors. By examining the returns of these alternative asset classes and their relationships with their public market counterparts, we found that these private asset categories exhibited positive historical returns after controlling for exposure to public markets.[6]

To explore the potential risk management benefits of alternative investments, we examined performance in years when public equity returns were poor, defined as the four worst return years for U.S. Large-cap equities from 2005 through 2022, (with average declines of -15.1% and -17.4% for U.S. large cap and U.S. small cap, respectively). With this approach, we aimed to determine which investment categories would have provided ballast to a traditional portfolio.

As outlined in Exhibit 5, we found that during these years of poor U.S. equity returns, all of the traditional asset classes experienced negative returns. Among the alternatives categories, we found that managed futures experienced the best returns overall, at 6.9%. Private real estate, direct lending, macro, and equity-generalist also generated positive returns.

EXHIBIT 5: Among the alternatives categories we studied, the returns of managed futures, private real estate, direct lending, macro strategies, and equity-generalist held up relatively well amid poor U.S. equity market performance.

Average Annual Returns in the Four Worst Return Years for the Russell 1000 Index from 2005 to 2022



Past performance is no guarantee of future results. Average annual returns in the bottom four return years for the Russell 1000 Index from 2005 to 2022. Traditional asset categories: U.S. large cap equity—Russell 1000 Index; U.S. small cap equity—Russell 2000 Index; developed-market equity—MSCI EAFE Index; emerging-market equity—MSCI Emerging-Market Index; Treasuries—Bloomberg US Long Treasury Index; Treasury inflation-protected securities—Bloomberg US Treasury Inflation Linked Bond Index; investment-grade bonds—Bloomberg US Credit Index; high-yield bonds—ICE BofA US High Yield Index; REITs—FTSE NAREIT All Equity REIT Index. Alternative categories: Liquid alternatives—HFRI Macro Total Index and HFRI EH Equity Market Neutral Index; Managed futures: SG CTA Index (note, there may be managed futures strategies in both the HFR and SG indexes); private equity—equity generalist, buyout, and venture capital reflect annual return data from Burgiss; private credit—direct lending represented by the Cliffwater Direct Lending Index, distressed debt reflects annual return data from Burgiss; real assets—private real estate represented by the NFI-ODCE Index. Burgiss Data used in this research reflects returns of U.S. private capital funds and funds of funds. See Appendix for index/asset category definitions. Sources: Bloomberg Finance L.P., HFR Inc., www.HFR.com, © 2023 HFR, Inc. All rights reserved, Morningstar, Burgiss, Societe Generale, Cliffwater LLC, NCREIF, Fidelity Investments, as of Dec. 31, 2022.

As previously noted, while the returns in our analysis reflect the longest available time period for these 18 asset classes, longer or different time periods could result in different outcomes.

In our attempt to understand the diversification benefits of alternatives within a portfolio context, we examined historical return correlations across asset classes. We analyzed the average historical correlations of each category with the other 17 asset classes from 2005 through 2022. Among the alternatives we studied, managed futures exhibited negative correlation with other asset categories, while macro, private real estate, and venture capital also exhibited diversifying characteristics in a multi-asset class portfolio context (Exhibit 6).

EXHIBIT 6: Managed futures exhibited negative correlation with other asset categories, while macro, private real estate, and venture capital also exhibited diversifying characteristics in a multi-asset class portfolio context.
Average Cross-Asset Class Correlation, 2005–2022

RANK	ASSET CLASS	AVG. CORRELATION WITH OTHER 17 ASSET CLASSES
1	Managed Futures	-0.18
2	Treasuries	-0.06
3	Private Real Estate	0.13
4	Macro Strategies	0.15
5	TIPS	0.27
6	Venture Capital	0.28
7	Investment-grade Bonds	0.33
8	Distressed Debt	0.35
9	High-Yield Bonds	0.36
10	Equity Market-Neutral Strategies	0.40
11	Direct Lending	0.42
12	Emerging-Market Equity	0.42
13	Equity-Generalist	0.44
14	REITs	0.45
15	U.S. Small Cap	0.46
16	Developed-Market Equity	0.49
17	U.S. Large Cap	0.51
18	Buyout	0.51

Past performance is no guarantee of future results. Average correlations with the other 17 asset classes. Traditional asset categories: U.S. large cap equity—Russell 1000 Index; U.S. small cap equity—Russell 2000 Index; developed-market equity—MSCI EAFE Index; emerging-market equity—MSCI Emerging-Market Index; Treasuries—Bloomberg US Long Treasury Index; Treasury inflation-protected securities—Bloomberg US Treasury Inflation Linked Bond Index; investment-grade bonds—Bloomberg US Credit Index; high-yield bonds—ICE BofA US High Yield Index; REITs—FTSE NAREIT All Equity REIT Index. Alternative categories: liquid alternatives—HFRI Macro Total Index and HFRI EH Equity Market Neutral Index; managed futures: SG CTA Index (note, there may be managed futures strategies in both the HFR and SG indexes); private equity—Equity-generalist, buyout, and venture capital reflect annual return data from Burgiss; private credit—direct lending represented by the Cliffwater Direct Lending Index, distressed debt reflects annual return data from Burgiss; real assets—private real estate represented by the NFI-ODCE Index. Burgiss Data used in this research reflects returns of U.S. private capital funds and funds of funds. See Appendix for underlying index details. See Appendix for index/asset category definitions. Sources: Bloomberg Finance L.P., HFR Inc., www.HFR.com, © 2023 HFR, Inc. All rights reserved, Morningstar, Burgiss, Societe Generale, Cliffwater LLC, NCREIF, Fidelity Investments, as of Dec. 31, 2022.

A note about evaluating the risk of alternatives

Due to the nature of private markets, the returns of some illiquid alternatives can appear "smoother" or less volatile, which can understate the risks of these asset classes relative to others with similar characteristics. For example, appraisal-based valuations that are often used in categories such as private real estate tend to change slowly over time and can lead to stale pricing. This can cause serial correlation, in which one period's return is highly correlated with the previous period. This statistical issue poses problems when measuring volatility.

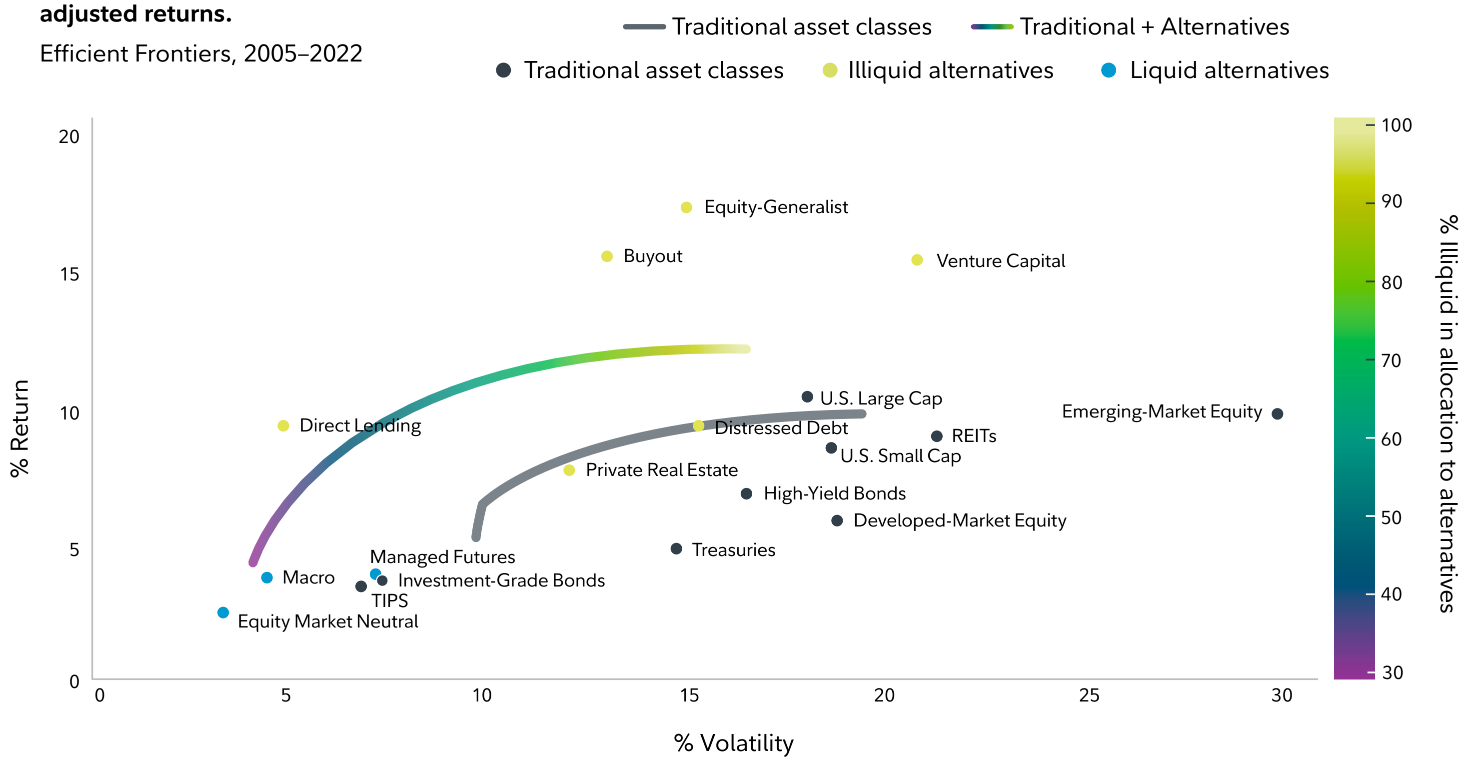
To identify the asset classes with artificially "smooth" returns, we can test for serial correlation and apply statistical techniques to ensure the data is comparable to other asset returns. For those categories where we observed meaningful serial correlation (venture capital, distressed debt, direct lending, and private real estate) we applied statistical techniques to "unsmooth" returns needed for our correlation and efficient frontier analysis.[7]

Based on the potential risk, return, and diversification benefits of the alternative asset categories we've outlined, investors may improve investment outcomes by incorporating them into multi-asset class portfolios. Our study so far has largely focused on each asset class independent of others. However, by constructing efficient frontiers—or sets of hypothetical portfolios that vary their asset allocations to optimize expected return for a given level of risk—we can illustrate how including alternatives may expand the investment universe and enhance risk-adjusted returns.

Using our historical return data, we created two efficient frontiers with constraints that we believe are appropriate for a diversified portfolio.[8] The gray line in Exhibit 7 represents a baseline efficient frontier that includes our nine traditional asset classes (defined below).

EXHIBIT 7: Incorporating a basket of alternative investments as part of a multi-asset class portfolio may enhance risk-adjusted returns.

Efficient Frontiers, 2005–2022



Past performance is no guarantee of future results. Returns reflect mean annual returns over the period, which were used to construct the efficient frontiers and would differ from the annualized returns shown in Exhibit 4. Left efficient frontier: Every point represents a hypothetical portfolio containing a mix of traditional asset classes, liquid alternatives, and Illiquid alternatives, with the right Y-axis representing the percentage of illiquid alternatives, in the overall allocation to alternatives, shifting in color to yellow as that percentage increases to a maximum of 60% as outlined in the portfolio constraints. Volatility reflects standard deviation of the annual returns over the period. Traditional asset categories: U.S. large cap equity—Russell 1000 Index; U.S. small cap equity—Russell 2000 Index; developed-market equity—MSCI EAFE Index; emerging-market equity—MSCI Emerging-Market Index; Treasuries—Bloomberg US Long Treasury Index; Treasury inflation-protected securities—Bloomberg US Treasury Inflation Linked Bond Index; investment-grade bonds—Bloomberg US Credit Index; high-yield bonds—ICE BofA US High Yield Index; REITs—FTSE NAREIT All Equity REIT Index. Alternative asset categories: liquid alternatives—HFRI Macro Total Index and HFRI EH Equity Market Neutral Index; managed futures: SG CTA Index (note, there may be managed futures strategies in both the HFR and SG indexes); private equity—equity-generalist, buyout, and venture capital reflect annual return data from Burgiss; private credit—direct lending represented by the Cliffwater Direct Lending Index, distressed debt reflects annual return data from Burgiss; real assets—private real estate represented by the NFI ODCE Index. Burgiss Data used in this research reflects returns of U.S. private capital funds and funds of funds. To identify the asset classes with artificially "smooth" returns, we tested for serial correlation. For those categories where we observed serial correlation (e.g., venture capital, distressed debt, direct lending, and private real estate) we applied statistical techniques to "unsmooth" returns and used "unsmoothed" risk data in our efficient frontier analysis. However, the dots represent the original raw data to reflect the actual investor experience. Unsmoothing techniques are outlined in endnote 7, and portfolio constraints are defined in endnote 8. See Appendix on page 14 for index/asset category definitions. Sources: Bloomberg Finance L.P., HFR Inc., www.HFR.com, © 2023 HFR, Inc. All rights reserved, Morningstar, Burgiss, Cliffwater LLC, NCREIF, Societe Generale, Fidelity Investments, as of Dec. 31, 2022.

The multi-color line represents a portfolio that can also include our nine alternative investment categories, representing liquid alternatives, private equity, private credit, and real assets (also defined in the chart above). As the asset mix is expanded to include alternatives, the efficient frontier moves up and to the left on the chart, reflecting a higher level of return for the same unit of risk. Further, the right Y-axis shows the illiquidity premium as the percentage of illiquid assets increases (and the frontier becomes more yellow). In addition, a traditional portfolio can reduce risk dramatically by adding an allocation to liquid alternatives, with the same returns, as indicated by the purple portion of the frontier.

The improved efficiency in the efficient frontier on the left is the result of including additional alternative asset classes with diversification benefits or higher historical returns at an equal or lower expected level of risk. This result may also reflect the compensation investors expect for bearing illiquidity and/or tail risk (e.g., the risk of outsized negative returns).

Why some investors may consider an allocation to bitcoin

In a survey of almost 1,052 institutional investors across the United States, Europe, and Asia conducted on behalf of Fidelity between January 2020 and June 2022, 58% of respondents reported that they were currently invested in digital assets, and 8 out of 10 believed digital assets held a place in their investment portfolio.[9] Bitcoin holders look to the digital asset for several investment purposes, including as a high-volatility alternative investment; therefore, it is important to understand that bitcoin can add meaningfully to a portfolio's overall risk profile.

A 21-million bitcoin supply cap was written into the digital asset's original source code and is often cited as a rationale behind bitcoin's role as a potential inflation hedge to help offset falling real returns from traditional store-of-value assets. Some bitcoin-holders also note that the digital asset may be just beginning along its adoption curve. Therefore, it is possible that small allocations to bitcoin as a venture asset could provide long-term value for investors, as infrastructure continues to be built and users continue to opt into its open-source network.

Although many investors consider bitcoin an emerging asset class, its return history is shorter than traditional and other alternative investments. With the use case of the digital asset still evolving, it can be challenging to apply traditional risk, return, and portfolio analytics; for these reasons, we excluded it from our analysis here. However, in a separate analysis, Fidelity compared bitcoin's historical data to that of stocks, bonds, and gold in various contexts. The goal was to test whether bitcoin could offer enhanced returns, increased diversification, or hedging against inflation within a multi-asset class portfolio. According to the findings, investing in bitcoin might enhance returns and might offer diversification benefits, but so far, equities have performed better when inflation is rising.[10]

Looking ahead

We have highlighted some of the potential merits of alternative investments, and why investors—more traditionally large institutions—have sought exposure to them. But the availability of these strategies in more varied and accessible vehicle structures has increased over the years and has enabled more investors to pursue their potential benefits.

The types of alternative investment strategies and vehicle structures an investor might consider will depend on their investment objective, time horizon, and risk tolerance. Furthermore, some categories of alternatives have a wide dispersion of returns among managers and strategies, so the performance an investor experiences in a single strategy may differ from the representative data shown in this article. The broad range of investment outcomes of some alternative investment strategies underscores the importance of manager research and suggests investors may consider diversified exposure to alternatives, such as funds of funds, multi-strategy solutions, or in the case of real estate, REITs in place of ownership in a single building. In future white papers, we plan to explore how these factors may impact allocations to alternatives, and highlight the key elements of careful manager due diligence and selection.

Appendix

Exhibit 3–7 methodology details: Traditional asset categories: U.S. large cap equity—Russell 1000 Index; U.S. small cap equity—Russell 2000 Index; developed-market equity—MSCI EAFE Index; emerging-market equity—MSCI Emerging-Market Index; Treasuries—Bloomberg US Long Treasury Index; Treasury inflation-protected securities—Bloomberg US Treasury Inflation Linked Bond Index; investment-grade bonds—Bloomberg US Credit Index; high-yield credit—ICE BofA US High Yield Index; REITs—FTSE NAREIT All Equity REITs Index.

Alternative categories: liquid alternatives—HFRI Macro Total Index and HFRI EH Equity Market Neutral Index; managed futures: SG CTA Index (note, there may be managed futures strategies in both the HFR and SG indexes); private equity—equity-generalist, buyout, and venture capital reflect annual return data from Burgiss; private credit—direct lending represented by the Cliffwater Direct Lending Index; distressed debt reflects annual return data from Burgiss; real assets—private real estate represented by the NFI-ODCE Index. Burgiss calculation details: Results are posted with every quarter-end publication date. The results reflect those of U.S. private capital funds and funds of funds and are net of fees and carried interest. Vintage is assigned based on the year of initial cash flow date. Pooled results are calculated based on the composite transaction (cash flow and valuation) activity of the underlying funds. Roll-forward valuations are used to calculate results whenever reported valuations are not available.

We started our analysis in 2005, which represented the longest period for these 18 asset classes. Our analysis began in 2005 because that is the earliest we could obtain high-quality data for direct lending—the largest category of private credit. Longer or different time periods could result in different outcomes.

We used three indexes to represent liquid alternatives in the research because they have longer track records dating back to 2005, the beginning of the time period in our analysis, and the indexes represent strategies that are often offered in liquid structures. But we would note that liquid alternatives strategies represent a diverse range of investment strategies that would be much wider in scope. We would also note that the HFR and SG index constituent strategies offer a spectrum of liquidity and may include some strategies with lockups or other illiquidity features.

Given that the Cliffwater Direct Lending Index reflects unlevered, gross of fees performance, we made the following modeling adjustments so the returns would align with the other seven alternative asset classes shown in this research in regard to how most investors can likely access each asset class. First, we assumed a hypothetical leverage (debt-to-equity ratio) of 100%, along with an assumed leverage cost of 2.5% over the Secured Overnight Funding Rate (SOFR); and next we subtracted estimated fees of 2.7%, which reflect management, performance and direct-lending fees typically charged to investors. These estimations are based on Fidelity internal research, academic literature review, and communication with fund managers. Of note, both the mean return and volatility measures increase after these adjustments.

1. Fidelity Investments, "A Study of Allocations to Alternative Investments by Institutions and Financial Advisors," April 2023. **2.** See endnote 1. **3.** Results from the 2021 Fidelity Advisor Insights survey, an online blind survey fielded from October 2021 to November 2021. Participants included 2,759 advisors who manage or advise upon client assets either individually or as a team, and work primarily with individual investors. The study was conducted by an independent firm not affiliated with Fidelity Investments. Allocation percentages may include both liquid and illiquid alternatives. Investor definitions of alternative investments may vary, and thus survey results may reflect different definitions among respondents.

4. Results from the 2021 Fidelity Advisor Alternative Investment Survey, an online blind survey fielded in April 2021. Participants included 204 advisors who personally manage or advise at least $30 million in client assets. **5.** Results from the 2021 Fidelity Financial Advisor Community—Investment Decision-Making Study, an online blind survey fielded in July 2021. Participants included 406 advisors who manage or advise upon client assets either individually or as a team, and work primarily with individual investors. The study was conducted by an independent firm not affiliated with Fidelity Investments. **6.** In conducting linear regression analysis, returns of large cap U.S. equities and high-yield bonds were used as independent variables, while returns of buyout, venture capital, direct lending, and distressed debt were used as dependent variables. The alpha (intercept) from these regressions was interpreted as a measure of excess return due at least in part to illiquidity. For example, regression analysis involving buyout and large cap U.S. equities, yearly returns of buyout (dependent variable) were regressed against yearly returns of large cap U.S. equities (independent variable). The representative data sets for each asset category are defined above. **7.** We used the statistical procedure outlined in Couts et al. (2020), section 1.3 to "unsmooth" returns for venture capital, distressed debt, and private real estate. Specifically, we fit a MA(L) process to the annual return for the given asset class and if there is evidence of autocorrelation, we use the estimated MA(L) coefficients to obtain return series that are not correlated over time. Unsmoothed returns for the Cliffwater Direct Lending Index, a publicly available index with infrequent (quarterly) pricing, were provided by the index provider. Couts, Spencer J. and S. Gonçalves, Andrei and Rossi, Andrea, "Unsmoothing Returns of Illiquid Funds," (November 25, 2020). Kenan Institute of Private Enterprise Research Paper No. 20-05, USC Lusk Center of Real Estate Working Paper Series, Available at SSRN: https://ssrn.com/abstract=3544854 or http://dx.doi.org/10.2139/ssrn.3544854 **8.** Efficient frontier analysis constrained by the following minimum and maximum allocations: Russell 1000 Index (Min: 0%; Max: 60%); Russell 2000 Index (Min: 0%; Max: 15%); MSCI EAFE Index (Min: 0%; Max: 30%); MSCI Emerging-Markets Index (Min: 0%; Max 15%); Bloomberg US Long Treasury Index (Min: 0%; Max: 15%); Bloomberg US Treasury Inflation Linked Bond Index (Min: 0%; Max: 15%); Bloomberg US Credit Index (Min: 0%; Max: 40%); ICE BofA US High Yield Index (Min: 0%; Max 15%); FTSE NAREIT All Equity REITs Index (Min: 0%; Max: 15%); all alternatives categories (Min: 0%; Max 10%). **9.** The blind survey was executed in association with Coalition Greenwich on behalf of Fidelity Digital Assets℠, the Fidelity Center for Applied Technology℠, and Fidelity Consulting and Strategic Insights between January 2, 2022 and June 24, 2022. The survey included 1,052 institutional investors in the U.S. (410), Europe (359) and Asia (283), including financial advisors, family offices, digital and traditional hedge funds, high-net-worth investors, pensions and defined benefit plans, and endowments and foundations. **10.** Fidelity Institutional Wealth Adviser, "Considerations for Including Bitcoin in Investment Portfolios," November 2022.

Index definitions

Bloomberg U.S. Credit Index is a market value-weighted index of investment-grade corporate fixed-rate debt issues with maturities of one year or more. **Bloomberg U.S. Long Treasury Index** measures the performance of U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury with a maturity greater than 10 years. **Bloomberg U.S. Treasury Inflation-Protected Securities (TIPS) Index (Series-L)** is a market value-weighted index that measures the performance of inflation-protected securities issued by the U.S. Treasury. **Cliffwater Direct Lending Index** is an asset-weighted index of over 8,000 directly originated middle market loans totaling $223 billion. The CDLI assists investors to better understand asset class characteristics and to benchmark manager performance. NFI-ODCE Index (NCREIF), short for NCREIF Fund Index Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 38 open end commingled private real estate funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. **ICE BofA U.S. High Yield Index** is a market capitalization-weighted index of U.S. dollar-denominated, below-investment-grade corporate debt publicly issued in the U.S. market. **The FTSE NAREIT All Equity REITs Index** is a free-float-adjusted, market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50% of total assets in qualifying real estate assets other than mortgages secured by real property. **HFRI Macro Total Index:** Investment managers who trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches, and long and short-term holding periods. Although some strategies employ relative value techniques, macro strategies are distinct from relative value strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to equity hedge, in which the fundamental characteristics on the company are the most significant are integral to investment thesis. In order to be considered for inclusion in the HFRI Monthly Indices, a hedge fund manager must submit a complete set of information to the HFR Database. Additionally, all HFRI constituents are required to report in U.S. dollars monthly, net of all fees, performance and assets under management. Constituent funds must have either $50 million assets under management or at least $10 million USD assets under management on the last reported month prior to the index rebalance and have been actively trading for at least 12 months. **HFRI EH Equity Market Neutral Index:** Equity market-neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between select securities for purchase and sale. These can include both factor-based and statistical arbitrage/trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical arbitrage/trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies that may occur as a function of expected mean reversion inherent in security prices; high-frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Equity market-neutral strategies typically maintain characteristic net equity market exposure no greater than 10% long or short. SG CTA Index is designed to track the largest 20 (by AUM) CTAs and be representative of the managed futures space. Managers must be open to new investment and report returns on a daily basis. The CTA Index is equally weighted, and rebalanced and reconstituted annually. NFI-ODCE Index (NCREIF), short for NCREIF Fund Index Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 38 open end commingled private real estate funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. **The MSCI Europe, Australasia, Far East Index (EAFE)** is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in developed markets, excluding the United States and Canada. **MSCI Emerging-Markets (EM) Index** is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in emerging markets. **The Russell 1000 Index** is a market capitalization-weighted index designed to measure the performance of the large cap segment of the U.S. equity market. **The Russell 2000 Index** is a market capitalization-weighted index designed to measure the performance of the small cap segment of the U.S. equity market. It includes approximately 2,000 of the smallest securities in the Russell 3000 Index. **SG CTA Index** is designed to track the largest 20 (by AUM) CTAs and be representative of the managed futures space. Managers must be open to new investment and report returns on a daily basis. The CTA Index is equally weighted, and rebalanced and reconstituted annually. **NFI-ODCE Index (NCREIF)**, short for NCREIF Fund Index Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 38 open end commingled private real estate funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s.

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Investing involves risk, including risk of loss.

Alternative investment strategies may not be suitable for all investors and are not intended to be a complete investment program. Alternatives may be relatively illiquid; it may be difficult to determine the current market value of the asset; and there may be limited historical risk and return data. Costs of purchase and sale may be relatively high. A high degree of investment analysis may be required before investing.

Investing in digital assets, such as bitcoin, is speculative and may involve a high degree of risk. Digital assets can become illiquid at any time and are only for those investors willing to risk losing some or all their investment and who have the experience and ability to evaluate the risks and merits of an investment in bitcoin.

Past performance and dividend rates are historical and do not guarantee future results.

Diversification and asset allocation do not ensure a profit or guarantee against loss.

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