Portfolio Solutions Group | January 2024

Why Now?

Stock markets rallied in 2023 as inflation fell, but macroeconomic uncertainty remains elevated and headwinds for equities are mounting. The past few decades saw strong returns for stock/bond investors, but some of those returns were effectively 'borrowed from the future' in the

"Macroeconomic uncertainty remains elevated, and headwinds for equities are mounting."

form of falling yields and rising valuations. Even after some cheapening in 2022, yield-based expected returns remain much lower than historical realized returns. And regardless of nearterm outcomes for monetary policy, interest rate levels are likely to be substantially higher during the rest of 2020s than the last 10-15 years. Equities and private assets have tended to deliver smaller excess returns when cash rates are higher.

Bonds have been less reliable diversifiers to stocks since inflation risks re-emerged in the 2020s. While they remain useful for some scenarios, ongoing inflation uncertainty may increase the likelihood of the simultaneous stock and bond losses we saw in 2022. Alternatives may have a decisive role to play in the tougher investment environment of the mid- to late-2020s.

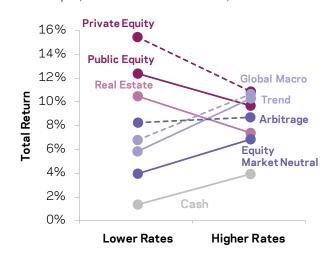
Why Multi-Strategy Alternatives?

Private assets have seen huge demand and inflows in recent years, which is likely to depress their future returns, and they have similar economic exposures as traditional assets, especially in prolonged challenging periods.

Liquid alternatives use financial tools such as shorting and leverage to hedge macroeconomic risks and deliver genuinely diversifying returns. These 'cash-plus' strategies also benefit directly from higher cash rates, as they hold free cash alongside their active positions: historically, they've delivered similar excess returns in higher- and lower-rate environments. The chart contrasts sensitivities of equities and private assets in red and a range of liquid alternatives in purple.

Average Returns in Higher and Lower Rate Environments

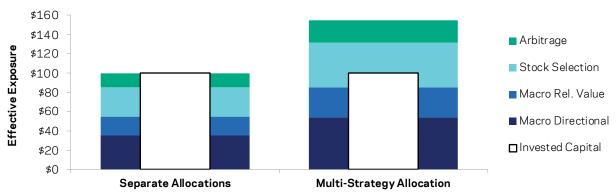
January 1, 1990 - December 31, 2023



Source: GFD, Federal Reserve, Bloomberg, AQR. Public equity is S&P 500; Private Equity is 50% Cambridge PE Index, 50% 1.2*Russell 2000; Real Estate is 50% NCREIF Index, 50% FTSE NAREIT Index; Equity Market Neutral, Trend and Global Macro are respective HFR indices; cash is 3-month T-Bill. For more details see AQR Alternative Thinking 2023 Issue 3.

Multi-strategy hedge funds provide a natural one-stop shop for liquid diversifying returns, with the potential to deliver a smoother ride thanks to their broad internal diversification. While 'pick n mix' hedge fund portfolios are sometimes seen as offering anaemic aggregate returns, a multi-strategy manager can use prudent leverage to monetize internal diversification—delivering greater capital efficiency and higher expected returns.

A Multi-Strategy Allocation is More Capital Efficient Than Separate Allocations



Source: AQR. Assumes 0.2 correlation between each pair of strategies. Multi-strategy portfolio applies leverage to achieve same portfolio risk as standalone components. For illustrative purposes and not representative of any AQR strategy.

Benefits of a Holistic Quantitative Approach

A quantitative or systematic multi-strategy portfolio can be designed to span the full active management opportunity set, exploiting security selection, macro and arbitrage opportunities across thousands of securities (see graphic on the following page). The risk allocated to each component strategy can be dynamically adjusted while ensuring the total portfolio delivers diversification and capital efficiency.

Systematic investment approaches have tended to outperform during periods of macroeconomic uncertainty and higher market volatility, with sub-strategies such as Trend Following having

provided particularly strong returns during large and extended market drawdowns.

"Systematic approaches have tended to outperform during periods of macroeconomic uncertainty."

Some systematic strategies are characterized as alternative risk premia, delivering efficient

exposure to well-documented patterns and sources of return. Others are designed to focus on the many recent innovations in quantitative investing. For example, a systematic multi-strategy portfolio can employ the latest AI and machine learning techniques to enhance stock selection models and expand macro strategies to include new signals across many novel assets that are overlooked by most systematic managers.

Further reading on liquid alternatives is available on agr.com:

- Key Design Choices in Long/Short Equity
- Corporate Arbitrage: Overview and Benefits of a Dynamic Multi-Strategy Approach
- Economic Trend
- Honey, the Fed Shrunk the Equity Premium: Asset Allocation in a Higher-Rate World

Exploring the Active Management Opportunity Set

A quantitative approach to building and combining active investment strategies

Stock Selection

Thesis:

- · Markets are mostly efficient; inefficiencies exist
- Possible to identify companies with attractive or unattractive characteristics

Quant implementation:

- Quant approach can process large data sets
- Global market-neutral portfolio uses machine learning to aggregate signals efficiently

Corporate Arbitrage

Thesis

 Supply/demand imbalances create opportunities for liquidity providers (convertible bonds, mergers, corporate events)

Quant implementation:

- Multi-strategy approach allocates risk to arbitrage sleeves as opportunities arise
- Dynamic hedges to isolate liquidity premia

Source: AQR.

Macro Directional

Thesis:

- Markets underreact to macroeconomic news
- Trends are most profitable in volatile regimes

Quant implementation:

- Quant approach identifies macro catalysts and cross-asset relationships
- Long and short directional views applied to hundreds of markets across asset classes

Macro Relative Value

Thesis

- Macro markets have characteristics associated with relative outperformance
- Episodes of dislocation from fundamentals

Quant implementation:

 Quant approach forms risk-managed relative value portfolios in equity country selection, bond markets, currencies and commodities

Challenges of Multi-Manager Approaches

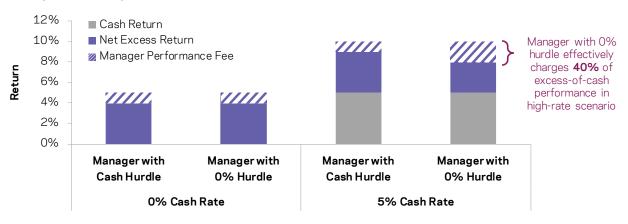
Some liquid alternative strategies suffered in recent years, either due to higher-than-expected correlations to markets, or due to particular strategies experiencing tough times. As a result, many allocators have turned to *multi-manager* approaches for their alternatives exposure, as these are perceived to offer better internal diversification. But they also have at least three distinct disadvantages:

- 1. Unattractive fee structures exacerbated by high cash rates: Many multi-manager funds do not operate performance fee netting, so performance fees may be charged on gains by one component manager despite offsetting losses by another. Also, many charge performance fees without a cash hurdle, and in a higher-rate environment this means investors are paying substantial additional fees even before any excess return is delivered (see chart on the following page). The "pass through" fee model, where operating costs are passed on directly to clients, further raises the bar for managers to generate attractive excess returns after fees and expenses.
- 2. Sub-optimal risk allocation process: Multi-manager funds tend to de-allocate from underperforming managers but often cannot immediately re-allocate risk elsewhere. This internal manager turnover can make it difficult for them to achieve portfolio risk and return targets.

3. Unfavourable liquidity terms: Multi-manager funds often require substantial lock-ups. A truly liquid diversifier is more valuable and versatile than a semi-liquid one.

Other disadvantages include limited available capacity from established multi-manager firms, with new entrants often exhibiting weaker performance.

Money for Old Rope? Watch Out for Performance Fees with No Cash Hurdle



Source: AQR. For illustrative purposes only. Illustration assumes 5% gross excess return, 20% performance fee and 0% management fee for both managers.

2020s Diversification: Balancing a Raft of Different Risks

Prudent investors must balance their portfolios across many different risks, including the risk of a large or prolonged equity bear market, which could coincide with falling or resurgent inflation (i.e., bonds could do well or poorly). They must also consider the substantial liquidity and macro risks embedded in private assets, which have not materialized in recent years.

Multi-strategy liquid alternatives can use financial tools to deliver attractive and diversifying returns in a liquid and capital-efficient package. Of course, these tools come with their own risks – including the risk of deleveraging events or sudden changes in correlations across assets or strategies – and it can be more difficult for investors to be patient with a sophisticated diversifying investment that 'zigs when the market zags'. But these risks can be managed – for example, by managers spreading risk across multiple asset classes and strategies – and these challenges can be overcome, for instance by setting appropriate expectations and implementing a review process that encourages patient investing in diversifiers.

"Many investors have embraced an amalgam of equity risk, credit risk and illiquidity." Many investors have embraced an amalgam of (explicit or implicit) equity risk, credit risk and illiquidity. As long as those risks don't materialize, they will achieve their objectives with or without an allocation to liquid diversifiers. But if (or when) the risks do materialize, multi-strategy alternatives and other liquid diversifiers are likely to provide much-needed respite and wealth preservation.

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The **Cambridge Associates U.S. Private Equity Index** is calculated based on data compiled from approximately 2,000 funds, including fully liquidated partnerships, formed between 1986 and 2022.

The **NCREIF Property Index** measures the performance of real estate investments on a quarterly basis and evaluates the rate of returns in the market. The NPI covers properties that are acquired in place of institutional investors that are exempted from taxes in the fiduciary environment.

The **FTSE Nareit All Equity REITs Index** is a free-float adjusted, market capitalization-weighted index of U.S. equity REITs

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The **HFRI Macro**: Systematic Diversified Index measures the aggregate performance of Investment Managers who employ Systematic Diversified strategies, which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes.

The **HFRI Macro (Total) Index** measures the aggregate performance of Investment Managers which 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.

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