Fourth Quarter 2021

Time to diversify – but into what?

The case for diversifying out of equities, and the role of liquid alternatives

The last 10 years were exceptional for traditional stock/bond portfolios. But with stock market valuations near all-time highs and bond yields near all-time lows, prospective returns look bleak.

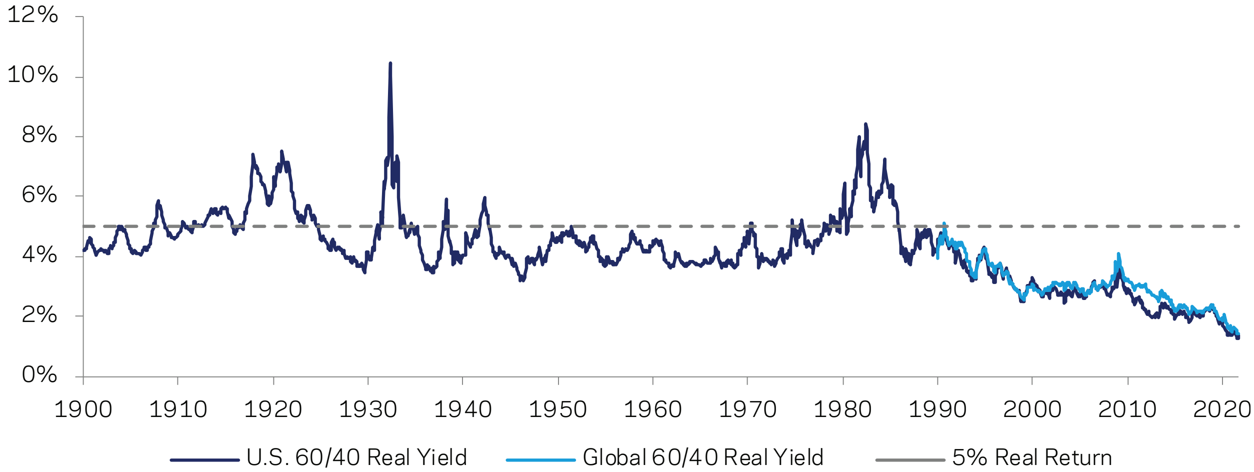
Many investors – though not all – are looking to diversify away from equity risk. We believe this should be viewed as a strategic rather than merely a tactical goal. Market timing is difficult, and expensive markets can keep rising, but better diversification is a worthy strategic aim, and if equity markets are riding high, so much the better.

This begs the question, diversify into what? Many "alternatives" share the same underlying tail risks related to the state of the global economy, including private equity, real estate, credit, and anything with implicit exposure to equity and credit risks. The next market drawdown may not be as fleeting as the crash of March 2020, and the recovery may not be so rapid. *Liquid alternatives* can be powerful diversifiers in unfavorable market environments and may be a valuable addition to the investor's diversification toolkit.

Living on borrowed time (and returns)

A simple yield-based measure of expected real return for a stock/bond portfolio (see **Exhibit 1**) averaged 5% in the 1900s, fell to around 2% over the last 30 years, and dived even further in 2020-21 as bond yields reached new record lows and equity markets regained record highs. Yield declines generated high realized returns but this cannot go on forever. In effect, returns have been borrowed from the future, and eventually low expected returns will materialize for stock/bond investors, whether in a "slow pain" or "fast pain" scenario.

Exhibit 1: Yield-based expected real return of U.S. and global 60/40 stock/bond portfolios
January 1, 1900 – September 30, 2021



Source: AQR, Bloomberg, Robert Shiller Data Library, Ibbotson Associates (Morningstar), Kozicki-Tinsley (2006), Federal Reserve Bank of Philadelphia, Blue Chip Economic Indicators, Consensus Economics. U.S. 60/40 portfolio is 60% U.S. equities, 40% long-dated Treasuries. Global 60/40 is 60% cap-weighted developed equities and 40% GDP-weighted 10-year government bonds. Real equity yield is simple average of two measures: (0.5 * Shiller E/P * 1.075) + 1.5% and Dividend/Price + 1.5%. 1.5% term is assumed long term real earnings per share growth. 0.5 multiplier reflects long-term payout ratio; 1.075 multiplier accounts for EPS growth during 10-year earnings window. Universe of stocks is S&P 500. Real bond yield is yield minus long-term expected inflation.

Do not expect a rerun of the 2010s in the 2020s

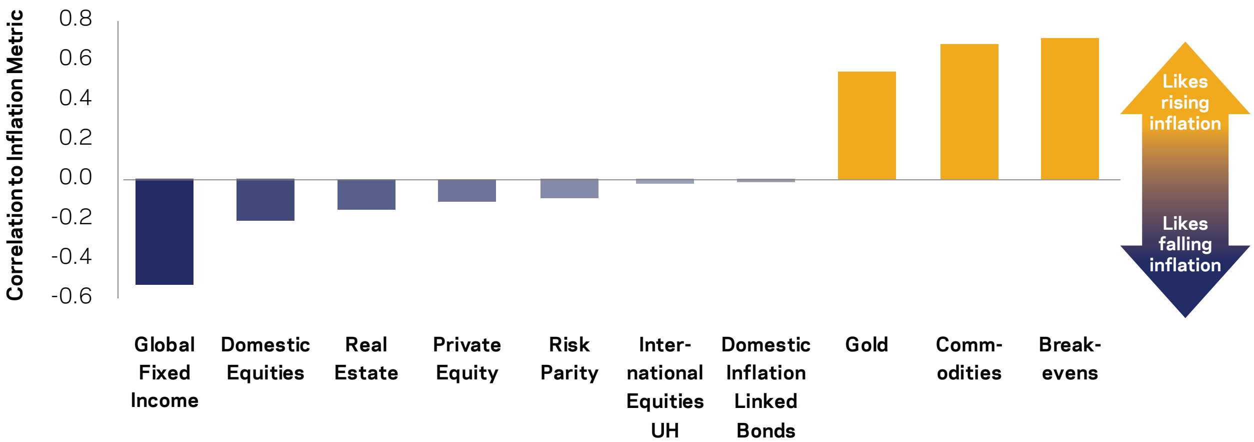
The 2010s were characterized by positive growth and low, stable inflation. Not only did equities and bonds both deliver unusually high excess returns, they were also unusually good diversifiers to each other. This gifted exceptional performance to traditional portfolios, with some 'diversifiers' lagging far behind. But now is not the time to abandon diversification.

Pandemic-related stimulus has been much larger than stimulus after the Financial Crisis, and the financial system is in a very different state, with more stimulus reaching real economies. The medium-term inflation outlook is unclear: a wide range of outcomes are possible, but the chances of another decade of low, stable inflation have fallen. Rising inflation would present a headwind for both equities and bonds (first two bars in **Exhibit 2** below), and may also reduce the diversification benefits between them.

Elevated inflation risk provides additional motivation for diversification. Inflation-linked bonds have the ability to hedge inflation-linked liabilities but negative real yields make them difficult to hold. Real estate is another popular option, but historical analysis shows that while it may offer a little more resilience than equities or bonds, it too has tended to underperform when inflation rises (in the chart we show U.S. data but patterns are similar elsewhere). Among long-only assets, only commodities like rising inflation. Most portfolios have a downside inflation bias, which helped in the 2010s but may prove to be an Achilles heel.

Exhibit 2: Historical sensitivities of major asset classes to U.S. inflation

January 1, 1972 – June 30, 2021

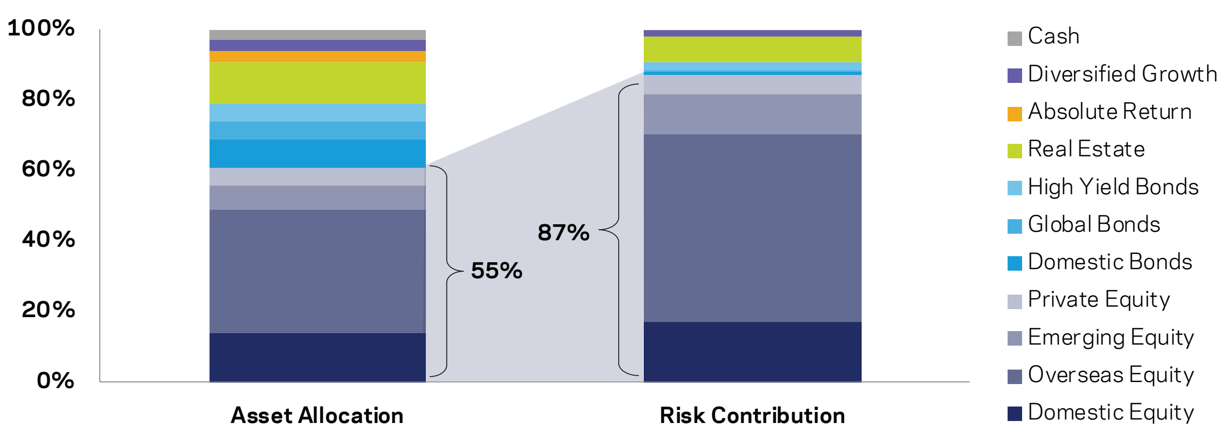


Source: AQR, Bloomberg, Survey of Professional Forecasters, U.S. Bureau of Labor Statistics. Inflation sensitivity metric is contemporaneous partial correlation to a composite metric of inflation changes and surprises, controlling for growth exposure. Domestic equities represented by MSCI USA, global fixed income by Bloomberg Barclays Global Aggregate, private equity by a simple average of Cambridge U.S. Buyout index and 1.2x levered Russell 2000, real estate by a simple average of FSTE Nareit All REITS and NCREIF Property indices, international equities by MSCI World ex US unhedged, risk parity by a hypothetical strategy that takes a risk-balanced allocation across equities, bonds and commodities, inflation-linked bonds by 10-year U.S. TIPS, gold and commodities by GSCI indices, and breakevens by a hypothetical strategy that is long 10-year U.S. TIPS, short 10-year U.S. Treasuries. Before March 1997, TIPS and breakevens are based on synthetic real yield series built by subtracting survey-based inflation expectations from nominal Treasury yields.

How much equity risk do you have?

A typical return-seeking portfolio tends to be dominated by equity risk. In **Exhibit 3**, we take a sample asset allocation and translate it into risk exposures. Since equities tend to be more volatile than bonds and other asset classes, a 55% capital allocation to equities accounts for 87% of the risk in the portfolio. Notably, private equity only adds to the already dominant risk in the portfolio.

Exhibit 3: Even apparently diversified portfolios may be dominated by equity risk



Source: AQR. Capital allocation of typical risk-seeking portfolio. Risk contribution based on volatilities and correlations of proxy indices. Equities are represented by MSCI indices, private equity by a simple average of Cambridge U.S. Buyout index and 1.2 x Russell 2000; bonds by Bloomberg Barclays U.S. Aggregate, Global Aggregate and U.S. High Yield indices, real estate by a simple average of FSTE Nareit All REITS and NCREIF Property indices, absolute return by a simple hypothetical multi-asset multi-style portfolio, diversified growth by a simple hypothetical risk parity strategy and cash by 3-month T-Bills.

The equity market crash of March 2020 was very short-lived thanks to central bank action, but not all bear markets are limited to a 20% drop, and not all are short-lived. There were three drawdowns exceeding 40% in the last half century, and worse in the half century before that.

What can investors do?

One response to low expected returns is to **take even more equity risk**. This may be justifiable for investors with high return objectives, constraints on leverage and exceptionally high tolerance for losses, but they should be wary of high valuations and inflation risks.

Another option is to employ option-based **tail protection strategies** to help insure against a large fall in equity markets. But such strategies tend to be costly to hold for long periods, and while they offer good protection against short, sharp crashes, they are not guaranteed to help in the case of sustained losses (see for example McQuinn et al. (2021)).

Perhaps the most popular response is to **raise allocations to illiquid private assets**. Many investors believe these offer attractive returns due to both alpha potential and illiquidity premia, as well as a degree of diversification. Recent analysis (see Ilmanen et al. (2020)) suggests all three of these benefits may be overstated.

While private assets may help to smooth short-term fluctuations in portfolio performance by avoiding mark-to-market losses, private equity is still equity, and private credit is still credit. They do not provide exposure to fundamentally different risks like, say, the rates risk in investment grade bonds. Private assets often have large economic exposures that tend to materialize in prolonged bear markets ("slow beta"). And their ability to smooth returns makes them popular, probably offsetting any illiquidity premium.

That said, private assets surely deserve a place in many long-term investors' portfolios. They provide embedded leverage, and may allow investors to maintain higher exposure to equity and credit premia than would be possible in volatile public markets. But as diversifiers, they leave a gap to be filled.

The role of liquid alternatives

Liquid alternatives are active strategies designed to deliver positive long-term returns without concentrated passive market exposure. They may seek exposure to well-documented premia such as value, momentum and quality, sometimes combining these with proprietary signals and portfolio construction techniques. They often pursue strategies across several asset classes, using financial tools such as leverage, shorting and derivatives to target and manage risk. Examples include multi-asset style premia strategies, risk parity, managed futures, long/short equity and corporate arbitrage strategies.

Exhibit 4: What do we mean by liquid alternatives?

Risk Parity	Long/Short Equity	Trend and Macro Strategies	Corporate Arbitrage Strategies	Multi-Asset Alternative Risk Premia
Seek risk-balanced exposures across market risk premia • Better macro-economic diversification than traditional portfolios • Includes inflation-sensitive assets, e.g., commodities	Seek to take advantage of market inefficiencies that cause specific stocks to be mispriced • Target equity-like returns with substantially lower beta and milder macro exposures • ESG features, e.g., net zero	Seek to profit from dislocations in global equity, bond, currency and commodity markets Have tended to: • Perform well during sustained market drawdowns • Thrive on macro-economic volatility	Seek to capture relative mispricing or risk premia associated with two related assets • Merger Arbitrage • Event Driven • Convertible Arbitrage	Seek to harvest well-documented premia across several asset classes • Value, momentum, carry, defensive themes • Seek near-zero beta

Source: AQR. For illustrative purposes only. Diversification does not eliminate the risk of experiencing investment losses. Please read important disclosures in the Appendix.

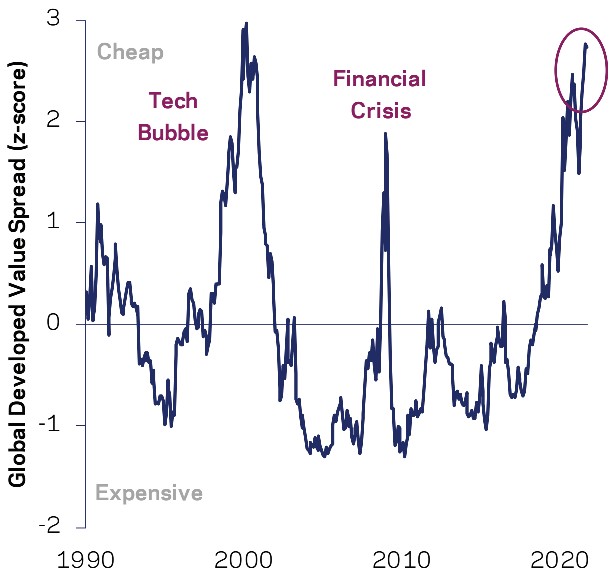
While some liquid alternatives have performed strongly, others have disappointed investors in recent years. Equity value strategies suffered from 2018 to 2020 as growth stocks outperformed, and managed futures underwhelmed in the 2010s (after delivering strong returns during the Financial Crisis) as central banks curtailed market trends.

But the case for such strategies is based on many decades of empirical evidence, and economic intuition that remains valid.

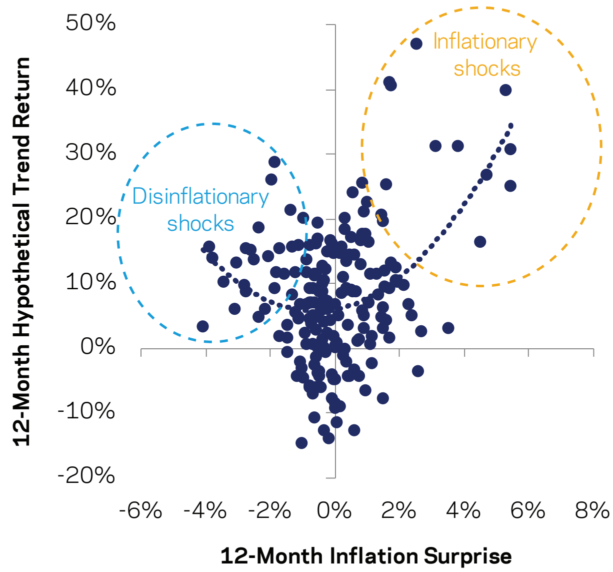
And because they take both long and short positions, many liquid alternatives can both hedge macroeconomic exposures (like inflation risk), and mitigate the pervasive impact of low yields on expected returns. Indeed, some strategies, such as equity value, are looking particularly attractive in late 2021 (see **Exhibit 5a**). Others, such as managed futures or trend following, may thrive if the next decade sees greater macroeconomic turmoil than the last (**Exhibit 5b**).

Exhibit 5: Cometh the hour? Liquid alternatives offer bright spots in a gloomy market landscape

A. Value spread for hypothetical value portfolio: extreme spreads have historically preceded strong value performance



B. Hypothetical trend following vs. inflation surprises: trend has tended to thrive on macroeconomic volatility



Source: AQR. Chart A: Period January 1990 to September 2021. Hypothetical value composite includes four value measures: book-to-price, earnings-to-price, forecast earnings-to-price, and sales-to-enterprise value; spreads are measured based on ratios. Spreads are constructed to be industry-neutral by comparing the value measures within each industry, then aggregating to represent an entire portfolio. Chart B: Period January 1972 to June 2021. Hypothetical trend following strategy as described in *A Century of Evidence on Trend Following* (Hurst, Ooi and Pedersen, 2017), net of transaction costs and 2 & 20 fees. Inflation surprise is realization minus forecast from Fed Survey of Professional Forecasters. Quarterly data. Hypothetical data has inherent limitations, some of which are disclosed in the Appendix.

The role of liquid alternatives in achieving sustainability and climate goals

As asset owners look to transition their portfolios to lower their carbon footprint and reflect ESG goals, they are increasingly looking beyond their equity portfolios. Liquid alternatives offer unique possibilities for addressing ESG objectives.

Firstly, long/short equity and risk premia strategies allow investors to more fully express negative investment views on companies with poor ESG characteristics. While a long-only portfolio is restricted to divesting from such companies, going short achieves greater impact (raising the company's cost of capital) as well as improving risk and return characteristics.

Secondly, liquid alternatives may have an important role to play in reaching net zero emissions targets. Traditional portfolios rely on screening or tilting away from heavy carbon emitters, but this can only be taken so far without impairing diversification and incurring substantial tracking error to benchmarks. Long-short strategies, however, can be constructed to target net zero or even a negative carbon footprint, by netting the carbon exposure of shorts in heavy emitters. Moreover, they allow for a larger carbon budget on the long side, so investors can retain positions in more companies where engagement is preferable to divestment.

A diversified approach to diversifying

Some investors with a 'rearview mirror' perspective took the wrong lessons from the exceptionally benign last decade. Equity and bond market valuations will make it very difficult for such strong performance to be repeated in the 2020s, reinforcing the case for diversifiers.

For investors looking to diversify, private assets have some role to play. But an allocation to liquid alternatives is also worthy of consideration, as they provide exposure to complementary and fundamentally different sources of return. Investors must balance the desire to reduce market risk against the risk of failing to meet long term return objectives. For many potential investments, lower equity beta means lower expected return. Well-crafted liquid alternative strategies have the potential to be powerful diversifiers in less favorable market environments, while also maintaining attractive long-term expected returns.

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