



What to do about Fixed Income? Fresh Perspective

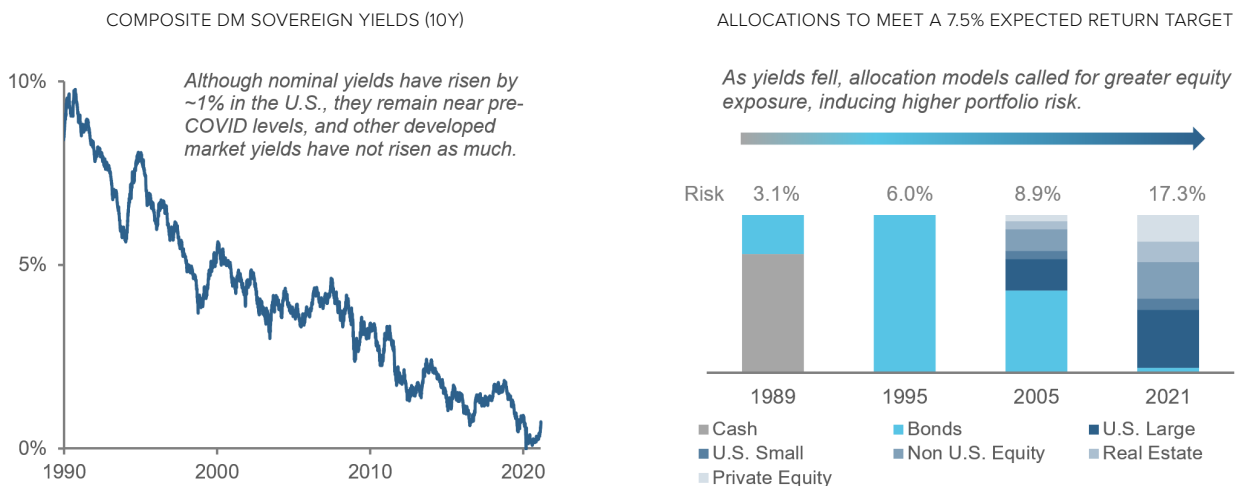
MARCH 2021

- In reassessing prospects for sovereign bond allocations, we show why the outlook remains bleak with respect to return generation and why the equity-risk offset that many investors have come to rely on may degrade.
- We present a clarifying framework for evaluating fixed income replacement strategies and allocations, including direct hedging, hedge funds, and gold.
- We outline desirable characteristics of candidate replacements, starting with clear objectives with respect to return generation and equity risk reduction.

Over the past four decades, the long-term sovereign bonds that typically dominate asset owners' fixed income allocations have delivered outstanding returns. Moreover, since 2000, they have also been exemplary risk-reducing assets. Nevertheless, as the secular bull market in bonds progressed and yields fell, expectations of future returns diminished, and investors felt increasing pressure to find alternatives to those allocations. To meet stubbornly high nominal portfolio return expectations, conventional asset allocation models responded by progressively increasing equity holdings, both public and private. This has come at the cost, however, of higher overall risk and greater vulnerability to equity market shocks. (Figure 1)

In this note, we reconsider alternatives to fixed income allocations in the current market context. We first disentangle the primary benefits that bonds have offered historically—risk reduction and return generation—and we consider the outlook for each going forward. We then consider the two major approaches that investors have sought to meet those objectives, hedging equity exposure and reallocating to uncorrelated positive return streams, and why such approaches have often met with disappointment. We then outline hallmarks of investing approaches that we believe investors should seek in reallocating from fixed income.

Figure 1: Global Bond Yields and Their Impact on Asset Allocation Models



Left chart: GDP-weighted, 10-year sovereign bond yields. Source: Acadian Asset Management LLC. Right chart source: Callan Associates "Capital Markets Assumptions" from 2019, 2020, and 2021. For illustrative purposes only.

The Evolving Role of Fixed Income Allocations

Over the past two decades, the primary role of fixed income allocations has evolved from that of a return source with modest risk reduction benefits to an offset for equity risk with a much more attractive return profile than explicit hedging strategies. Although bonds' income has diminished, their price appreciation has softened the impact of declining yields.

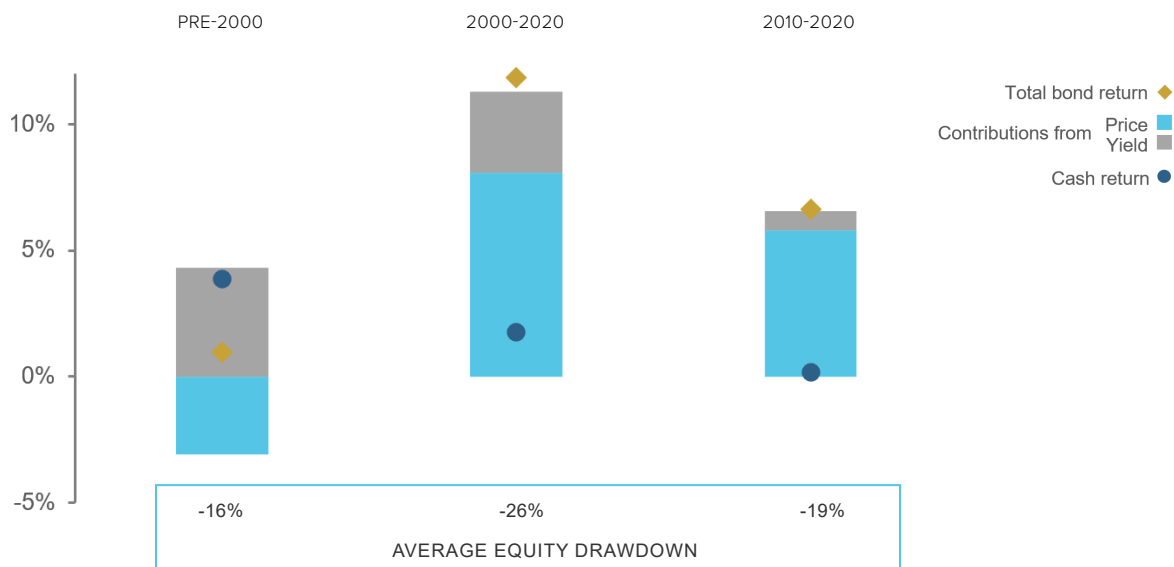
Figure 2 illustrates the changing mix of bond return drivers. For decades prior to the 2000s, bond price movements did not provide much of a hedge during severe equity market drawdowns.¹ High bond yields counterbalanced that lack of protection, however. In contrast, over the last two decades, bond price appreciation has offered a more material hedge against equity losses, while the yield benefit has declined to currently low levels, de minimis or even negative in some markets.

Looking ahead, the price-based diversification benefits that bonds have provided since 2000 may also diminish. Figure 3 shows that we should not take strong

negative stock-bond price correlation for granted. In fact, prior to the 2000s, it was positive for close to three decades. Moreover, recently, bonds and cap-weighted equity indexes have sold off together amid concerns about re-emergent inflation and diminished prospects for large, expensive technology stocks that benefited from COVID business conditions.²

If significant inflation does not materialize and long-term yields remain historically low, however, then Japan offers a glimpse as to what may lie ahead. Japan's experience suggests that continued global central bank policy measures to support growth could dampen the value of fixed income allocations as an offset to equity drawdowns. Figure 4 shows the trajectory and drivers of long-term Japanese bond returns. The early history resembles the more recent U.S. experience. Through the mid-1990s, JGBs produced healthy yields but little price offset to equity drawdowns. During the "lost decade" and into the 2000s, however, income largely disappeared as yields steadily fell, but bonds provided a hedge against equity drawdowns through negative price correlation.

Figure 2: U.S. Bonds — Returns Decomposition



Average total USD returns to equities, 10Y U.S. Treasury bonds, and cash (3M U.S. Treasury bills) computed during peak-to-trough equity drawdowns exceeding 10%. Price Contribution reflects duration. Yield Contribution reflects coupon and rolldown. Total Bond Return = Price contribution + Yield contribution = Duration contribution + Coupon + Rolldown contribution. Sources: Acadian Asset Management LLC and equity data from MSCI. MSCI data copyright MSCI 2021. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI. For illustrative purposes only.

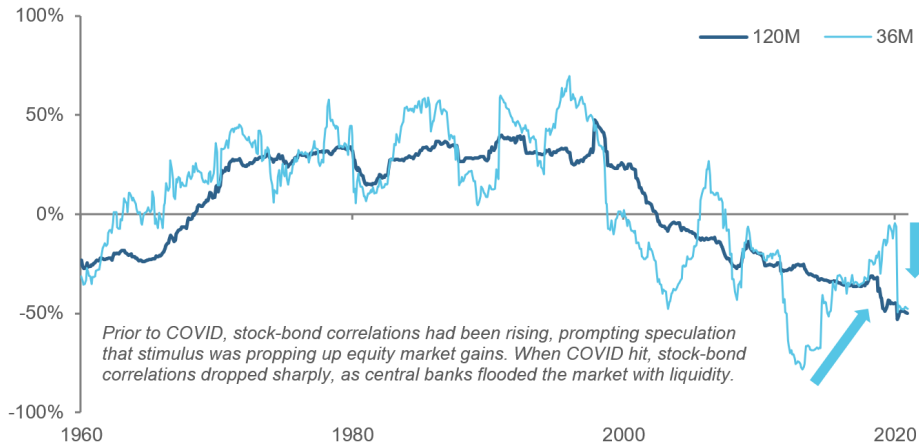
¹ Furthermore, the chart shows that prior to 2000 cash provided better protection against equity drawdowns than bonds.

² Positive stock-bond co-movements spurred by inflationary expectations were more common pre-2000s under counter-cyclical inflationary conditions. Please see Campbell JY, Pflueger C, Viceira LM. Macroeconomic Drivers of Bond and Equity Risks. Journal of Political Economy. 2020;128 (August) :3148-3185.

Over the next 10 years, however, as the BOJ imposed even more aggressive policy measures and yields reached zero, bond prices stopped providing an equity offset. In fact, much of the downside protection that JGBs provided to global investors over the last 10 years resulted from safe-haven effects involving the yen rather

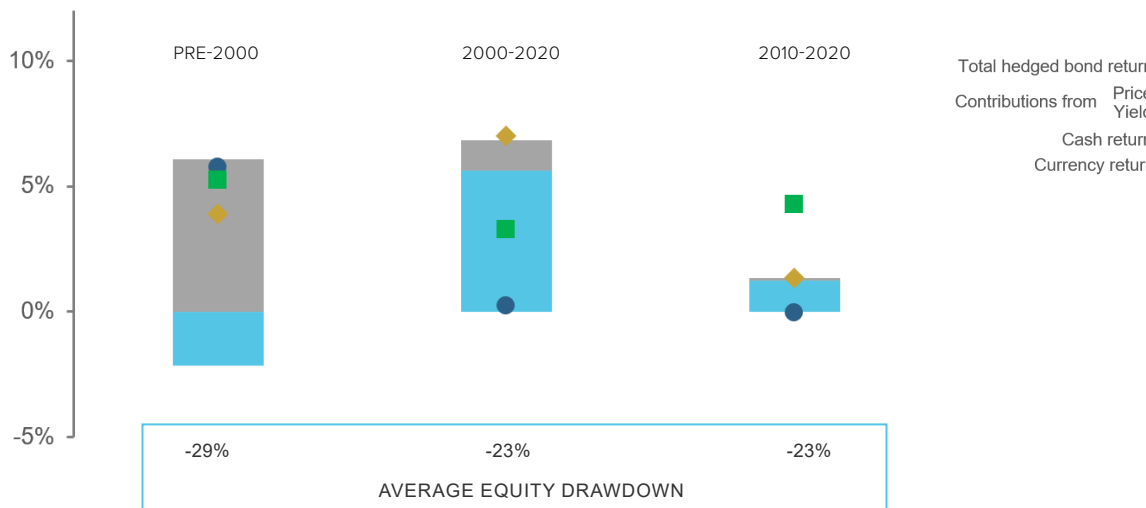
than the intrinsic behavior of the bonds themselves. The Japanese experience suggests that if global long-term yields were to remain very low, the implicit equity hedge that investors have come to rely on from fixed income in times of stress might be materially attenuated.

Figure 3: U.S. Stock-Bond Correlations

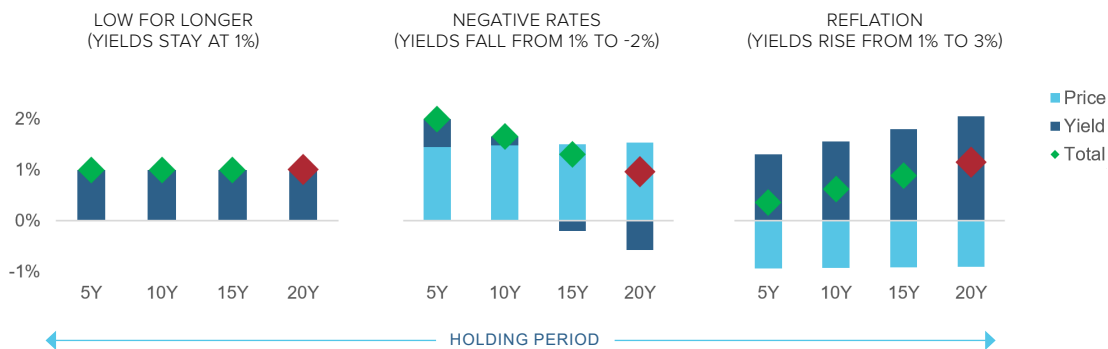


Rolling correlations between S&P Composite Index total returns and U.S. 10-year Treasury bond total returns. Sources: Acadian Asset Management LLC based on data made publicly by Robert Shiller, Yale School of Management. Index source: S&P Copyright (c) 2021, Standard & Poor's Financial Services LLC. All rights reserved. For illustrative purposes only.

Figure 4: Japanese Bonds — Returns Decomposition



Average total USD returns to hedged equities, hedged 10Y Japanese government bonds, cash (3M), and yen/USD forwards computed during peak-to-trough equity drawdowns exceeding 10%. Price Contribution reflects duration. Yield Contribution reflects coupon and rolldown. Total Bond Return = Total hedged bond return + Currency return = Price contribution + Yield contribution + Currency return = Duration contribution + Coupon + Rolldown contribution + Currency return. Sources: Acadian Asset Management LLC and equity data from MSCI. MSCI data copyright MSCI 2021. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI. For illustrative purposes only.

Figure 5: Three Scenarios for Global Sovereign Bond Yields

Annualized returns to constant 10-year duration investments based on different interest rate trajectories starting from the same initial yield of 1%. Source: Acadian Asset Management LLC. The chart represents an educational exhibit and does not reflect the returns of an investible strategy. For illustrative purposes only.

Not only are there potential challenges to fixed income's value as an equity offset, but its total return outlook is also limited given where yields are today.³ To see why, consider three scenarios for investments in 10-year sovereign bonds: a) low for longer — 10-year global yields remain steady at 1%; b) negative rates — yields fall from 1% to -2%; and c) reflation — yields rise from 1% to 3%. Figure 5 shows that in all three cases, annualized returns over a 20-year horizon would be roughly 1%. That's because initial capital gains or losses would be largely offset, given the duration and holding period assumptions, by diminished or improved reinvestment opportunities.

Of course, current bond holders' response to changing yields would affect outcomes. If inflationary fears are realized, bond holders who absorb capital losses might give up on their allocations before they can enjoy the benefit of reinvesting into higher yields.⁴ On the other hand, if yields fall further, angst over what to do with fixed income allocations would likely grow. For fixed income holders, therefore, the outlook seems uncomfortable across a variety of scenarios.

Conventional Fixed Income Alternatives

The secular decline in expected sovereign bond returns has for years pushed conventional asset allocation models into higher equity exposures, as we documented in Figure 1. But the accompanying increase in risk prompted asset owners to search for approaches that would preserve the higher expected portfolio returns while reducing vulnerability to equity market drawdowns. The responses fall into two broad categories:

1. **Hedges**, in other words, investments that reduce portfolio drawdown risk to the point where the higher equity exposure is tolerable. Hedges entail a cost, in terms of either up-front premium paid or drag on expected returns.
2. **"Uncorrelated"** investments that provide positive expected returns but reduce overall portfolio volatility and, specifically, have limited exposure to market stress. Demand for such return streams contributed to the growth of hedge funds, private markets, real estate, and other alternative investments.

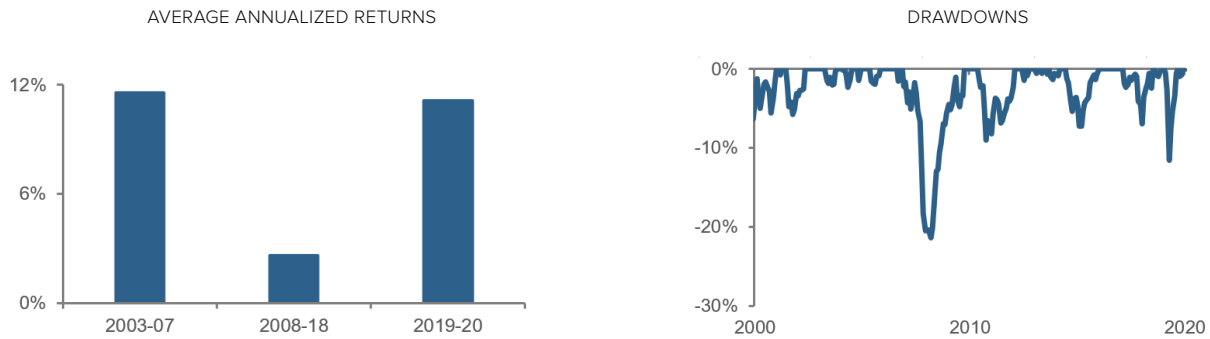
For many asset owners, however, finding satisfying alternatives to fixed income allocations has been a challenge for three reasons. First, direct hedging tends to be costly, particularly on a systematic basis. For example, over the past 10 years, the median cost of three months of put protection against S&P 500 declines in excess of 10% has been on the order of 0.95% of the underlying portfolio's value. As a result of the high cost of reducing deep downside exposure, even risk-averse investors often forgo hedging entirely or eventually throw in the towel.⁵

There are methods to reduce the up-front cost of hedging. Relatively simple and transparent approaches include limiting the extent of the downside protection (put spreads) and sacrificing upside exposure (collars). But investors often find that the alternative structures create unpalatable performance profiles or mark-to-market behavior. More sophisticated hedging approaches, which include active volatility trading, market timing via options, or taking a view on the specific trigger or nature of a selloff, tend to be opaque and limited in capacity.

³ Starting yields largely drive expectations to duration-targeted approaches that are widely used to manage active and passive institutional bond portfolios. See Martin L. Leibowitz, Anthony Bova & Stanley Kogelman (2014) Long-Term Bond Returns under Duration Targeting, Financial Analysts Journal, 70:1, 31-51, DOI: 10.2469/faj.v70.n1.5.

⁴ A more extreme version covers inflationary shocks that can result in greater capital losses, e.g., between 1965-80 investors in long-term U.S. bonds lost close to 30% in inflation-adjusted terms.

⁵ Although the drop in rates has, by some measures, reduced the opportunity cost of hedging, it still remains material. Further, depending on how the put protection is specified, falling interest rates may increase the up-front cost, because option prices depend on the underlying's forward price. Please contact us to discuss further.

Figure 6: HFR Fund Weighted Composite Index

Sources: Acadian Asset Management LLC, based on data from Hedge Fund Research, Inc. www.hedgefundresearch.com. The HFR Indices are being used under license from Hedge Fund Research, Inc., which does not approve of or endorse any of the products or the contents discussed in these materials. All Rights Reserved. For illustrative purposes only. It is not possible to invest directly in an index. Every investment program has the opportunity for losses as well as profits. Past results are not indicative of future results.

A second issue in finding fixed income alternatives is that many diversifying return streams have been more exposed to equity beta and other conventional exposures than many investors have realized. Over the past several months, there has been resurgent interest in hedge funds as a fixed income alternative, owing to a recent rebound in their performance relative to the prior decade. (Figure 6, left panel) But as we've discussed extensively in prior research, many styles of hedge funds, and their liquid cousins, alternative risk premia strategies (ARPs), exhibit both material exposure to basic forms of equity and bond risk as well as "short-put-like" vulnerability to equity crashes.⁶ As a case in point, hedge funds, in aggregate, did not perform well during the Q1 2020 market crisis. (Figure 6, right panel)

Underrecognized exposure of private equity (PE) and real estate to equity market drawdown risk represents another facet of the same problem. Smoothing and other forms of discretionary accounting have left reported PE return streams largely unscathed by recent equity downturns, even through the unprecedented turmoil of the March 2020 crisis.⁷

While market valuations of publicly listed PE firms have shown substantial damage during such episodes, suggesting substantial (if only brief) losses in PE portfolios, many asset owners believe that *their* private investments have differentiated characteristics or are idiosyncratic enough that they weren't so impaired. A prolonged drawdown in public equity markets, however, would reveal the true economic exposure of PE as a leveraged equity investment.

A third issue is that some alternatives to fixed income allocations present muddled (and sometimes even controversial) return-generating and risk-reduction characteristics. Gold offers a timely example, having gained the attention of investors who are concerned about rising inflation. We are skeptical that there is a long-term real return to holding gold, however. Empirically, in the post-Bretton Woods era, gold has outperformed cash by only 0.1% per annum. (Figure 7)

⁶ See "[Re-examining Diversification: 20/20 Perspective](#)," Acadian, June 2020.

⁷ Evidence suggests that over the long-term, aggregate private equity (buyout) returns – before fees -- can be largely replicated at lower cost by a levered small-cap value portfolio. PE's reported risk characteristics can be recovered by applying accounting smoothing and discretion. See "[Re-examining Diversification: 20/20 Perspective](#)," Acadian, June 2020 and Erik Stafford, "Replicating Private Equity with Value Investing, Homemade Leverage, and Hold-to-Maturity Accounting," Working Paper, December 2015.

Moreover, despite widespread perception of gold as a safe-haven asset, its relationship to equity risk is complicated. Because gold is a zero yielding asset—limited productive value, generates no earnings or income, roughly costless to store—its price responds to changes in real interest rates, which reflect the relative attractiveness of alternative investments. The left panel in Figure 8 shows why this matters: because gold has suffered losses during equity selloffs that have been accompanied by rising real yields. The initial stages of the March 2020 market crisis offer a recent example. Inflation expectations collapsed faster than the Fed cut rates. That

caused real yields to spike, and gold prices plummeted 12.5% even as equities sold off 12.3%.⁸

Not only are gold's returns dependent on real interest rates, its reliability as an equity offset is also conditional on the behavior of the U.S. dollar, because gold is a dollar-denominated commodity. (Figure 8, right panel) These complexities do not imply that gold cannot function as a useful diversifier, however. Instead, gold's role in the portfolio should be informed by its covariation with nominal rates, inflation, and the dollar, as opposed to an instinctive reliance on the metal as an all-weather or precision hedge.

Figure 7: Post-Bretton Woods Returns to Gold versus Cash and Inflation

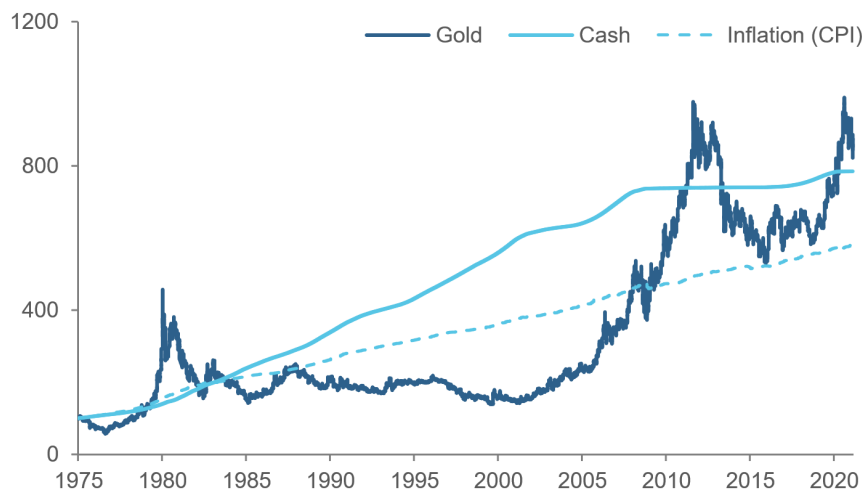
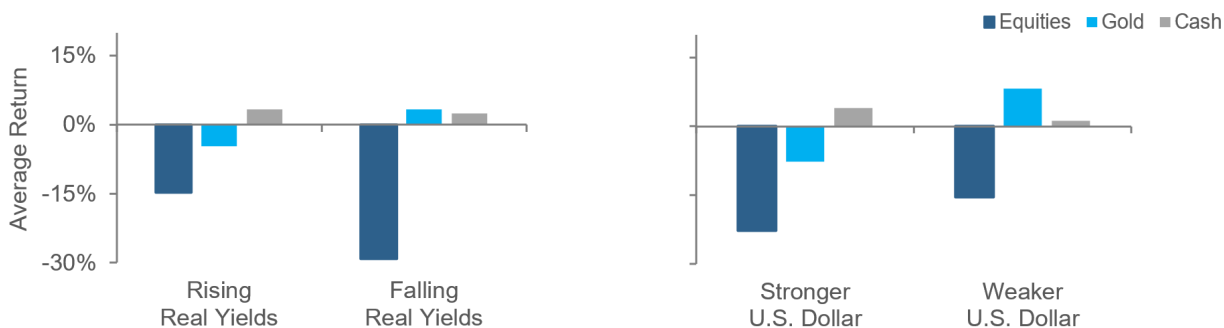


Chart shows cumulative returns to gold futures, cash (3m Treasury bill returns), and CPI-based inflation. Source: Acadian Asset Management LLC. The chart represents an educational exhibit and does not reflect the returns of an investible strategy. Hypothetical results are not indicative of actual future results. Every investment program has the opportunity for loss as well as profit. For illustrative purposes only.

Figure 8: Gold – Conditionally Defensive



Charts show average total USD return to equities, excess return to gold futures, and return on cash (3m Treasury bill) during peak-to-trough equity drawdowns exceeding 10% conditional on the behavior of real interest rates and the U.S. dollar during the periods in question. Sources: Acadian Asset Management and MSCI (equities). MSCI data copyright MSCI 2021. All Rights Reserved. PROPRIETARY TO MSCI. The chart represents an educational exhibit and does not reflect the returns of an investible strategy. Hypothetical results are not indicative of actual future results. Every investment program has the opportunity for loss as well as profit. For illustrative purposes only.

⁸ See “Gold in Crisis,” Acadian, April 2020.

Rethinking Fixed Income Replacements

A prerequisite for finding an appropriate fixed income replacement is clarity regarding the original allocation's intended role in the portfolio. Investors can then seek strategies that map deliberately and precisely to risk reduction and return generation requirements as well as to priorities with respect to liquidity, capacity, and transparency.

We can provide a sense for how allocators should look for durable alternatives via the example of our systematic multi-asset absolute-return oriented process. The baseline intent of our strategy is to provide consistently positive returns with little directional asset class exposure, i.e., an “uncorrelated” investment as opposed to a hedge. To achieve that performance profile, we exploit diverse sources of alpha (i.e., mispricings) as opposed to harvesting a few broad risk premia across a wide range of assets globally—equities, bonds, volatility, currencies, and commodities. This requires building forecasting models for each distinct asset, including families of signals unique to individual commodities, like gold, so that we can fully capture the richness and dynamics of particular markets.

To precisely manage portfolio risk characteristics, we exploit the precision and flexibility of systematic portfolio construction. To create a return stream that is independent of equity drawdown risk and other material directional asset class exposures, we construct a highly diversified long-short multi-asset portfolio based on a formation process that is 1) informed by asset-level risk relationships both within and across asset classes

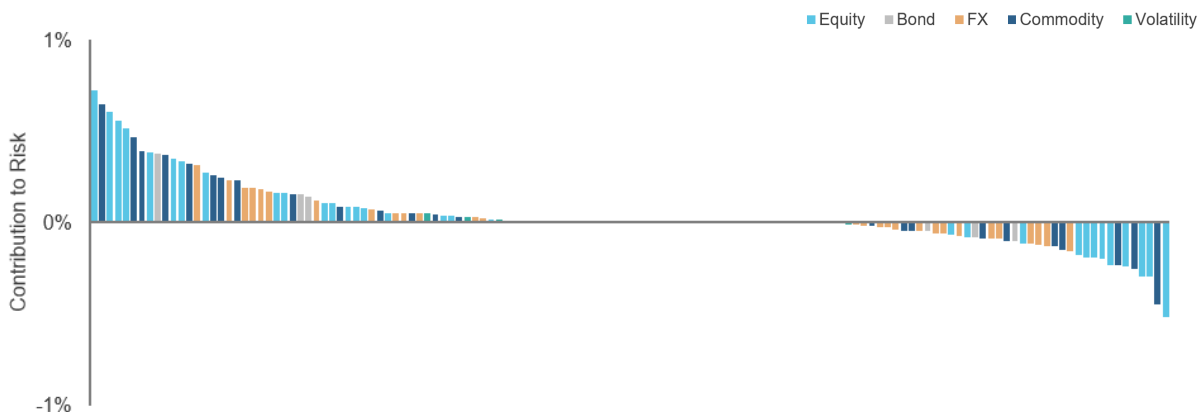
—to neutralize both direct and indirect asset class exposures; 2) dynamic—reflecting changing risk conditions; and 3) tail-focused—to identify and control non-linear risk exposures.

Figure 9 illustrates the breadth of the resulting positions as well as their modest and balanced contributions (positive and negative) to portfolio risk. We achieve liquidity by trading, principally, highly liquid listed futures, forwards and options while limiting position sizes based on stressed market conditions.

The approach has limitations, however, one being capacity: alpha is limited. For large asset owners, therefore, an approach like that described above can only serve as a partial solution, a “first stop” in replacing a material fixed income allocation. Principles underlying the investing approach, however, can inform evaluation of other strategies and allocation methods.

A second issue is complexity. A sophisticated investment process is, on the surface, harder to understand than a single asset, such as gold. But investors should not confuse complexity of the process that creates an investment with complexity of the return stream that it produces. Gold, while trivial to comprehend, has quite complex behavior. A well-designed and sophisticated investment process can produce a return stream that has much clearer and more reliable risk exposures. The failures of many alternative strategies to deliver return streams with claimed characteristics, however, speak to the value of transparency from managers in portfolio formation and ongoing monitoring of both process and portfolio behavior by investors.

Figure 9: Contributions to Risk from Individual Asset Positions — An Acadian Multi-Asset Absolute Returns Portfolio



Source: Acadian Asset Management LLC. Illustrative example of diversified risk exposure in the MAARS strategy.

Conclusion

The long-term decline of global interest rates has had an enormous impact on the investing landscape. It has provided fixed income investors both a tailwind to portfolio returns and an effective hedge to equity risk. It has also reshaped investors' perceptions of the role that fixed income should play in portfolios. Looking ahead, given anemic sovereign yields, investors remain hard-pressed to find effective counterbalances to increasingly equity risk-centric holdings.

In considering what to do with their fixed income allocations, investors should be clear as to the economic functions that bonds have been serving in

their portfolios. And in searching for alternatives, they should be sober about the challenge. The past 25 years are littered with examples of allocation methods and investment strategies that have failed to deliver on promises of diversification or stable return streams, often due to overlooked risk exposures. Investors should eschew complexity that obfuscates the economic drivers underlying performance, but they should also embrace process sophistication that produces alpha and minimizes unnecessary risks.

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