



Unchain Your Yield

A Multi-Asset Approach to Income, Stability and Growth



IN THIS PAPER: In today's slow-growth and low-interest-rate environment, investors should look beyond a conventional equity and fixed-income solution to meet their income needs. Breaking traditional constraints requires maintaining an open mind to all income sources while keeping a clear eye on risk management.

Better Paths to Higher Income



Even in unsteady markets and amid persistently low interest rates, income investors can chart a course to steady sources of yield and capital appreciation. To do so, they need to think beyond simple asset-class definitions and to frame the investing effort in terms of the characteristics of income assets: yield, stability and growth. Each asset type must be scrutinized not only for expected return and yield, but also along multiple dimensions of risk. These dimensions include maximum drawdowns and sensitivity to macroeconomic factors such as changes in interest rates, commodity prices, broad equity market moves or sector-specific shocks.

Many higher-income assets, such as equities, bonds and hybrid securities, offer higher risk-adjusted returns than comparable investments with lower yields, often without disproportionate increases in volatility. But these higher-yielding assets are vulnerable to significant drawdown risks. Our research shows that an integrated multi-asset income strategy can address these asset class—specific risks while protecting against the shortcomings of bolted-together solutions. We believe this approach can help investors enjoy a better balance of income, stability and growth than more concentrated single-asset income strategies can.

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A Multi-Asset Approach to Income, Stability and Growth

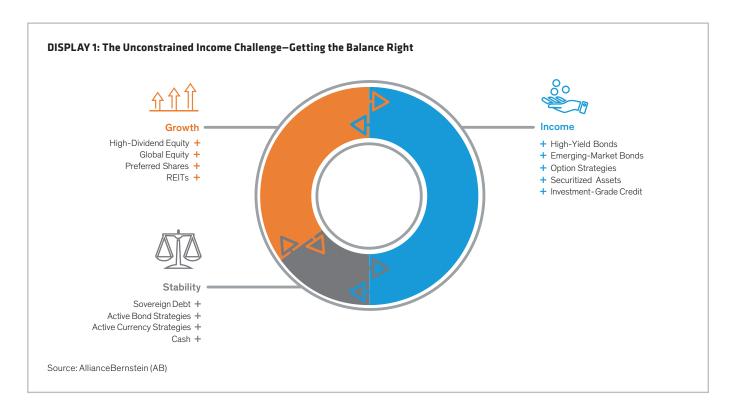
Whether it's to provide extra cash for retirement spending or as a long-term strategy to build and preserve wealth, income investors aspire to generate steady, robust annual payouts while preserving capital. This sets up a multipronged challenge: how to maintain a three-way balance between yield, stability and capital growth (*Display 1*). Emphasizing any one element in this investment triumvirate can threaten the balance of the other components of the equation.

These days, that quandary has become even more acute and vexing. Heightened market volatility, historically low interest rates and late-cycle risks after an extraordinarily long period of economic expansion have raised the stakes for income-hunting investors. Leaning into high-yield assets might enhance return potential, but could also undermine a portfolio's stability. On the other hand, those who play it too safe will have to settle for more modest returns and lower yield.

In this paper, we examine how to carefully diversify higher-yielding assets and dynamically manage an array of hazards to help income investors capture yield while minimizing drawdown risk. The key, in our view, is to unchain a portfolio from traditional constraints by sourcing higher-yielding securities across asset classes and around the world.

Creating a Risk-Aware Income Strategy

Many higher-income assets offer higher risk-adjusted returns than their lower-income peers. Yet higher-yielding equities, bonds and hybrid securities are vulnerable to drawdown risks that make them imprudent as concentrated or stand-alone investments. But there's good news, too. Severe tail-risk events don't usually hit high-income assets simultaneously, so a keen awareness of the potential threats can help investors create effective diversification. We believe that when higher-income securities are integrated strategically in a multi-asset portfolio, they can provide a balance of income, stability and growth that should withstand the volatility and rising uncertainty in today's markets.



Income Outlook Is Sobering

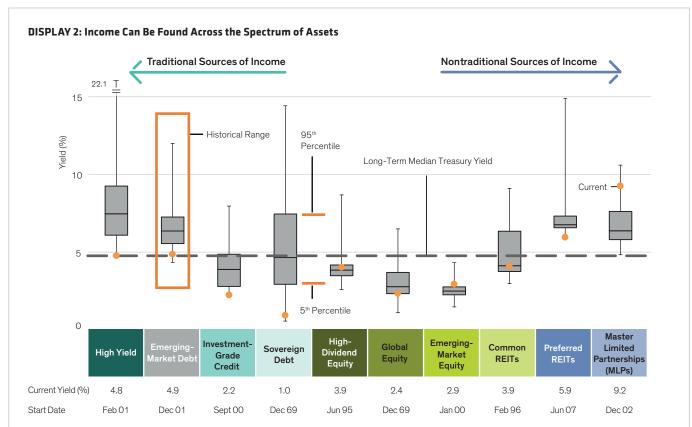
Income investors have struggled to find reliable sources of yield since the global financial crisis. Today, with government bond yields near zero, fixed-income yields are scarce. To achieve an annual yield of 4%, investors would need to take on much more volatility than a decade ago. While active fixed-income portfolios can be designed to deliver yield in this complex environment, new approaches to the income challenge are imperative, in our view.

The outlook for yield is sobering. Global macroeconomic growth is expected to be lower than historical trends as changing demographics decelerate the pace of workforce growth. Inflation is expected to be persistently lower despite central bank efforts to induce more normal inflation rates. In a low-growth, low-inflation world, interest rates are likely to remain significantly below long-term historical averages.

In this environment, we think investors looking for income should consider expanding their asset allocations (*Display 2*). This can include adding traditional equities, high-dividend equities and real estate investment trusts (REITs), as well as nontraditional sources

of income such as options strategies, currency and interest-rate alpha strategies, and master limited partnerships (MLPs). Embracing a multi-asset approach opens additional opportunities for yield and better growth potential. In fact, this paper will demonstrate that higher-income assets in equities and alternatives actually offer comparable or superior risk-adjusted returns, which are generally uncorrelated to fixed-income assets.

To be sure, investments such as high-yield bonds, REITs and high-dividend equities expose investors to other equity-like risks that require careful and dynamic management. For one, the downside risk of many income assets is somewhat greater. And in certain cases, they are subject to more pronounced fundamental or structural risks, including bankruptcy, liquidity, sector-specific shocks and idiosyncratic risks. But by being alert to these differences, investors can construct multi-asset portfolios to capture the high return potential of income assets while protecting against the tails—particularly, strong downside shocks—through a variety of interest-rate and macroeconomic environments (see "Expanding Horizons Across the High-Income Universe," page 3).



Past performance does not guarantee future results.

As of 31 December 2019

High yield represented by Bloomberg Barclays Global Corporate High Yield; emerging-market (EM) debt by JP Morgan EMBI Global Diversified; investment-grade credit by Bloomberg Barclays Global Corporate Investment Grade; sovereign debt by Bloomberg Barclays Global Treasury; high-dividend equity by MSCI World High Dividend; global equity by MSCI World; EM equity by MSCI EM Equity; common REITs by FTSE/EPRA NAREIT Developed Index; preferred REITs by Wells Fargo Hybrid and Preferred Securities REIT Index; and MLPs by Alerian MLP Index. Length of yield history differs for each asset class.

Source: Alerian, Bloomberg, FTSE, J.P. Morgan, MSCI, Wells Fargo and AB



Expanding Horizons Across the High-Income Universe

Asset	Description	Benefits	Main Risks	Correlation to Equities
High-Yield Bonds	Corporate credit of lowerquality companies	Significantly higher yield potential than treasuries	Bankruptcy	Low Medium High
Emerging-Market Debt	Government and corporate bonds from developing countries	Country and credit-cycle diversification; significantly higher yield than treasuries	Governance, transparency, emerging-market growth	Low Medium High
Securitized Assets	Bond securities backed by mortgages or other assets (such as auto loans)	Alternative sources of yield. Currently more insulated from geopolitical and trade tensions	Risk of default (failure to repay) on underlying loans; prepayment risk	Low Medium High
Investment-Grade Credit and Sovereign Debt	Bonds from developed- country governments and higher-quality companies	Reliable payments, stability in volatile markets	Duration/interest-rate risk; credit risk	Low Medium High
High-Dividend Equity	Stocks of companies that have high dividend yields	Currently yield higher than investment-grade bonds with capital-growth potential	Equity market volatility; sector and country concentrations	Low Medium High
Global Equity	Stocks of companies from around the developed world	Strong capital-growth potential	Equity market volatility	Low Medium High
Real Estate Investment Trusts (REITs)	Equity-like securities of companies that own, operate or finance real estate	Required distribution of most of company's income to shareholders	Interest-rate risk; real estate sector risk; equity risk	Low Medium High
Preferred REITs	REITs with a safer rank in the capital structure than common REITs	Higher yields than common shares of REITs, with lower volatility	Interest-rate risk; real estate sector risk; less liquid than common REITs; call risk	Low Medium High
Master Limited Partnerships (MLPs)	Publicly traded partnerships engaged in production, processing or transport of energy or natural resources in the US	High distribution of revenue to investors; high yield due to favorable US tax treatment	Energy sector/oil prices; regulatory risk; liquidity risk; tax-policy risk	Low Medium High
Currency Carry Strategies	Buying currencies with higher yields and selling those with lower yields to capture the interest-rate differential across countries	Alternative source of income and return	Exchange-rate moves	Low Medium High
Bond Carry Strategies	Buying government bonds with higher yields and selling those with lower yields to capture the interest-rate differential across countries	Alternative source of income and return	Interest-rate moves	Low Medium High
Options Strategies	Strategies such as straddles, which allow investors to collect a volatility risk premium, the difference between expected volatility priced into options markets and actual volatility, which tends to be lower	Alternative source of income	Market volatility	Low Medium High

Unleashing Income: Pros and Cons of a Diversified Approach

Portfolios that pair high-yield corporate bonds and high-quality government bonds are a well-known strategy among fixed-income investors. The approach is known as a barbell because it loads up on two asset classes at opposite ends of the credit-quality spectrum. Rate-sensitive assets such as treasury bonds are an effective complement to credit-sensitive assets such as high-yield corporate bonds and emerging-market debt: when one side is doing poorly, the other usually performs well.

Three Benefits of an Expanded Barbell

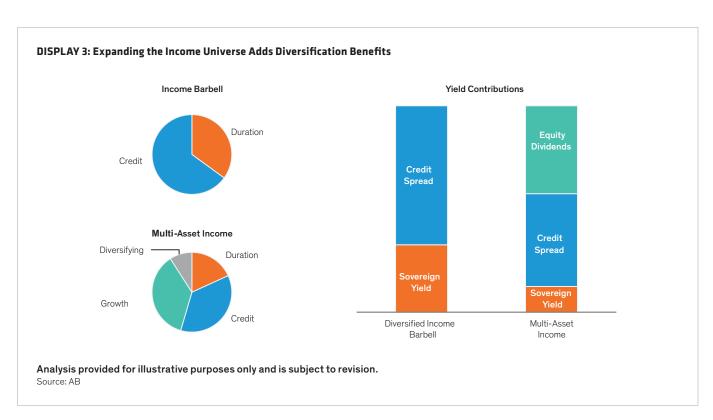
Multi-asset income investing builds on the benefits of a credit barbell by extending the universe of income-producing assets yet further to include equity-oriented growth assets and other diversifiers (*Display 3, left*). The expanded mix provides three benefits:

+ Broader sources of income—investors draw on an especially broad and diversified pool of assets to deliver income (*Display 3, right*). This adds several diversification benefits for both returns and risk management versus a traditional multi-asset portfolio.

- + Uncorrelated returns underpin stability—returns from equity and equity-like hybrid assets are generally negatively correlated with treasuries (much like credit assets in a traditional barbell).
- + Growth assets enhance returns—while credit assets give portfolios yield and high-quality government debt provides stability, adding equity enhances capital growth that bonds can't provide; the upside of pure fixed income is capped at full payment of principal and interest.

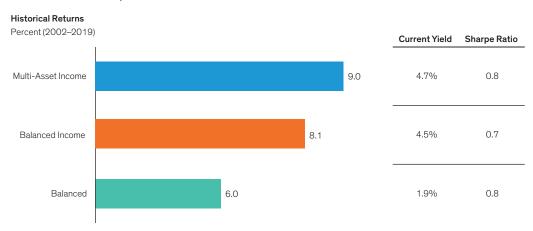
The diversification benefits can be powerful. Just as adding a wider range of bonds can boost yield and returns for balanced fixed-income portfolios, broadening a multi-asset income allocation improves the outcome. Our research shows that by expanding the reach of a balanced income portfolio to include high-yield bonds, high-dividend-yield equities and REITs, an investor could have generated an annualized return of 8.1% from 2002 through 2019. In a diversified multi-asset income portfolio that extends duration by adding longer-term global treasury bonds, the return improved to 9.0% with a slight reduction in volatility versus the balanced income portfolio (*Display 4, page 5*).

Multi-asset income allocations do have somewhat higher volatility than most fixed-income portfolios. However, we believe that for many investors, the added benefit of capital appreciation and the higher return potential of multi-asset income are attractive trade offs for higher risk.



DISPLAY 4: Multi-Asset Barbell Extension Augments Return and Yield

Greater Diversification of Assets Helps Balance Potential Risks



Past performance does not guarantee future results.

Left display from 1 May 2002 through 31 December 2019; right display as of 31 December 2019

Balanced portfolio is 50% Bloomberg Barclays Global Aggregate Bond and 50% MSCI World. Balanced income portfolio is 50% high-yield bonds, 40% high-dividend-yield equity, 2.5% REITs and 7.5% preferred REITs. Multi-asset income includes the same composition of assets from the balanced income portfolio, but adds duration extension, with global treasuries at 20%.

Source: Bloomberg Barclays, FTSE, J.P. Morgan, MSCI, Wells Fargo and AB

DISPLAY 5: Higher Income Assets Have Comparable or Better Risk-Adjusted Returns...

Income vs. Sharpe Ratio (Jan 1997-Dec 2019)



Past performance does not guarantee future results.

Through 31 December 2019

Equity represented by MSCI World; high-dividend equity by MSCI World High Dividend Yield; real estate common shares by S&P Global Property; REITs by FTSE Nareit All Equity REITs; preferred REITs by ICE BoA REIT Preferred Securities; energy common shares by 50% S&P 600 Energy and 50% ICE BofA US Energy; MLPs by Alerian MLP; sovereign investment grade (IG) by ICE BoA Global Government—USD Hedged; IG credit by ICE BoA Global Corporate—USD Hedged; EM dollar sovereigns (Sov) by ICE BoA US Emerging Markets External Sovereign; DM high yield (HY) by ICE BoA Global High Yield—USD Unhedged Source: Alerian, Bloomberg, FTSE, ICE Data Indices, MSCI, S&P and AB



Average Return of Six Worst Months of Returns (Jan 1998-Dec 2019)



Past performance does not guarantee future results.

Through 31 December 2019

Equity represented by MSCI World; high-dividend equity by MSCI World High Dividend Yield; real estate common shares by S&P Global Property; REITs by FTSE Nareit All Equity REITs; preferred REITs by ICE BoA REIT Preferred Securities; energy common shares by 50% S&P 600 Energy and 50% ICE BofA US Energy; MLPs by Alerian MLP; sovereign investment grade by ICE BoA Global Government—USD Hedged; IG credit by ICE BoA Global Corporate—USD Hedged; EM dollar sovereigns (Sov) by ICE BoA US Emerging Markets External Sovereign; DM high yield (HY) by ICE BoA Global High Yield—USD Unhedged Source: Alerian, Bloomberg, FTSE, ICE Data Indices, MSCI, S&P and AB

Does More Income Add More Risk?

Despite the advantages, stability is still a concern. Shouldn't building an income-focused portfolio from such a broad array of higher-income securities pile up risk?

In fact, the opposite is true. Our analysis shows that hybrid instruments like preferred REITs, MLPs and high-dividend equities delivered higher yields than their lower-income peers without proportionally higher risk (*Display 5*, page 5).

In many instances, the Sharpe ratio—which measures risk-adjusted returns—improves for higher-income securities versus lower-income variants. For example, over a 22-year period, preferred REITs yielded 9.9%, 410 basis points more than common REITs, at a higher Sharpe ratio of 0.51—an 11% improvement versus REITs. High-dividend equities showed similar improvements compared with standard market-cap indices. While higher-income bonds didn't improve the Sharpe ratio, they delivered meaningfully higher yields than lower-income peers at similar levels of risk.

But there's a catch. Despite better Sharpe ratios, most higher-income assets get hit hard when markets get nasty. These so-called tail risks can be as bad—or even worse—for higher-income assets than for their lower-income counterparts (*Display 6*).

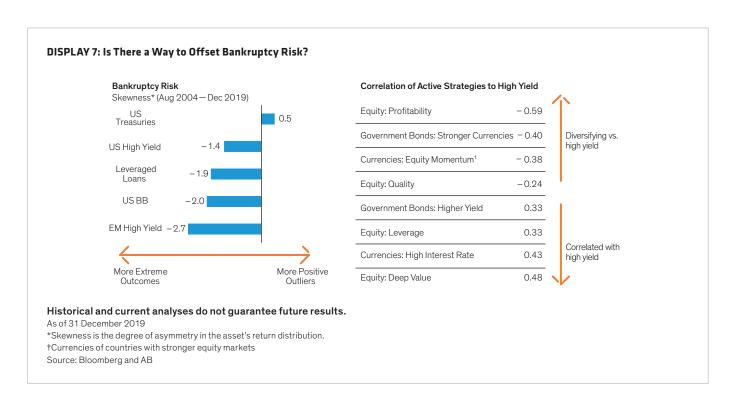
Extreme markets can also aggravate the drawdown risk. For example, during the global financial crisis, REITs tumbled by 68% and high-dividend equities took a hit of 59%—their worst drawdowns since 1999.

It's been easy to overlook these risks since the global financial crisis. Over the past decade, market volatility has been generally lower than in the past, and drawdowns across the market have been relatively modest. That has allowed investors to concentrate in higher-income assets while getting away with a low-risk portfolio. However, rising volatility in 2018 and 2019 should remind investors to beware of complacency.

Managing Multiple Sources of Risk

Investors must be on guard against unintentionally concentrating in certain types of risk when reaching for extra income. Each asset class has its own set of risks that require careful, strategic management. So, in a multi-asset income portfolio, investors need to check under the hood to ensure they aren't overly susceptible to pitfalls such as interest-rate shifts, low-quality companies or the particularities of certain industrial sectors.

Broadening allocations adds benefits, but idiosyncratic and cross-asset considerations must be evaluated to determine the weight of each income-generating component within a portfolio.



Asset-Specific Risks

A. Bankruptcy Risk

Income-oriented portfolios that hold corporate bonds are subject to credit risk—the possibility that an issuer will go bankrupt. Multi-asset income portfolios have more tools to manage these risks.

Companies with weak cash flows or a heavy debt load relative to their earnings run a greater risk of failing to repay creditors. Bonds of corporations with a higher chance of bankruptcy carry higher yields, while the debt of the shakiest firms is considered noninvestment grade.

Companies rated below investment grade ("high yield") may include rapidly growing companies with weak balance sheets, capital-intensive businesses such as energy explorers, or companies that have borrowed aggressively to finance acquisitions. Leaning too much into credit from lower-quality issuers through high-yield bonds in developed and emerging markets, or through buying leveraged loans, leaves a portfolio exposed to greater default risk than one limited to investment-grade bonds (*Display 7, left*). And the threat is skewed to the downside because when a company goes bankrupt, bond investors lose everything—income and principal.

How can investors offset bankruptcy risk from high-yield credit? In fixed-income portfolios, the first lines of defense are careful credit analysis and bond diversification. In a multi-asset portfolio, investors can also select active strategies in equity, government bonds and currencies that improve diversification, and avoid strategies that compound the bankruptcy-related risk of high yield (*Display 7, right*). That solves a common flaw of "bolt-together" portfolios that lack integrated risk management and might inadvertently double down on the same types of risks across different parts of the portfolio.

For example, the returns of more levered and deep-value equities are correlated with those of high-yield bonds, as both typically come from companies with weaker fundamentals. So exposure to these stocks should be limited in portfolios with high-yield bonds, in our view. By contrast, the relative returns of shares in higher-quality and higher-profitability companies versus the equity index are negatively correlated with high-yield bond returns. That makes them better diversifiers for high-yield bonds than passive equities, which include a broader range of lower-quality stocks. Similarly, government bond strategies that tilt toward higher-yielding countries are correlated with high-yield bonds, but those that favor countries with stronger currencies are diversifying. Currency strategies that take into account interest-rate differentials and other factors such as equity momentum can also be managed to diversify a high-yield allocation.

B. Sector Concentration Risk

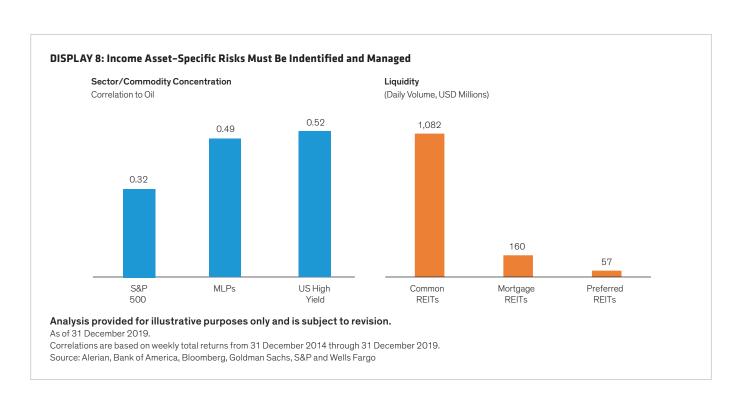
When a group of assets is associated with an industry, those assets may be vulnerable to a negative event in that industry. Multi-asset income investors must carefully consider whether portfolio components inadvertently become too exposed to particular sector risks.

In recent years, the high-yield bond market has become more concentrated in oil companies. Income investors need to be careful not to compound high-yield exposure to the energy sector by adding excessively to other investments that also have significant oil industry risks (*Display 8, left*). Master limited partnerships are a good example today. These securities are issued by energy infrastructure companies with steady cash flows based on long-term oil and gas transportation contracts. Income investors favored MLPs because they generated high income with low volatility. But when oil prices declined precipitously in 2015, MLPs' oil sensitivity rose sharply, compounding the pain for income investors who had concentrated excessively in both high-yield bonds and MLPs without taking into account the common oil risk.

C. Liquidity Risk

Not all assets can be traded with the ease and efficiency of a blue-chip stock or a treasury note. When low transaction volume for securities makes it difficult to quickly exit the security at a given price, investors face market liquidity risk (*Display 8, right*). To maintain stability during times of market stress, income investors must not weigh down a portfolio too heavily with assets that would suffer from thin volume.

Preferred shares issued by REITs, for example, are relatively less liquid than common shares. Lower liquidity can make these securities more volatile during extreme capital market stress, when investors often seek the safety of highly liquid treasuries (see "Best of Both Worlds: Preferred REITs," page 9).





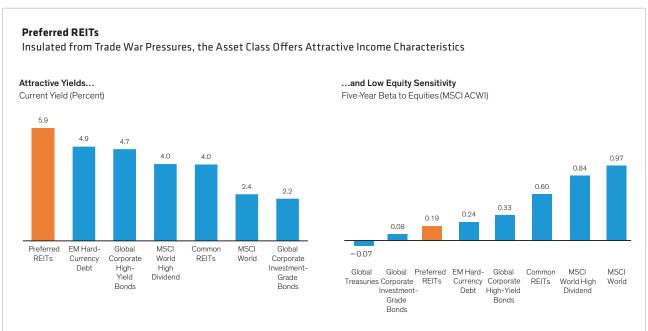
Best of Both Worlds: Preferred REITs

Preferred shares issued by real estate investment trusts (REITs) offer attractive opportunities for income investors seeking to benefit from the best of both worlds: stocks and bonds.

REITs issue preferred shares on which they are obliged to pay dividends at higher rates and before any payments to common shareholders. These can be a more flexible way for REITs to raise capital, rather than taking on the fixed contractual commitments of debt or giving up voting rights to common shareholders. REIT preferred stocks are "hybrid" securities because they also have some bond-like features: they pay dividends on a set schedule, have a par value and are sensitive to interest-rate fluctuations.

For income investors, preferred REITs are an attractive way to capture higher yield relative to fixed income (*Display*) with lower volatility than that of more conventional equities. What's more, with low sensitivity to equity market swings, they enhance the diversification of a multi-asset portfolio.

Of course, preferred REITs do present some risks. They are vulnerable to a real estate crisis—as in 2008—and potential liquidity crunches. But in the current global economic environment, preferred REITs offer several attractions. They're relatively insulated from the pressures of recent trade wars while capitalizing on a relatively healthy environment for US commercial real estate, bolstered by strong US consumer and business confidence.



$\label{thm:continuous} \mbox{Historical and current analyses do not guarantee future results.}$

As of 31 December 2019

Preferred REITs represented by Wells Fargo Hybrid and Preferred Secured Aggregate; EM hard-currency debt by JPMorgan Global Diversified; global corporate HY bonds by Bloomberg Barclays Global High Yield Corporate (Hedged USD); common REITs by FTSE EPRA/Nareit Global Developed Real Estate; global corporate IG bonds by Bloomberg Barclays Global Corporate IF (Hedged); global treasuries by Bloomberg Barclays Global Treasury (Hedged USD) Source: Bloomberg, FTSE, J.P. Morgan, MSCI, Wells Fargo and AB

D. Instrument-Specific Structural Risks

Income investors must also be vigilant about the structural characteristics of certain higher-income financial instruments.

For example, mortgage bonds are often used by multi-asset portfolios to provide ballast during spates of volatility. But when markets experience an extreme spasm in times of crisis—and interest rates drop—they don't protect as much as treasuries. That's because mortgage bonds are exposed to prepayment risk: when interest rates decline, borrowers tend to refinance their loans. Mortgage owners then don't receive all the payments on the original loan, nor the benefit of capital appreciation from holding the loan to maturity. That structural risk limits the upside of mortgage-backed securities during times of rate declines compared to that of, say, a Treasury bond. So although mortgage bonds do offer real income benefits, investors need to make sure that a portfolio also holds treasuries for greater stability in times of crisis. Allocations to instruments like mortgage bonds must be sized carefully and with an awareness that they are imperfect substitutes for treasuries in a crisis.

Assets That Are Sensitive to Multiple Types of Market Risk

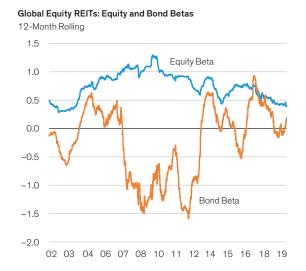
Certain income-oriented assets are sensitive to multiple types of market risks, so when combining these assets in a portfolio, it is critical to consider the aggregation and interaction of these risks at the portfolio level. Major market risk categories include equity market risk, interest-rate risk, credit risk, commodity risk and implied volatility risk.

REITs, for example, are sensitive to both equity market risk and interest-rate risk. Since they're based on publicly traded real estate stocks, REITs often display equity-like characteristics. Yet these securities also have some bond-like characteristics because they're required to distribute a steady stream of their income. And because the companies themselves rely on borrowing to finance themselves, higher rates erode their profit margins.

Interest-rate risk can also apply to certain types of stocks. Some higher-income components of the equity market are considered "bond proxies"—companies with reliable earnings streams and stable dividends. Like bonds, they often do well in low- and falling-interest-rate environments as investors hunt for yield, but can suffer in high- and rising-rate environments when investors can achieve their yield more easily elsewhere. Conversely, fixed-income asset classes such as high-yield credit also tend to have a degree of equity beta. That's not surprising, given that corporate high-yield bonds are strongly linked to earnings performance and business fundamentals.

What's more, the sensitivity of these asset classes to interest rates, equity markets or oil prices tends to vary over time (*Display 9*). Since the financial crisis, the bond beta of REITs has steadily risen while their equity beta has declined. This shift illustrates the impact of the growing appetite for yield and how investors increasingly see this asset class as a bond substitute. So, it's not enough to focus just on asset allocation. Investors must take a fully integrated, strategic view of the portfolio and look at asset exposures through many lenses, while analyzing core market risks that drive asset-class returns over time.

DISPLAY 9: Changing Market Risks Can Affect Performance



US High Yield: Equity and Oil Betas



Analysis provided for illustrative purposes only and is subject to revision.

Through 31 December 2019. Left display from 1 January 2002; right display from 1 March 2005

Global equity REITs represented by FTSE EPRA/Nareit Developed; equity by MSCI World; bonds by 7–10 Year US Treasuries; US high yield by CDX North America High Yield; oil by Bloomberg WTI Crude Oil

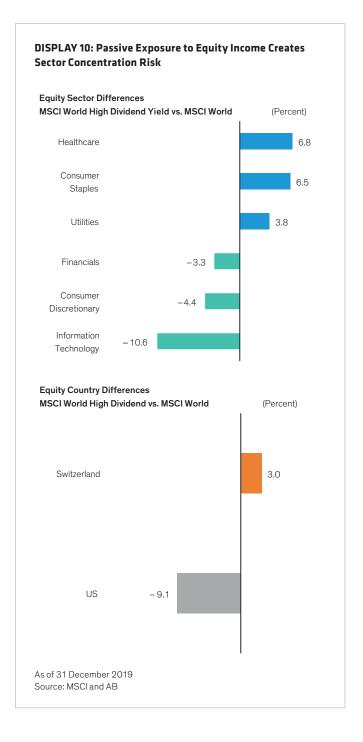
Source: Bloomberg, FTSE, IHS Markit, MSCI and AB

Integrated Construction: Avoiding Diversification Pitfalls

With so many risks to navigate, effective diversification across asset classes is no easy task. Bolting together different types of assets in a passive portfolio can leave investors exposed to many unintended hazards. It takes a thorough, integrated assessment of the risk-reward trade-offs to capture the potential of an unconstrained allocation targeting income securities.

Equities are a case in point. Focusing solely on higher-income-paying stocks could inadvertently create concentration in defensive sectors such as consumer staples, healthcare and utilities, which tend to be more dominant among high-dividend stocks (*Display 10, top*). At the same time, a lack of exposure to growth industries such as technology or consumer discretionary could be self-defeating if equities are intended to provide a portfolio with capital appreciation as well as income.

Regional exposure also warrants an integrated strategy. Companies in certain countries pay consistently higher dividends on their stocks than companies in other countries, which means investors might end up with too much exposure to a given country. For example, Switzerland's weight in the MSCI World High Dividend Yield Index is nearly 10%, three times its weight in the MSCI World. In contrast, the US weight in the high-dividend index is much lower than in the broader equity benchmark (*Display 10*, bottom).



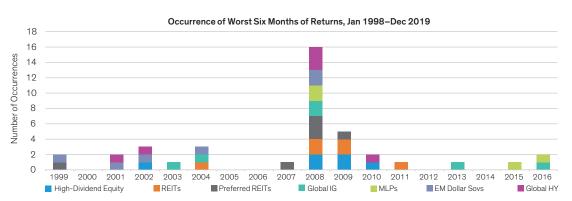
From Specific Risks to Systemic Market Risk

For all the attention that income investors must focus on the fundamental, market and sector risks across a diversified portfolio, there is a silver lining. While certain income-oriented assets may suffer more during periods of extreme market turbulence, these rare events tend to be idiosyncratic (*Display 11*). Aside from the financial crisis in 2008, when seven income assets experienced sharp downturns at the same time, large drawdowns in income assets usually occur at different times. As a result, these income asset–specific risks can be offset effectively by diversification.

At the same time, diversification across stocks and bonds can protect a portfolio from extreme market stress. By including government bonds in a broadly constructed strategic asset allocation, we believe investors can improve overall returns and reduce risk when a sell-off sweeps through markets. We looked at three crisis periods over the last two decades and found that in each case, a multi-asset income strategy outperformed both global high-dividend equities and a 50-50 mix of high-yield bonds and high-dividend equities, with reduced risk (*Display 12*). Even in today's lower-yield environment, we continue to believe that duration is an effective hedge to equity beta risk.

DISPLAY 11: Bad Spells for Income Assets Don't Usually Coincide

Outside Major Crises, Drawdowns Don't Overlap

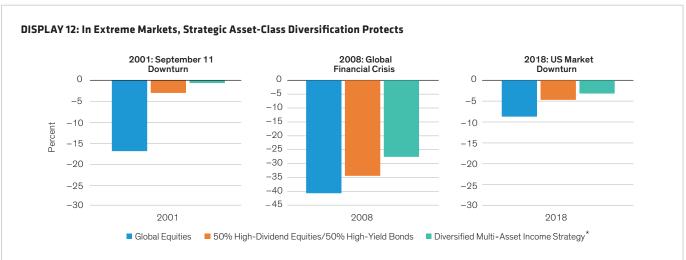


Past performance does not guarantee future results.

Through 31 December 2019

High-dividend equity represented by MSCI World High Dividend Yield; REITS by FTSE Nareit All Equity REITs; preferred REITs by ICE BoA REIT Preferred Securities; global IG credit by ICE BoA Global Corporate Index—USD Hedged; MLPs by Alerian MLP; EM dollar sovereigns by ICE BoA Emerging Markets External Sovereign; global HY by ICE ICE BoA Global High Yield—USD Unhedged

Source: Alerian, Bloomberg, ICE Data Indices, MSCI and AB



Past performance does not guarantee future results.

Returns shown for the calendar year indicated.

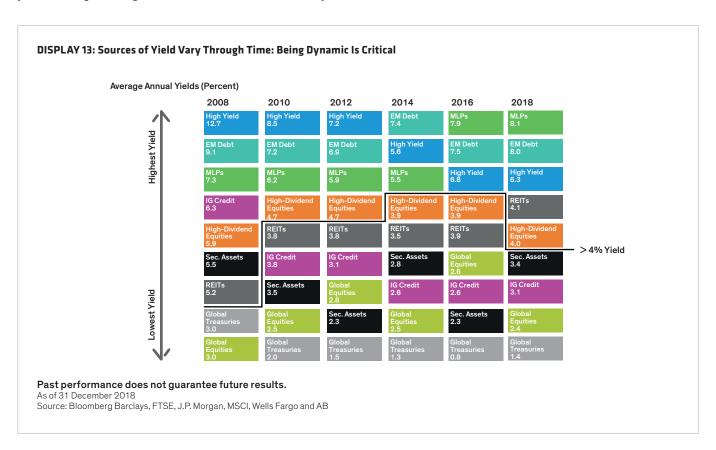
*Diversified Multi-Asset Income Strategy represented by 40% global high-yield bonds, 30% global equities, 10% global REITs and 20% global government bonds Source: Morningstar Direct and AB

Staying Flexible in Changing Markets

Even with a strategically diversified multi-asset allocation, an unconstrained approach also requires a flexible and active portfolio-management strategy to be effective.

One reason is that the sources of yield vary over time. Relative yield advantages among different asset classes are constantly in

flux. Before the financial crisis, treasuries used to yield more than global equities. High-yield bonds ranked at the top of incomegenerating assets through 2012, but have since been topped by emerging-market debt and MLPs (*Display 13*). So to optimize income, investors must take into account that the relative yield advantage among asset classes will change over time.



Another reason is that a nimble approach can also be used to manage risk and return through changing market conditions. While a diversified portfolio should have built-in buffers to volatility, it may still be vulnerable to a sustained, broad-based sell-off across asset classes, such as during the global financial crisis in 2008 or the euro debt crisis three years later.

Dynamic tools can be used to adjust the asset-allocation strategy to changing markets. When applied systematically over time, our research suggests that dynamic asset allocation—focused on modifying asset-class, geographic and style exposures as

conditions change—can reduce portfolio volatility, as well as the frequency and severity of negative outcomes.

Softening the impact of a major market downturn is important for investors. It can help reduce "risk drag," when large losses make it harder for portfolios to regain lost value in a recovery. And creating a smoother pattern of returns can help investors stay in the markets through a rough spot and avoid withdrawing funds at the wrong time, when markets hit a trough (see "Dynamic Management in Three Major Crises," page 14).



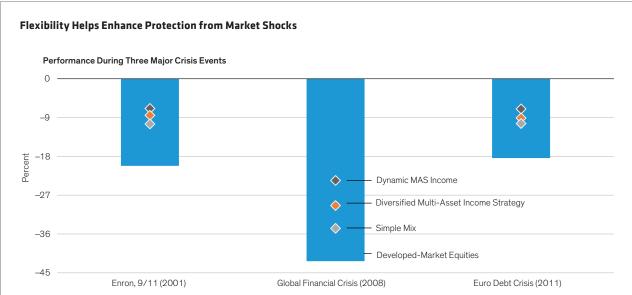
Dynamic Management in Three Major Crises

What happens to a portfolio when markets face a systemic crisis? The answer to this question is essential for investors to gauge whether a portfolio's construction and risk management will stand up to the ultimate test.

Global diversification among a set of diverse asset classes can help mitigate the extreme drawdown risks associated with high-income asset classes. Including assets with attributes complementary to high-income asset classes helps mitigate end-of-cycle risks. Stability assets, such as government bonds, are important for weathering systemic market risks. And employing a nimble strategy to pivot to more defensive assets at times of stress can further mitigate large drawdowns.

While each approach in isolation can improve risk-adjusted returns, we believe that bringing them together helps create the most attractive balance of yield, growth and stability. Our research shows how three different model portfolios held up during systemic crises over the past two decades (*Display*). The Dynamic Multi-Asset (MAS) Income portfolio, which incorporated full diversification across income-generating asset classes as well as dynamic asset allocation, would have helped preserve yield, stability and capital growth during three major historical market crises: 9/11, the 2008 global financial crisis and the 2011 euro debt crisis.

In each event, exposure to global government bonds was crucial because they provided positive returns at a time when many other assets were selling off. And in each case, with volatility peaking, the ability to dynamically shift a portfolio toward more defensive positions would have further helped mitigate the drawdowns.



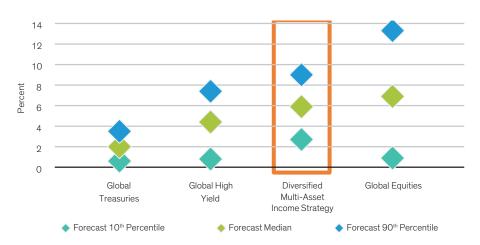
Past performance does not guarantee future results.

Enron crisis from 2 August 2001 through 21 September 2001; global financial crisis from 1 September 2008 through 20 November 2008; EU debt crisis from 21 July 2011 through 3 October 2011

Simple Mix portfolio includes 60% global high-yield bonds and 40% global high-dividend equities. Diversified Multi-Asset Income Strategy includes 40% global high-yield bonds, 30% global equities, 10% global REITs and 20% global government bonds. Dynamic Multi-Asset Income Strategy includes 35% high-yield bonds, 5% emerging-market debt, 25% mix of global equities (high-dividend, quality and minimum-volatility equities), 5% MLPs, 10% global REITs and 20% government bonds, with the asset allocation dynamically adjusted over time Source: Alerian, ICE Data Indices, MSCI, S&P and AB

DISPLAY 14: Diversified Income Strategy Can Help Deliver Capital Growth as Macroeconomic Landscape Shifts

Return Outlook: Range of AB Forecast Compound Annualized Growth Rates Over Next 10 Years



As of 31 January 2019

Analysis provided for illustrative purposes only and is subject to revision. Data does not represent past performance and is not a promise of actual results or range of future results.

Based on forecasts of the AB Capital Markets Engine, which projects 10,000 plausible paths for major asset classes. Global treasuries based on seven-year constant maturity sovereign bonds. Global high yield based on seven-year constant maturity global corporate high-yield bonds. The Diversified Multi-Asset Income Strategy is based on the following allocation: 40% global high-yield bonds, 30% global equities (15% high-dividend equities, 15% low-volatility equities), 10% global REITs and 20% global government bonds. Global equities are based on a universe similar to the MSCI World. Alpha and tracking error assumptions were also made to reflect expectations from our active services in these asset classes. Source: AB

Rising to the Income Challenge

Nobody knows exactly which segment of the capital markets will suffer in the next crisis, or when the next big market downturn will strike. But as a decade of very strong stock and bond returns ends and lower growth and rising geopolitical tensions cloud the outlook, traditional stock and bond portfolios will find it tough to deliver. The good news is that income investments can meaningfully improve portfolio performance if managed carefully. Our forecasts suggest that diversified income strategies are likely to deliver attractive compound growth rates over the next decade, with median returns close to global equity allocations (*Display 14*).

A New Mindset for Income Investors

Even in unsteady markets and amid persistently low interest rates, investors can chart a course to steady sources of yield.

To do so, investment managers should think beyond simple asset-class definitions and frame the investing effort in terms of the characteristics of income assets: yield, stability and growth. Each asset type must be scrutinized not only for recent returns and yield, but also for long-term characteristics that include volatility and sensitivity to different types of risks.

These features can be holistically monitored and adjusted in portfolio construction by using an integrated investment process. Flexibility allows assets to be swapped so the portfolio can be adjusted to the changing market and macroeconomic landscape. With the right mindset—and a disciplined yet unconstrained approach—investors can find resilient sources of income, stability and even some growth in surprising places across the global capital markets.

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