

Investment Strategies for Generating Efficient Income

IN THIS PAPER

An unfriendly macro and market landscape is making life harder for investors today, with traditional core bonds coming up short on income. In our view, focusing on generating efficient income is an effective approach to tackling the challenge of mixing the key building blocks of rates, credit and growth.

2022

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An Unfriendly Landscape for Income Investors

A challenging macro mix is set to make investing a lot more challenging in the years ahead: The share of the world's population that's of working age seems to have peaked. Growth in world trade, a huge economic tailwind since the mid-1980s, has flattened. And the global debt burden is nearing 140% of gross domestic product (GDP)—it's well documented that levels above 100% can create economic headwinds.

Collectively, these factors will likely yield lower growth and higher inflation, creating a challenging environment for investors. Add in historically high equity valuations and historically low Treasury yields, and you may have a return problem.

The challenge is particularly acute for income-seeking investors: high-quality bonds, the traditional cornerstone of income-oriented portfolios, can no longer provide a meaningful amount of income.

Traditional Core Bonds Are Coming Up Short on Income

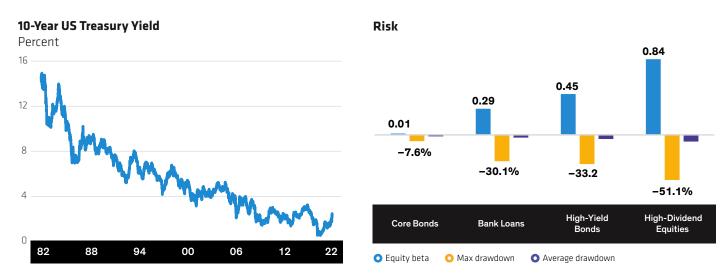
Feeling the income pinch with traditional high-quality core bonds, many investors have gravitated to other sources, including bank loans, high-yield bonds and high-dividend equities. These assets offer higher yields, but they're also a lot riskier than core bonds (*Display 1*).

Equity beta tells the tale, and helps show how equity-like an asset is. Core bonds, with a modestly positive equity beta, aren't equity-like at all. Bank loan, high-yield bond and high-dividend

equity betas range from 0.29 to 0.84. With higher beta comes the risk of bigger losses: bigger losses: the maximum drawdown for core bonds has been -7.6% historically, for bank loans -30.1%, for high-yield bonds -33.2% and for high-dividend equities 51.1%. These tumbles usually happen when the stock market is also falling, magnifying the damage to portfolios.

If income investors can no longer look to core bonds for their income needs, how can they access more income without taking on too much risk? The key is to build efficient income portfolios, getting the most income and total return for each added unit of risk taken on. Investors can also view the challenge through a different risk lens—seeking to minimize the drawdown risk of a portfolio at any income level.

DISPLAY 1: HIGHER-YIELDING ALTERNATIVES COME WITH MORE MARKET RISK



Current analysis and past performance do not guarantee future results.

10-year US Treasury yield from January 1, 1982 to March 31, 2022. Beta and average drawdown are calculated from January 1, 2012 through January 31, 2022; max drawdown is calculated from January 1, 2012 through December 31, 2021. Core bonds, bank loans, high-yield bonds and high-dividend equities are represented by the Bloomberg US Aggregate Bond Index, S&P/LSTA Leveraged Loan Index, ICE BofA US High Yield Index and MSCI USA High Dividend Yield Index, respectively.

As of January 31, 2022 | Source: Bloomberg, ICE Data Indices, Morningstar Direct, MSCI, S&P, US Federal Reserve and AllianceBernstein (AB)

Efficient Income Building Blocks: Rates, Credit and Growth

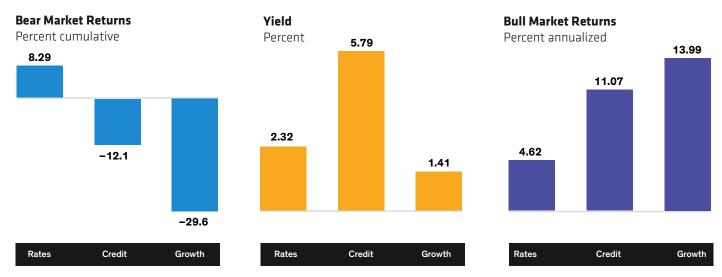
We think income investors should refine their portfolios based on a diversified mix of three building blocks: rates, credit and growth. Each plays a key role in designing an appropriate income formula, as we can see from a few traditional examples.

The rates building block, represented by the Bloomberg US Aggregate Bond Index, has shown its ability to counterbalance risk-asset losses, posting a positive return of more than 8% in bear

markets (*Display 2, left*). Credit, illustrated by US high yield, has a superior yield of 5.79% (*Display 2, middle,*) and the growth building block, the S&P 500 Index, outpaces the other two building blocks in long-term growth potential (*Display 2, right*).

While these examples help illustrate the value of each block, in practice, there's a lot more investors can do to refine each building block—and combine them in effective ways that are tailored to their specific income and risk preferences.

DISPLAY 2: DIVERSIFY BUILDING BLOCKS-RATES, CREDIT AND GROWTH



Past performance and current analysis do not guarantee future results.

Yield is calculated using the 10-year US Treasury yield for rates. Bull and bear market returns are represented by the Bloomberg Intermediate Treasury Index for rates, the ICE BofA US High Yield Master I Index for credit and the MSCI World Index for growth. A bear market is defined as a 20% or more decline from peak to trough. Returns are calculated using annualized monthly returns from December 1987 through December 2021.

As of March 31, 2022 | Source: Bloomberg, ICE Data Indices, MSCI, Morningstar Direct and AB

Upgrade Rate Exposure in Traditional Core Bonds

A healthy allocation to traditional high-quality core bonds still makes sense. Their interest-rate exposure can help counterbalance higherrisk procyclical assets. We believe that's a much better starting point for a rates building block than the strategies some investors have turned to in order to allay their fears of rising rates.

Given our interest-rate expectations and the ability of portfolios with long time horizons to reinvest in new, higher-yielding bonds, we think these worries are overstated. But they've created a big problem, driving many assets out of core bonds and into places like cash, low-duration bond funds and unconstrained bond strategies. These approaches struggle to counterbalance assets with higher equity betas.

The average annualized returns of these core substitutes in past equity bear markets ranged from a modest 3.6% for cash to -6.7% for unconstrained bond strategies. US Treasuries and core bonds, in contrast, returned a healthy 11.0% and 9.2%, respectively. With a smaller allocation to rates, investors seeking to get the most bang for their buck in the rate building block should focus on these

pillars. In fact, it makes a lot of sense to upgrade core bonds with additional exposure to US Treasuries.

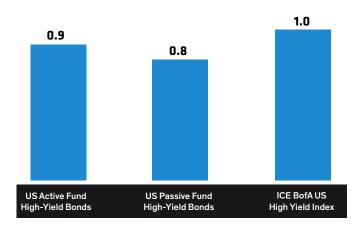
Embracing Credit Risk—and Managing It

High yield is the centerpiece of credit exposure, so it's important to get the design right—and get the most out of it over time. It's very hard for a typical US high-yield strategy to beat a broad high-yield index (*Display 3*). For any one-year period, less than half of actively managed high-yield portfolios beat the benchmark. Over longer periods—three, five and 10 years—90% of strategies underperform. Passive managers tend to fare worse than active managers.

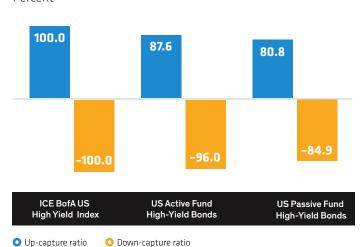
So, investors should think hard before going passive in their high-yield exposure. They should also make sure that their active managers are actually taking enough risk—and managing it effectively over market cycles. The average active high-yield fund has a lower beta than the broad high-yield market, capturing 87.6% of the market's return in rising markets and 96% in falling markets. That's not an efficient recipe for tapping the credit potential in high-yield bonds. For passive funds, the outcome is even worse.

DISPLAY 3: MOST CREDIT MANAGERS DON'T TAKE ENOUGH RISK AND DON'T MANAGE IT WELL





Up/Down Capture: September 1, 2011–December 31, 2021Percent



Past performance does not guarantee future results.

As of December 31, 2021 | Source: ICE Data Indices, Morningstar Direct and AB

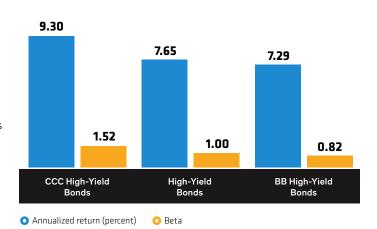
Just as investors should embrace interest-rate exposure in the rate building block, they should embrace credit risk in the credit building block.

We can see a demonstration of the "embrace risk" principle in CCC-rated high-yield bonds (*Display 4, right*). With a beta of 1.52 to the high-yield index, the CCC high-yield segment has a much more cyclical nature than the broad market itself, generating a significant annualized return premium and an even higher premium over BB-rated high-yield bonds, which have a beta of 0.82.

But efficient credit exposure isn't only about embracing risk—it's about managing it too. When risk assets sell off, CCC-rated high yield declines by about 9% on average and almost 49% in the worst case historically (*Display 5, left*). BB-rated high yield, on the other hand, has generally experienced a less severe downside. This makes the case for managing high-yield risk during the credit cycle by adapting credit quality.

Over the course of a credit cycle, the yield advantage, or yield spread, on high yield tends to shrink. The later in the cycle, the lower the spread—and the higher the risk of a sell-off. In these environments, investors need to weigh the higher yield of CCC exposure against the greater drawdown risk. Rotating into higher-quality issuers and reducing beta not only reduces cyclicality but also takes advantage of lower-beta high yield's sizable outperformance emerging from low-spread conditions (*Display 5, right*).

DISPLAY 4: EMBRACING RISK IN HIGH-YIELD CREDIT WORKS OVER TIME



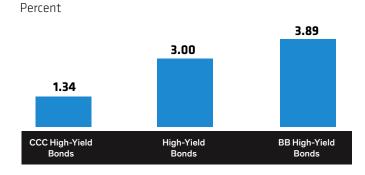
Past performance does not guarantee future results.

Data from December 31, 2001 through December 31, 2021 | **Source:** Morningstar Direct and AB

DISPLAY 5: ACTIVELY MANAGING CREDIT RISK IS CRITICAL TO AVOID LARGE DRAWDOWNS

Percent -9.76 -5.56 -48.61 CCC High-Yield Bonds Bonds Bonds CCC Bigh-Yield Bonds Bonds Bonds Bonds Bonds

Average Forward One-Year Return When Spreads Are Tight



Past performance does not guarantee future results.

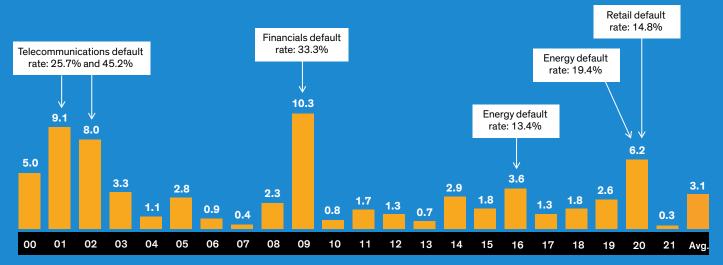
 ${\tt Data\,from\,December\,31,2001\,through\,December\,31,2021\ |\ \textbf{Source:}\,Morningstar\,Direct\,and\,AB}$

Average

DISPLAY 6: BROAD DIVERSIFICATION AND AVOIDING CONCENTRATION RISK ARE KEY IN CREDIT

High-Yield Bonds: Annual Par-Weighted Bond Default Rates

January 2000-December 2021 (Percent)



Past performance does not guarantee future results.

There is no guarantee that any estimates or forecasts will be realized.

As of December 31, 2022 | **Source:** J.P. Morgan and AB

Diversifying Across Industries and Going Global with Credit

Investors can bring more efficiency to their credit building block by diversifying to avoid too much concentration in any one industry that may fall on hard times (*Display 6*). In 2001 and 2002, telecom underperformance was a big problem for many high-yield investors. In 2008 and 2009, it was financials. In 2016, we had energy defaults, and in 2020 both energy and retail struggled. Industry diversification matters in credit, and so does kicking the tires on fundamentals when selecting individual issuers.

Going global with credit exposure extends the diversification principle beyond credit ratings, industries and issuers to embrace income generators all over the world. Here's a telling comparison: the US high-yield market has roughly US\$1.7 trillion in assets. Casting a wider net to include global high-yield bonds, emergingmarket (EM) debt, securitized assets and bank loans expands that opportunity set amounts to approximately US\$7.3 trillion. That's a lot of credit opportunities to choose from.¹

Even a naive passive allocation to global multi-sector credit has historically outpaced US high yield by about 70 basis points in annualized returns (*Display 7*), winning in 82% of three-year return periods. This can lead to more diversification, more opportunity, better risk-adjusted returns and a bigger playing field for active managers to seek alpha. In our view, that's a winning formula for the credit building block.

DISPLAY 7: A GLOBAL MULTI-SECTOR CREDIT APPROACH ENHANCES PORTFOLIOS

Growth of Initial US\$1,000 Investment: January 2001-December 2021



US Equities	Total Return	Standard Deviation	Sharp Ratio	Up Capture	Down Capture	Overall Capture Ratio	Relative 3-Year Batting Average*
Global Multi-Sector Credit	8.25%	9.16	0.78	101.35	94.51	1.07	77%
US High Yield	7.65%	9.10	0.72	100.00	100.00	1.00	23%

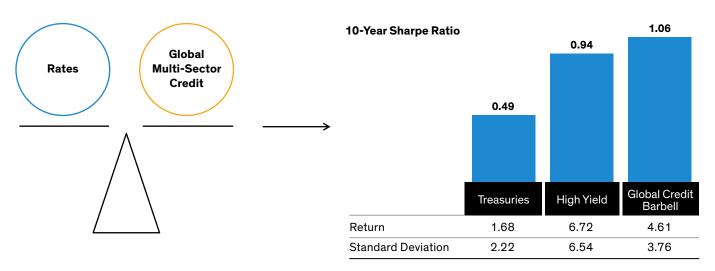
Past performance does not guarantee future results.

Global multi-sector credit represented by the Bloomberg Global High Yield Total Return Index USD Hedged; US high yield represented by the ICE BofA US High Yield Master I Index

As of December 31, 2021 | Source: Bloomberg, ICE Data Indices, Morningstar and AB

^{*} Relative batting average is calculated by measuring the percent of three-year rolling periods where one portfolio outperforms the other.

DISPLAY 8: RETHINKING FIXED INCOME—BALANCING RATES AND DIVERSIFIED CREDIT



Past performance does not guarantee future results.

Treasuries are represented by the Bloomberg US Treasury Index and high yield by the ICE BofA US High Yield Index. Global credit barbell is represented by 50% Bloomberg Global High Yield Total Return Index USD Hedged, 25% Bloomberg US Treasury Index and 25% Bloomberg US Aggregate Bond Index.

Data from January 1, 2012 through December 31, 2021 | **Source:** Bloomberg, ICE Data Indices, Morningstar and AB

The Barbell Structure: Balancing Rates and Credit

Making rates and credit building blocks more efficient also makes them more efficient in combination, such as a barbell structure (*Display 8, left*) balancing high-yielding global multi-sector bonds with high-quality core bonds bolstered with US Treasuries. Even a simple barbell combination with equal assets budgeted to rates and credit in this way has been an efficient mix.

We can see this through the Sharpe ratio, a popular measure of the amount of return generated for each unit of risk investors take. Over the past two decades, the Sharpe ratio for US Treasuries, a basic proxy for rates, has been 0.49 (*Display 8, right*). A simple credit allocation to US high yield has produced a Sharpe ratio of 0.94. An efficient global credit barbell beats both of those building blocks—a Sharpe ratio of 1.06, with returns closer to high yield than to Treasuries and less risk than high yield.

The global credit barbell delivers a high level of income to investors in a low-income world. And it does so efficiently, taking the least amount of risk for every unit of income while also reducing downside risk. In our view, this is the bond portfolio of the future.

Introducing Growth Through Income Diversifiers

Some income investors want access to growth potential in addition to income generation. Bringing growth into the mix can help investors not only generate income, but also increase their standard of living and combat the threat of inflation. Growing income makes sense if investors believe that we're headed for a higher-inflation environment, and there are several ways to do it.

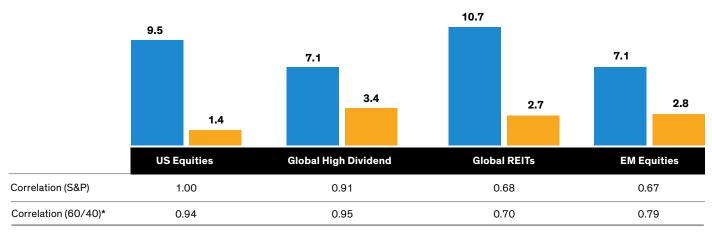
Broad equity exposure is one way, though it will likely reduce income generation, at least at first. Part of the portfolio will be growing rather

than producing much income. For many investors, this leads to growth and income diversifiers—growth engines that help investors maintain a higher income level and diversify their income portfolio, such as high-dividend equities, global real estate and EM equities (*Display 9*).

Global real estate, for example, has a correlation of 0.68 to the broad US stock market, so it provides some diversification versus broader equity exposure. It also yields more than twice as much as the US stock market and has outperformed it over time.

DISPLAY 9: ADDING GROWTH WITH INCOME

Return, Yield and Correlation Benefits of Income Diversifiers





Past performance does not guarantee future results.

US equities, global high dividend, global REITs and EM equities are represented by the S&P 500 Index, MSCI World High Dividend Yield Index, S&P US REIT Index and MSCI Emerging Market Index, respectively.

Performance is calculated as annualized 20-year returns.

*60/40 benchmark: 60% MSCI All Country World Index/40% Bloomberg US Aggregate Index

Yield as of December 31, 2021; returns and correlations calculated from January 1, 2001 through December 31, 2021 | **Source:** Bloomberg, Morningstar Direct, MSCI, S&P and AB

Bringing It All Together: One Possible Approach

Whether investors add traditional stocks or growth and income diversifiers, they each bring more risk into the portfolio, because all three still have relatively high correlations with US stocks, so investors should be careful to calibrate these portfolios to the appropriate level of risk.

In today's low-return, low-income environment, higher-income portfolios tend to outperform lower-income portfolios—all else being equal. That makes sense: if investors struggle to find growth in markets, having an income component that compounds over time can really make a difference.

Growth and income portfolios are relevant not only for income and growth investors, but also as a complementary exposure for any investor seeking to diversify away from traditional portfolios. Growth and income strategies diversify across not only investment types and asset classes, but also return contributors.

Active and Passive Choices: Where to Lean

With a suitable portfolio design in place, the choice between active and passive management can also make a big difference in defining success. In a low-return world, reducing fees while still being able to beat the market translates into leaning toward passive in some segments and active in others.

In the high-quality bond arena, most managers don't beat the index by a meaningful amount, and typically produce more risk, so efficiency argues for leaning into passive. Credit is a different animal entirely. Both active and passive managers tend to trail the index, but the average active manager has beaten the average passive manager. One reason why is that a passive strategy trying to replicate a credit index often creates a riskier low-return portfolio instead. So, investors should consider leaning into active management in high yield to refine risk, sector allocation, security selection and liquidity.

As for equity income diversifiers, the average active manager, particularly in EM and real estate, actually fares quite well. We think that stems from the relative inefficiency of these markets, so leaning into active management seems appropriate. With high-dividend equities, on the other hand, the average active manager doesn't meaningfully beat the index. For income investors in this area, as with many segments of large-cap equity markets, passive can be a reliable and inexpensive source of beta.

Looking at the Big Picture

Income investors likely face the stiffest challenge in a low-return landscape, because they want high income and low risk. Traditional core bonds no longer provide much income, though they're still an important element in downside protection. To design an efficient income portfolio, today's investor has to think broader and be more dynamic.

We believe investors seeking income should lean heavily on credit, but it's important to be efficient by expanding the global universe of income generators and being well diversified across many dimensions. Balancing actively managed, global multi-sector credit with high-quality bond exposure can help reduce the risk of large drawdowns that comes with credit exposure. What about income investors looking for some growth? Instead of incorporating traditional equities and sacrificing income, it's sensible to add income-producing diversifiers like high-dividend stocks, EM stocks and global REITs. But this exposure should be modest.

As investors consider the design of growth and income portfolios, it's important to move away from a 60/40 construct and instead target an income level, growth level and risk level. If investors do this thoughtfully, it can produce a portfolio that's compelling for an income investor and even a balanced portfolio investor. In a low-return environment, higher-income assets tend to outperform, so income investing is about more than the income investor—it's about creating better outcomes for all investors.

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A WORD ABOUT RISK

Interest-Rate Risk: Fixed-income securities may lose value if interest rates rise or fall—long-term securities tend to rise and fall more than short-term securities. The values of mortgage-related and asset-backed securities are particularly sensitive to changes in interest rates due to prepayment risk. Credit Risk: A bond's credit rating reflects the issuer's ability to make timely payments of interest or principal—the lower the rating, the higher the risk of default. If the issuer's financial strength deteriorates, the issuer's rating may be lowered and the bond's value may decline. Inflation Risk: Prices for goods and services tend to rise over time, which may erode the purchasing power of investments.

Municipal Market Risk: Debt securities issued by state or local governments may be subject to special political, legal, economic and market factors that can have a significant effect on the portfolio's yield or value. Fixed-Income Risk: Investments in fixed-income securities are subject to interest-rate risk, the fluctuation of the interest rate, and credit risk, the issuer's ability to make timely payments of interest or principal. The lower the credit rating, the higher the risk of default. Fixed-income securities with lower ratings (commonly known as "junk bonds") tend to have a higher probability that an issuer will default or fail to meet its payment obligations

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