REDEFINING DURATION

CREATIVE SOLUTIONS FOR EVOLVING MARKETS

The Portfolio Construction and Strategy Team

In recent portfolio consultations, our Portfolio Construction and Strategy Team has heard many clients ask for our perspective on reducing fixed income duration through the use of alternatives or short duration strategies. The concern is that rising interest rates in the U.S. could derail objectives for their portfolio. However, as our portfolio consultations tend to unpack these interest rate fears, we find that what is initially broad pessimism can be organized into a few specific concerns, and, importantly, specific portfolio solutions.

Even in an environment defined by low interest rates and tight credit spreads, there are ample risk-adjusted opportunities across government, credit and alternatives markets – many of which are not typically considered "short duration" solutions, but nonetheless deliver important ways for fixed income investors to successfully navigate the risk of rising rates.

In this article, we aim to distill our recent client portfolio consultations into three typical client "personas" we encounter and how, throughout each, we find opportunities to redefine what they view as their ideal "short duration" solution.

1 Investor Persona #1: Reducing duration but maintaining yield

"I still want high-quality fixed income with competitive yield but want more defense against rising rates."

CONSIDERATION: REDEFINE YOUR SHORT DURATION TOOL KIT

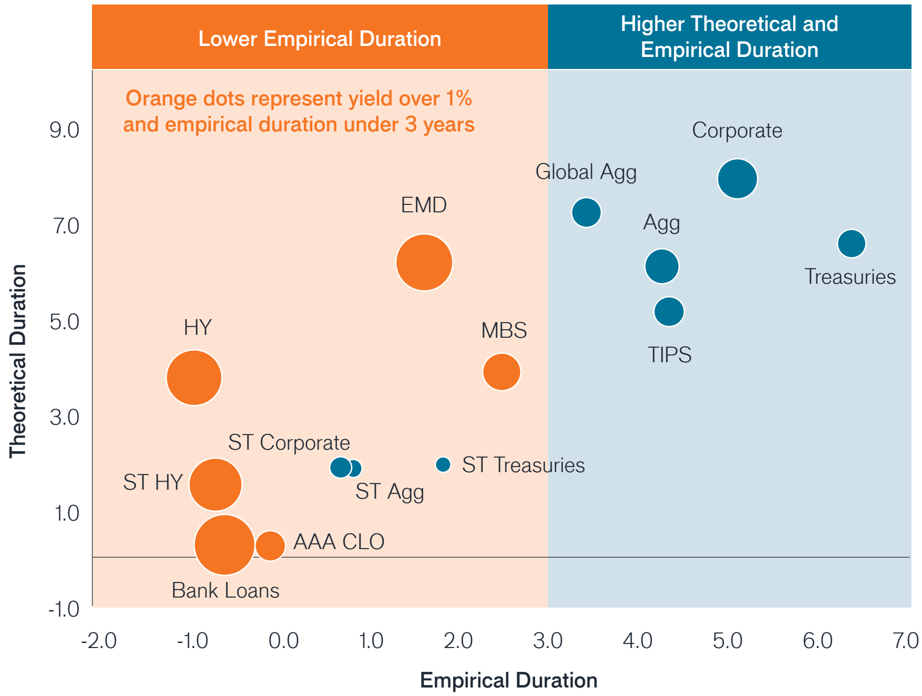
While duration is a helpful tool to balance volatile equity markets, in today's environment we are hearing from investors that, while they still want their fixed income to be conservative, they are worried about sensitivity to rising interest rates. The most obvious solution they consider, then, is to shorten their duration.

However, the standard calculation for duration can be unhelpfully simplistic. A strategy's theoretical duration is often referred to as its effective duration and it is commonly listed on fact sheets and websites. While this theoretical, or effective, duration provides a bond's estimated expected return for a given change in its yield, this duration measurement is simply theoretical because interest rate moves never happen in a vacuum and, more importantly, investors are generally more concerned with a bond's reaction to Treasury yield changes.

Empirical duration is important because it estimates a bond's reaction to Treasury yield changes by incorporating countless other real-life market risks (e.g., credit spreads). This gap between expected theoretical duration and the actual experienced, or empirical, duration is a valuable tool to capture real life results and how they can be dramatically different than a simple calculation.

The figure below summarizes this phenomenon. It plots a variety of asset classes' theoretical durations against their empirical durations. If math was reality, all the dots would plot along a straight line. But many asset classes have much higher mathematical, or theoretical, durations than empirical ones.

Your Low Duration Opportunity Set



Source: Janus Henderson. Empirical OAD calculated from 5-year period from 9/10/2016 - 9/9/2021 using 3M rolling daily returns and yield changes. Mathematical OAD and YTW represent the average calculated over that same 5-year period. Indices used are Bloomberg US 1-3yr US Treasury TR USD, Bloomberg US Aggregate 1-3yr TR USD, Bloomberg US Corp 1-3yr TR USD, Bloomberg US High-Yield 1-3yr TR USD, Bloomberg US MBS TR USD, Bloomberg US Agg Bond TR USD, Bloomberg US Treasury US TIPS TR USD, Bloomberg US Corp Bond TR USD, ICE BofA US High Yield TR USD, Bloomberg Global Aggregate TR USD, JPM EMBI Global TR USD, S&P/LSTA Leveraged Loan TR and JPM AAA CLO.

> While theoretical duration is an indication of an investment's interest rate sensitivity, empirical duration is a better indicator of actual real-life results and better highlights an investor's true "short duration" tool kit.

For example, the theoretical duration of high yield may not be traditionally thought of as "short" at 3.7 years, but, once you account for real life price movements, high yield over the past five years shows much less sensitivity to interest rate moves than one might expect, with an empirical duration that is in fact -0.87 years. The relationship between an asset class' theoretical and empirical durations varies depending on each asset class' sensitivity to a wide array of risk factors. Oftentimes yield plays a role. In the chart above, higher yields are represented by larger dots. Whereas short-term Treasuries have the same theoretical and empirical duration, asset classes that have yields incorporating larger spreads relative to Treasuries of similar maturities tend to exhibit lower empirical durations.

More relevant to core fixed income investors, MBS, for example, might have a theoretical duration of 3.8 years but given that the asset class generally has a high ratio of income to interest rate sensitivity, it's empirical duration is just 2.6 years, which implies behavior more in line with a shorter duration strategy.

The bottom line is relatively simple: the most common duration metric might drastically overstate the real-life interest rate sensitivity of many common portfolio tools, and therein lies the opportunity to redefine your short duration tool kit – often with the benefit of a portfolio with lower duration and higher yields than previously thought possible.

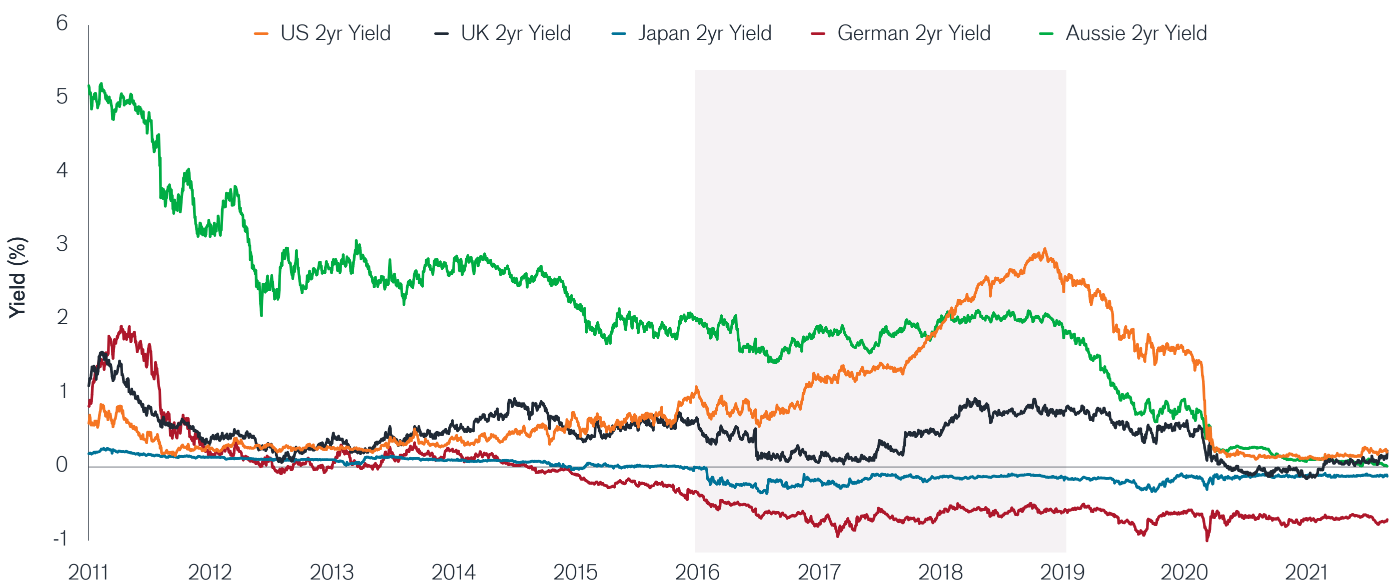
CONSIDERATION: REDEFINE YOUR HOME BASE

Investors who are concerned with their U.S. fixed income duration should also remember that the world economy is not perfectly synchronized. Different countries are in different phases of their economic cycles, and the global bond market is vast. Looking outside of the U.S. can provide a vast opportunity set in which investors can diversify risk and duration, allowing for additional sources of return not available in a solely domestic fixed income portfolio.

> Currently, the U.S. makes up only 37%[1] of the global fixed income opportunity set as measured by its share of the Barclays Global Aggregate benchmark. This means that 63% of the world's bonds can be bought without the same sensitivity to the U.S. interest-rate cycle.

For example, note the divergence in short-term bond yields in the figure below over the 2016-2019 period, when bond markets were pricing in the last economic recovery. As the world emerges from the pandemic, we expect similar divergence opportunities can continue. In Australia, for example, the Governor of the Reserve Bank recently pushed back on the country's pricing in of a rate hike in 2022, saying "I find it difficult to understand why rate rises are being priced in next year or early 2023. While policy rates might be increased in other countries over this timeframe, our wage and inflation experience is quite different".[2]

Diverging Developed Bond Markets



Source: Bloomberg, as of 31 August 2021.

A key benefit of a broader global opportunity set is the possibility of smoothing the volatility of a bond portfolio's returns by identifying countries that may be either just beginning to price in an economic recovery or – at the other extreme – may have nearly completed it. Less duration exposure could be taken in the former (countries just starting to price in a recovery) than the latter (countries which may have largely priced in a recovery). For investors wanting to decrease their U.S. duration, going global can lessen the amount of fixed income invested exclusively at home and, therefore, provide a diversified way to "shorten" their portfolio's U.S. duration.

[1] U.S. Global Aggregate weighting as of 31 August 2021.

[2] September 2021 speech from Philip Lowe, Governor of Reserve Bank of Australia https://www.rba.gov.au/speeches/2021/pdf/sp-gov-2021-09-14.pdf

2 Investor Persona #2: Reaching for yield, responsibly

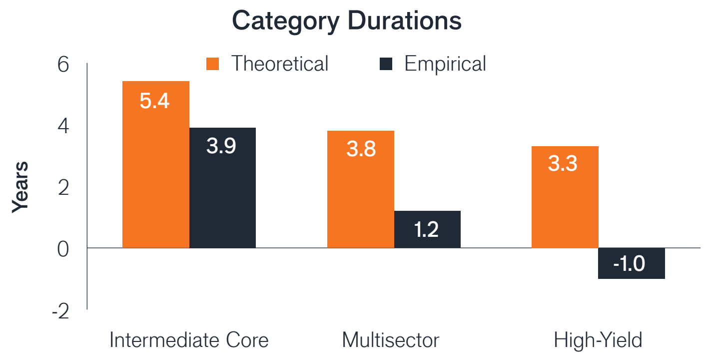
"I want to move outside the core to increase yield, but I worry about high-yield spread levels."

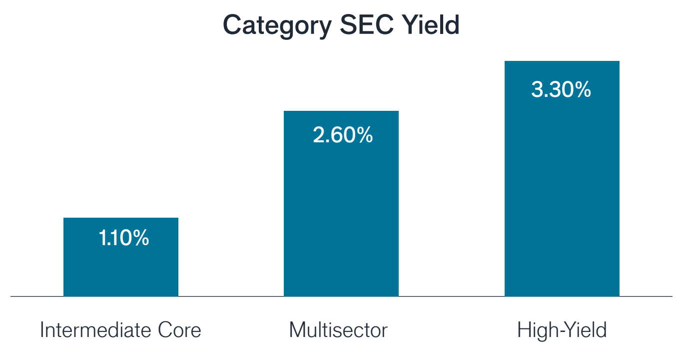
CONSIDERATION: REDEFINE HIGH YIELD

While the aforementioned perspective on empirical duration might make traditional high yield extremely compelling for offering high income for very low – or negative – empirical duration, the devil is in the implementation.

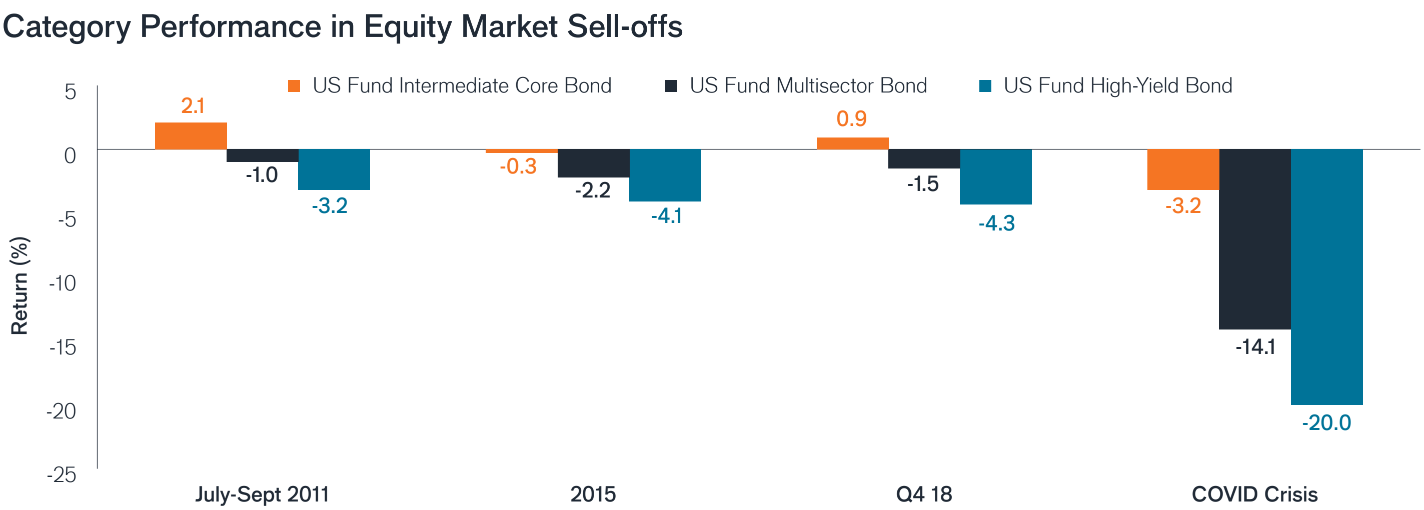
With credit spreads currently below 10-year averages, the high-yield asset class certainly has much less upside than it did in March 2020 when spreads were near all-time highs. If these current valuations in traditional high-yield cause concern but investors are still attracted to its potential to drive relatively high portfolio yield with relatively low duration contribution, multisector bond funds may be a solution. This category provides an investor the ability to allocate to high yield on an opportunistic basis while also diversifying into other fixed income sectors that can add value over traditional core/core plus strategies. Some additional "plus" sectors, or sectors that can often be below investment grade but offer attractive risk/return relative to the rate-sensitive part of the market, include sectors like bank loans and various areas of the securitized markets, such as CMBS, ABS and CLOs. Many of these sectors are excluded from the traditional fixed income benchmarks and are often underrepresented in portfolios.

Possibly because of their greater latitude to allocate to these diversified sectors and in a more tactical fashion, the funds in the multisector bond category can serve as an opportunistic middle ground between the intermediate core and high yield space. As the charts show, the multisector bond category, along with high yield, shared the benefits of lower empirical duration and higher yields, while at the same time sharing with intermediate core the benefits of lower losses than high yield experienced during equity market sell-offs.





Source: Morningstar, as of 31 August 2021.



Past performance is no guarantee of future results.
Source: Morningstar. Time periods shown denote 7/1/11-9/30/11, calendar year 2015, 10/1/18-12/31/18 and 2/1/20-3/31/20.

3 Investor Persona #3: Diversifying away from both bonds and stocks

"I want to diversify from duration and credit altogether, but I'm not comfortable moving to equities given their valuations and other risks involved."

CONSIDERATION: REDEFINE YOUR ALTERNATIVE SELECTION

If investors still aren't satisfied with any solution presented above, it's often because they want to lower their allocation to bonds altogether. Which begs the question of where to put the money withdrawn from bonds.

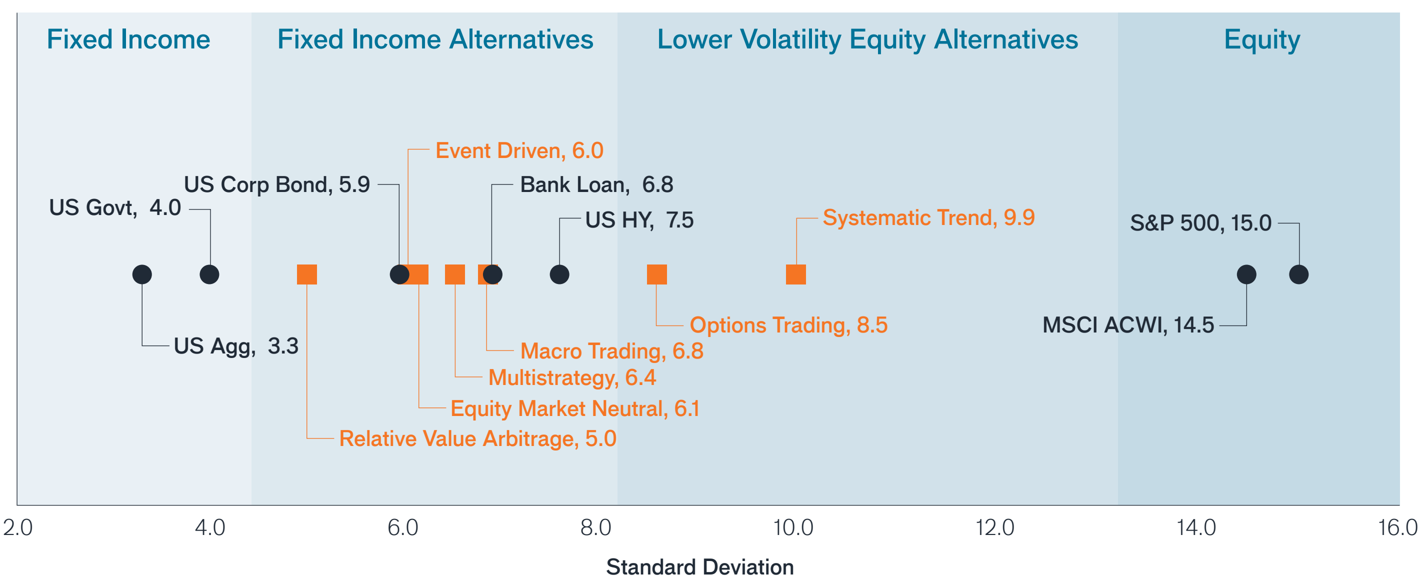
Instead of simply moving that money into equities, investors are increasingly looking to alternatives as a way to sidestep both equity and fixed income risks.

Breadth is both the biggest opportunity and the biggest challenge of allocating to liquid alternatives. They potentially serve to diversify a portfolio but there are a wide range of characteristics among them, both across categories and within. When looking for a liquid alternative to replace a fixed income allocation, one should start by identifying the alternative categories that have a similar risk profile to the fixed income that is being replaced.

As you can see in the chart below, based on trailing 5-year standard deviation, the nearest neighbors to core fixed income are what we label as "Fixed Income Alternatives":

- Relative Value Arbitrage
- Event Driven
- Equity Market Neutral
- Multistrategy
- Macro Trading

5-Year Standard Deviation of Fixed Income, Equities and Their Alternatives



Source: Morningstar, as of 31 August 2021.

Once an investor has identified the relevant category(ies) to consider, it's most important to look under the hood and understand strategy-level characteristics. As you can see below there is a wide divergence of fund-level risk within each Morningstar category. While the Event Driven category had an overall average risk that was in line with the Corporate Bond Index's 5.9% standard deviation, you can see that certain managers in the Event Driven category have produced a 5-year standard deviation that's higher than the S&P's 15.0% standard deviation. If adding alternatives is intended to replace fixed income duration, this risk dynamic needs to be assessed carefully.

5-year Standard Deviation of Morningstar Alternative Categories

Source: Morningstar, as of 31 August 2021.

THERE ARE NO (GOOD) ONE-SIZE-FITS-ALL SOLUTIONS

Every investor has different goals, time horizons and risk tolerances. However, for investors that have wanted a balanced portfolio that will perform (that is, generate a reasonable risk-adjusted return) across different environments, "core" allocations to bonds have generally delivered. Even as interest rates declined toward – and in some cases through – zero, core bond benchmarks like the Bloomberg U.S. Aggregate Bond Index proved they could still protect when equities sold off. We don't believe the current environment is so fundamentally different that this history should be ignored. Equity markets are (as of this writing) at all-time highs, and the risks of unknown or unexpected events are as prevalent as ever.

But when Treasury rates are expected to rise, it makes sense for many investors to have less exposure to them than when rates fell. However, perfect timing of that decision has proved impossible, and we believe the instinct to lower overall duration needs to be interrogated through a customized portfolio consultation.

Ultimately, we believe that navigating these decisions requires a thoughtful, forward-looking asset allocation implemented with a hands-on approach from experienced bond managers. A successful allocation can use all these techniques and instruments we have described to dynamically adjust exposures as conditions evolve, while maintaining throughout a focus on finding the appropriate balance of risk and reward to meet investors' goals. However inevitable it may seem that bond yields will rise, we believe bond portfolios have a core role to play in investors' diversified portfolios.

ABOUT THE PORTFOLIO CONSTRUCTION AND STRATEGY TEAM

The PCS Team performs customized analyses on investment portfolios, providing differentiated, data-driven diagnostics. From a diverse universe of thousands of models emerge trends, themes and potential opportunities in portfolio construction that we believe will be interesting and beneficial to any investor.

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Janus Henderson INVESTORS

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Past performance is no guarantee of future results. Investing involves risk, including the possible loss of principal and fluctuation of value.

Diversification neither assures a profit nor eliminates the risk of experiencing investment losses.

Foreign securities are subject to additional risks including currency fluctuations, political and economic uncertainty, increased volatility, lower liquidity and differing financial and information reporting standards, all of which are magnified in emerging markets.

Duration measures a bond price's sensitivity to changes in interest rates. The longer a bond's duration, the higher its sensitivity to changes in interest rates and vice versa.

Emerging market investments have historically been subject to significant gains and/or losses. As such, returns may be subject to volatility.

Fixed income securities are subject to interest rate, inflation, credit and default risk. The bond market is volatile. As interest rates rise, bond prices usually fall, and vice versa. The return of principal is not guaranteed, and prices may decline if an issuer fails to make timely payments or its credit strength weakens.

Alternative investments include, but are not limited to, commodities, real estate, currencies, hedging strategies, futures, structured products, and other securities intended to be less correlated to the market. They are typically subject to increased risk and are not suitable for all investors.

Credit Spread is the difference in yield between securities with similar maturity but different credit quality. Widening spreads generally indicate deteriorating creditworthiness of corporate borrowers, and narrowing indicate improving.

High-yield or "junk" bonds involve a greater risk of default and price volatility and can experience sudden and sharp price swings.

Equity securities are subject to risks including market risk. Returns will fluctuate in response to issuer, political and economic developments.

Standard Deviation measures historical volatility. Higher standard deviation implies greater volatility.

Collateralized Loan Obligations (CLOs) are debt securities issued in different tranches, with varying degrees of risk, and backed by an underlying portfolio consisting primarily of below investment grade corporate loans. The return of principal is not guaranteed, and prices may decline if payments are not made timely or credit strength weakens. CLOs are subject to liquidity risk, interest rate risk, credit risk, call risk and the risk of default of the underlying assets.

U.S. Treasury securities are direct debt obligations issued by the U.S. Government. With government bonds, the investor is a creditor of the government. Treasury Bills and U.S. Government Bonds are guaranteed by the full faith and credit of the United States government, are generally considered to be free of credit risk and typically carry lower yields than other securities.

S&P 500® Index reflects U.S. large-cap equity performance and represents broad U.S. equity market performance.

Bloomberg U.S. Aggregate Bond Index is a broad-based measure of the investment grade, US dollar-denominated, fixed-rate taxable bond market.

Mortgage-backed securities (MBS) may be more sensitive to interest rate changes.

They are subject to extension risk, where borrowers extend the duration of their mortgages as interest rates rise, and prepayment risk, where borrowers pay off their mortgages earlier as interest rates fall. These risks may reduce returns.

Securitized products, such as mortgage- and asset-backed securities, are subject to prepayment and liquidity risk.

Smaller capitalization securities may be less stable and more susceptible to adverse developments, and may be more volatile and less liquid than larger capitalization securities.

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