Nationwide®
is on your side

Fixed income

White paper

Making sense of the bond market

Key highlights

- **The bond market is at a critical transition point with rates poised to rise.**
- **Interest rates generally follow the performance of the economy.**
- **Active bond strategies may be better suited to help investors through the change in cycles.**

Summary

The stock market gets the lion's share of attention from investors and the financial media, but the bond market offers a greater share of investment opportunities, not only because it's bigger — $41.0 trillion for the U.S. bond market versus $32.1 trillion for U.S. stocks — but also because it is more dynamic and diverse.

Bonds are essential pieces of a comprehensive investment strategy. They're important for income generation as well as portfolio stability. However, many investors remain in the dark about how the bond market works or how to use bonds and bond funds effectively in their portfolios.

Understanding the factors that influence bond returns and bond market performance becomes critical as we transition to a new phase of the market cycle — ending the 35-year bull market for bonds with interest rates poised to rise and global central banks ready to implement more restrictive monetary policies.

In this white paper, we'll share insights to help investors get a better understanding of how the bond market works. We'll explore what's changed in the bond market in the 10 years since the global financial crisis. We'll also examine how investors can position their bond allocations to capture potential return opportunities in the changing market environment.

Types of securities

U.S. Treasury securities

Issued by the U.S. government to fund federal spending, U.S. Treasurys are considered to be the safest securities in the market because they are backed by the full faith and credit of the U.S. government. Interest rates paid by U.S. Treasurys is called the risk-free rate, but yields will vary due to the length of the maturity. Maturities range from 30 days to 30 years, although the majority of Treasury issues are notes maturing in 2 to 10 years ($8.8 trillion outstanding in 2017, according to the Securities Industry and Financial Markets Association).

Mortgage-related bonds

Issued by U.S. federal government agencies, government-sponsored entities or private lenders, these bonds are financed by baskets of different mortgages on residential or commercial property. Principal and interest are paid to investors as mortgage holders make payments on their loans. Within this category, collateralized mortgage obligations (CMOs) are multi-class bonds offering varying scales of terms and risks for investors with specific needs.

Corporate bonds

These bonds represent borrowing by U.S. businesses. The majority of outstanding corporate bonds are investment grade, rated in the top four categories by independent credit rating agencies Standard & Poor's, Fitch or Moody's. High-yield bonds are considered riskier than investment grade because of uncertainty about the performance of the underlying business, so they have higher coupon rates (and pay higher yields to investors).

Municipal ("muni") bonds

Unlike U.S. Treasury securities, muni bonds are not backed by the full faith of the U.S. government, but rather by the municipality or a project within a municipality such as infrastructure (e.g., roads, bridges, waterworks, etc.). Principal and interest are usually paid to investors via tax revenue or usage fees (e.g., bridge or highway tolls). Municipal bonds are favored by high net worth and older investors because interest is exempt from federal income taxes.

Federal agency bonds

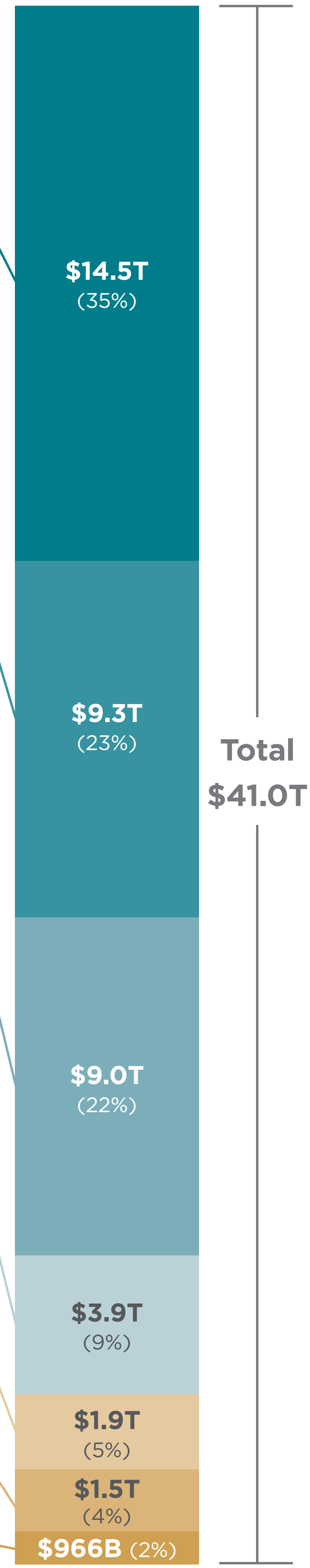
Unlike U.S. Treasury securities, federal agency bonds are not backed by the full faith of the U.S. government, but rather by a government agency — including government-sponsored enterprises (GSEs) such as Fannie Mae or Freddie Mac. Interest on some agency bonds may be exempt from state or local income tax.

Asset-backed securities

These bonds are issued by loan originators (e.g., banks, credit card providers) and are backed by loans made to consumers (e.g., credit card receivables, auto loans, home equity loans, etc.). The majority of outstanding asset-backed bonds are top rated (AAA).

Money markets

U.S. fixed income market



Source for chart data: Securities Industry and Financial Markets Association (SIFMA). Data as of 2017.

The bond market landscape

Bonds are important components of a comprehensive investment plan, both as a source of income and as a counterbalance to equities to help lower portfolio volatility.

But bonds in general don't get the same attention that stocks get from investors or the financial media. Part of the reason is that bonds are seen as a boring relative to stocks — bond prices haven't fluctuated as much as stock prices, at least in more recent market history. Additionally, bonds are difficult to understand, with interest rates and duration more influential in determining their values, rather than earnings and investor demand.

From the perspective of the financial market as a whole, bonds have a more dominant role than stocks: At $41.0 trillion, the U.S. bond market is bigger than the $32.0 trillion U.S. stock market. Moreover, the bond market is more active than the stock market, with nearly three times the level of trading on average as measured by the total value of securities traded.

Average daily trading volume in 2017

Source for data: Bats Global Markets (stock market), SIFMA (bond market)

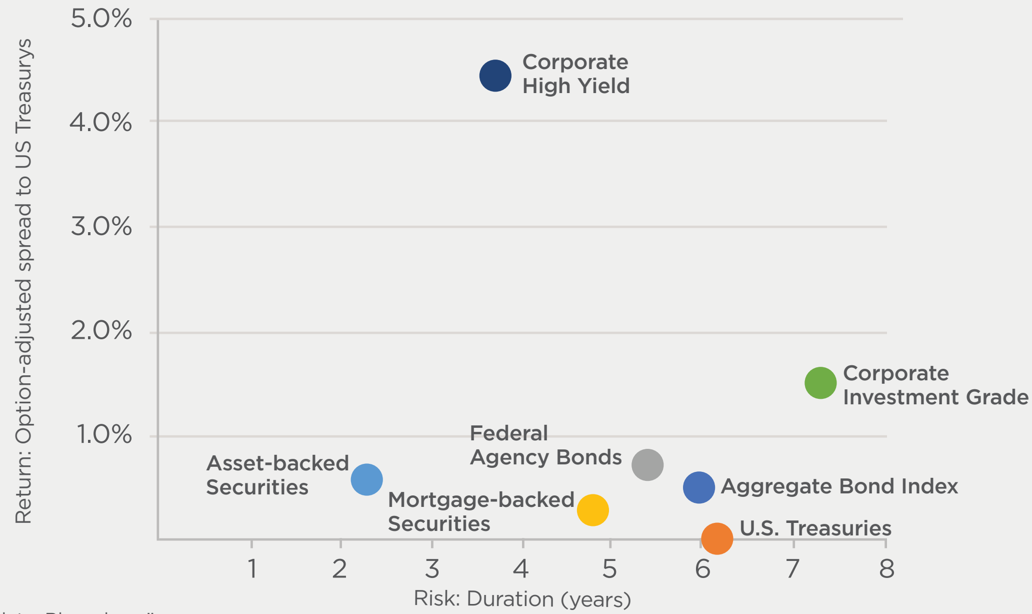
Bond market vital signs
as of January 15, 2019

	Option-adjusted spread Measures the rate difference (spread) between a fixed-income security and the risk-free rate of return, adjusted to account for an embedded option	**Duration** How sensitive a bond is to changes in interest rates; higher duration means greater sensitivity	**Yield to maturity (YTM)** The estimated rate of return for a bond held to maturity	**Key risks in the current market environment**
U.S. bond market in aggregate Index: Bloomberg Barclays U.S. Aggregate Bond Index	0.51%	5.92	3.28%	Rising rates, credit risk, extension
U.S. Treasurys Index: Bloomberg Barclays U.S. Treasury Total Return Index	--	6.11	2.66%	Rising rates
Federal agency bonds Index: Bloomberg Barclays U.S. Aggregate Government-Related Total Return Index	0.71%	5.38	3.38%	Rising rates
Mortgage-backed securities Index: Bloomberg Barclays US Mortgage Backed Securities (MBS) Index	0.35%	4.83	3.41%	Prepayment risk and extension risk
Asset-backed securities Index: Bloomberg Barclays U.S. Aggregate Asset Backed Securities Index	0.51%	2.14	3.09%	Liquidity and credit risk
Corporate — investment grade Index: Bloomberg Barclays U.S. Corporate Bond Index	1.48%	7.17	4.20%	Credit risk
Corporate — high yield Index: Bloomberg Barclays U.S. Corporate High Yield Bond Index	4.45%	3.79	7.23%	Liquidity and credit risk

Source: Bloomberg

U.S. bond market risk/return analysis

as of January 15, 2019



"Source for chart data: Bloomberg"

Where are bonds today?

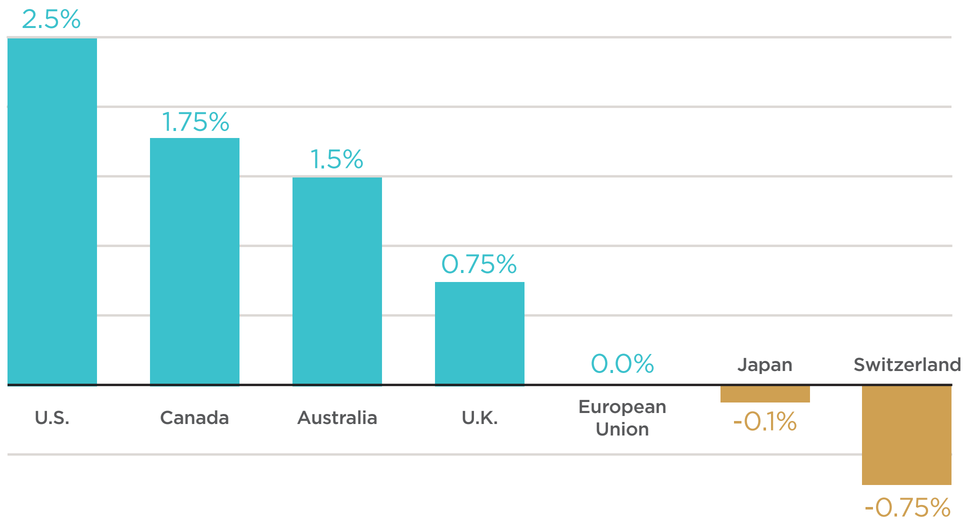
Activity in global bond markets over the past 10 years has been extraordinary, primarily for the role central banks in the major advanced economies (the U.S., U.K., Europe and Japan) played during the global financial crisis of 2007-09. The Federal Reserve and other central banks went to unprecedented lengths in the early aftermath of the crisis to enact accommodative monetary policies, dropping prime lending rates to near zero (in the U.S.) or below zero (in Europe and Japan), and buying securities on the private market (quantitative easing).

Ten years beyond the worst of the crisis, global economies are finally showing signs of resilience. The U.S. set the pace for economic growth coming out of the last recession, while expansions in advanced and emerging economies arrived later. The return of growth has given central bankers enough cause to begin tapering their accommodative monetary policies. With the U.S. leading the global recovery, the Fed moved first to lift interest rates from their historically low levels, ending quantitative easing and beginning to reduce the size of their balance sheet.

The end of "easy money" has pushed U.S. interest rates higher. But since the Fed began raising rates in December 2015, longer-term interest rates haven't climbed as high as many economists and market analysts had feared. Part of the reason for this is the continuation of stimulative monetary policies from central banks in Japan and the European Union; because yields are more attractive on U.S. sovereign debt than on Japanese or German bonds, demand has remained strong and constrained the pace of U.S. rising rates. Even with moderate rate increases, the environment for bond investors has changed — potentially in ways many investors may not be prepared for.

Key interest rates of major global central banks

as of December 31, 2018



Source: Global-rates.com

But to assess the current bond market environment properly, we have to look back farther than the financial crisis for a wider perspective. Interest rates reached their lowest point in the summer of 2016, but this historic decline can be seen as an extension of the long run of falling rates and appreciating bond values that started in 1981.

From this peak, interest rates have gradually come down over the following three-plus decades. There have been periods over this time when rates seesawed, rising during economic expansions and falling during recessions. But the path that rates took over this time clearly represents a long-term downtrend.

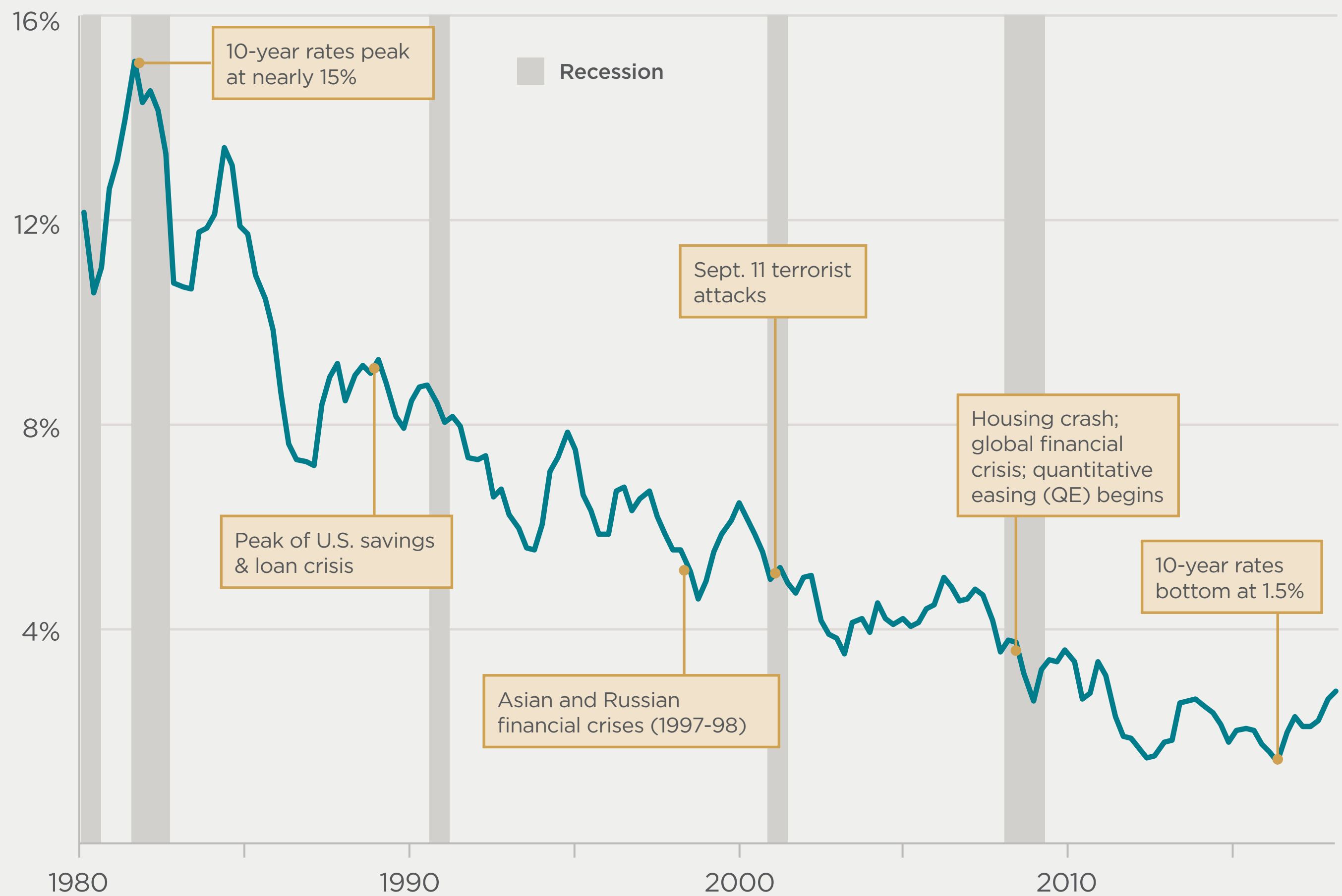
Governments, businesses and consumers benefited from lower costs of borrowing, and debt levels exploded during this period. Bond investors benefited from a long-term bull market in bonds. (Bond values rise when rates fall.) But for investors seeking income, including many older investors, the long downtrend in interest rates has been mostly bad news, with falling yields making sustainable income a more difficult goal to achieve.

Perhaps more importantly, few in the current generation of investors and investment managers have lived or worked during a tumultuous period of rising or volatile interest rates. This could present a problem when the long-term trend in interest rates decisively turns.

For most market participants, the bond market environment of the past 35+ years is all they've ever known.

10-year U.S. Treasury note yield

1980 to 2017



Source for chart data: FactSet (10-year rate); National Bureau of Economic Research (recession dates)

Is there a new normal?

It seems the bond market has turned a corner, with rates finally climbing off historically low levels. Does that mean we're heading back to a period of normal interest rates? It depends on what the definition of normal is. If anything, it's fair to say there is no normal when it comes to interest rates, because they've been on a steady downtrend for nearly 40 years.

Some evidence of a different bond environment can be seen in the chart below. In the chart, economic performance is represented by the annual growth rate of *nominal* GDP, which adjusts the *annual* GDP growth rate for inflation. As you can see, the 10-year rate has tracked nominal GDP growth for much of the past four decades.

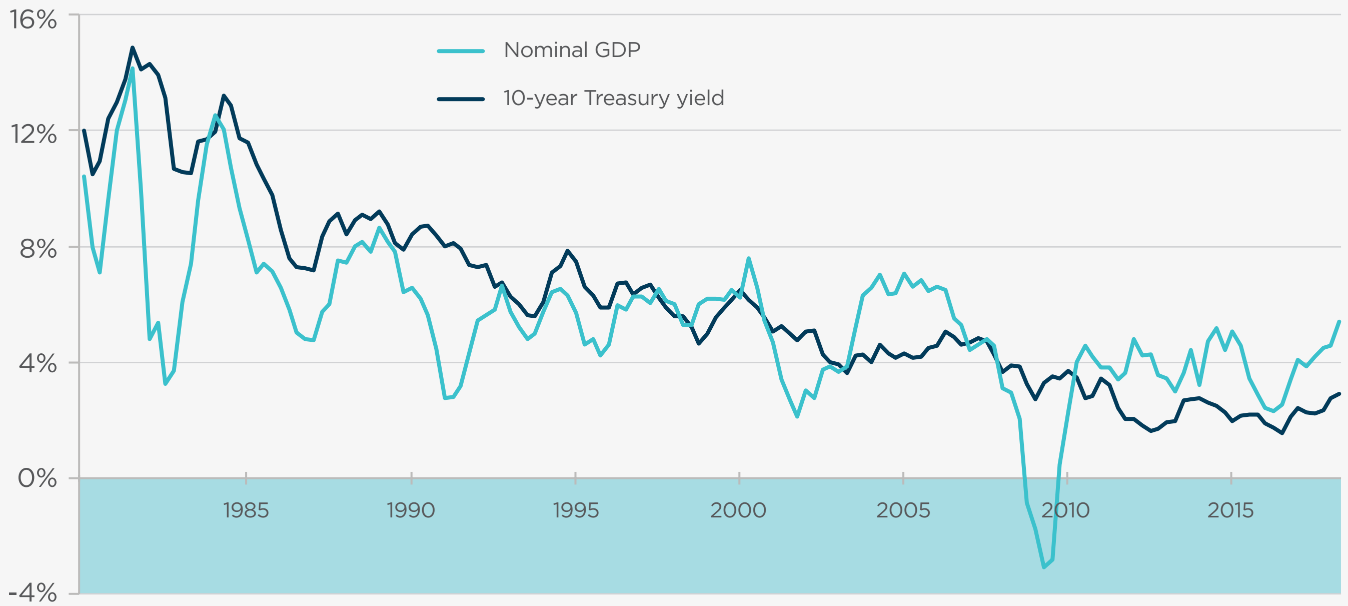
Generally, 10-year Treasury rates follow the performance of the economy.

But since the end of 2015 — when the Fed began raising its target federal funds rate — the trend of nominal GDP growth has risen at a faster pace.

Several factors are driving this divergence. The first factor is quantitative easing: Never before in the bond market has there been such a large and willing buyer in the presence of the Federal Reserve. Its broad and indiscriminate bond buying in the wake of the financial crisis created unusual distortions in bond markets and held rates low for an extended period.

Interest rates follow growth: Nominal GDP vs. 10-year Treasurys

1989–April 2018



Source for chart data: FactSet

The second factor is global dynamics. While the Fed has moved first to lift interest rates in the U.S., its counterparts in Europe and Japan have yet to begin any rate tightening. (The European Central Bank has at least projected an end to low rates and quantitative easing in a recent announcement.) With long-term government rates so low in other advanced economies of the world, it would seem unlikely that U.S. interest rates would accelerate anytime soon.

10-year benchmark rates in Germany and Japan remain close to zero, while the corresponding U.S. rate hovers around 3%.

(See chart below.)

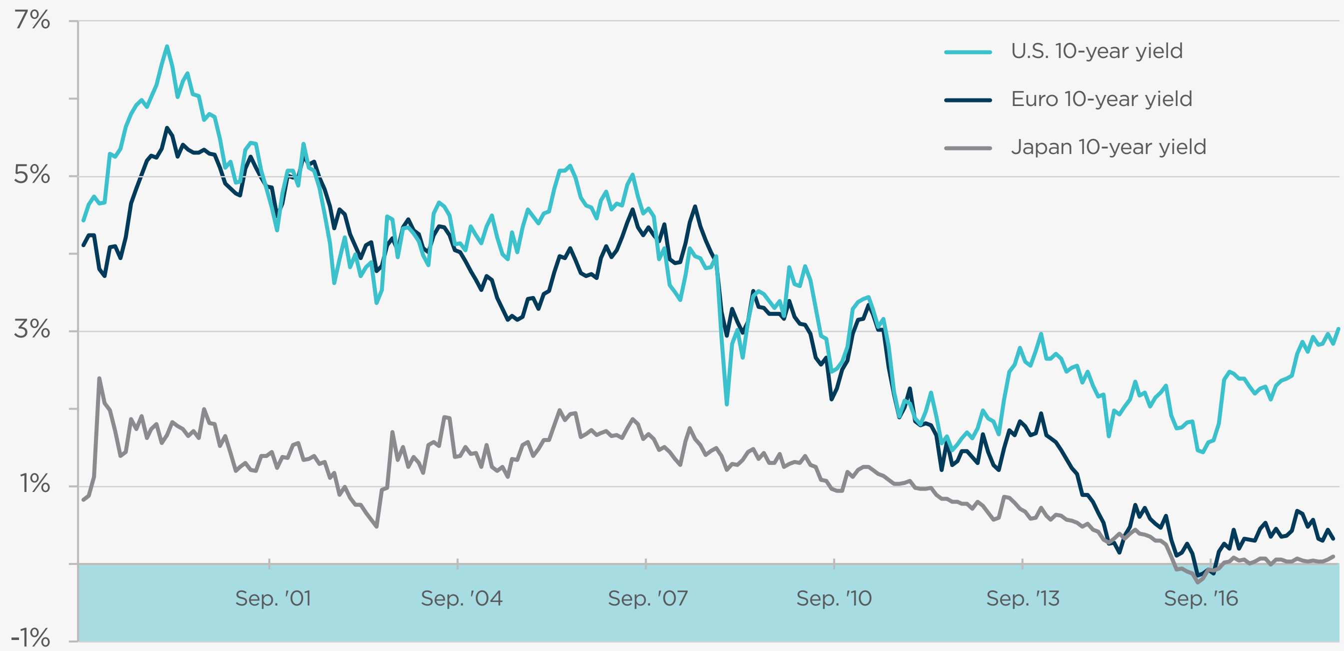
Our view is that U.S. interest rates should continue to push higher in the near term, but not fast enough to present a shock to the U.S. bond market. Usually at this stage of the economic cycle (late expansion), growth has risen strongly, business activity is robust and inflation would be pressing upward.

At present, the first two conditions have been met, but inflation has ticked higher only modestly and from an already low level. The Fed would typically move to raise interest rates at this point in the cycle in an effort to cool a heating economy. But the current pace of Fed rate hikes has been among the slowest on record.

A slow transition to a cycle of higher interest rates would be positive for bond investors, allowing enough time to adjust their fixed income positions to account for the new realities of the bond market.

Comparison of global 10-year sovereign debt yields

Sept. 1998 to Sept. 2018



Source for chart data: FactSet

What’s ahead for bonds?

To set expectations for where the bond market and interest rates in particular may be heading, it helps to understand the concept of term premium. Term premium is the amount of *extra yield* investors expect to receive for taking on the additional risk of investing in long-term bonds. Or, more simply, term premium is the difference between interest rates for long- and short-term bonds, such as 10-year Treasury notes and 2-year Treasury bills.

As the chart below illustrates, term premium has declined and turned negative in advance of the last three recessions going back to 1988.

The current term premium is also visible when looking at the yield curve. In a normal upward-sloping yield curve, the term premium shows up in the steepness of the line. When the curve is steeper, it shows investors are willing to accept more risk by investing in longer-term bonds in order to capture greater yields.

When the curve is flatter, as it has been in recent months, it shows a lack of available term premium. The absence of term premium, as seen in the flatness of the current yield curve, explains why long-term rates (10-year Treasurys) struggled to break out above 3% until recently.

For rates to rise to the 4% or 5% level, which would represent a shock to the bond market, the term premium would have to be much higher and the yield curve much steeper. In the current economic environment, it seems unlikely that either would occur. If anything, term premium should remain compressed and the yield curve should stay flat or potentially invert in advance of the next recession.

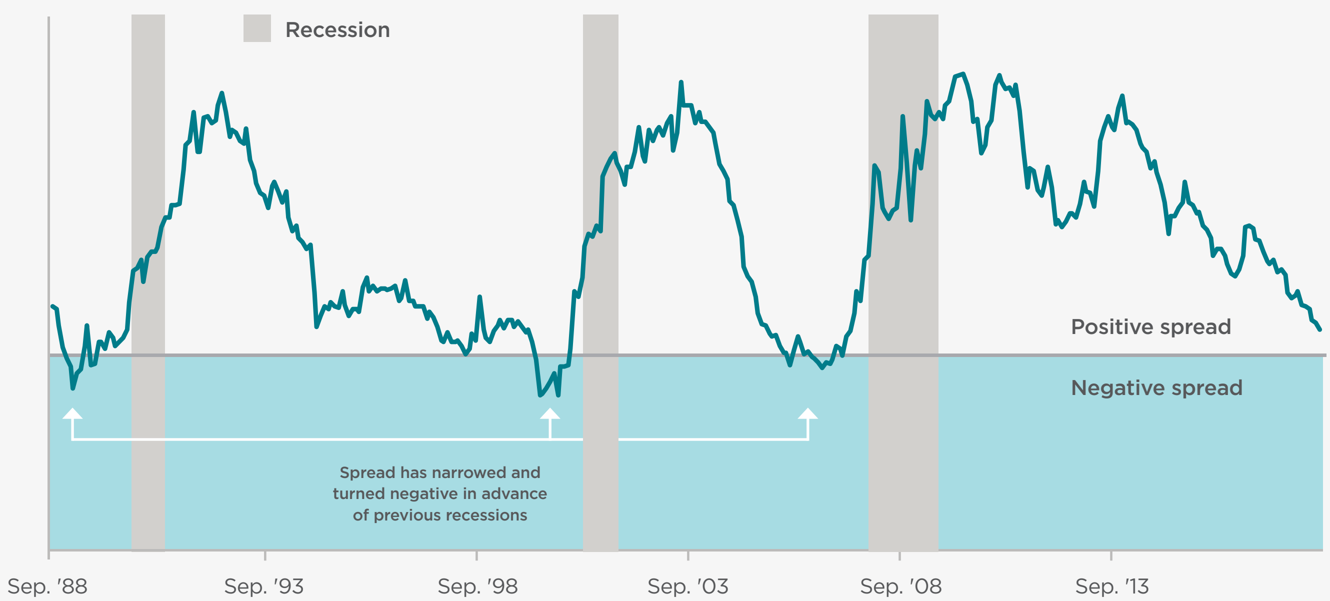
When rates move higher, investors see the value of their bond investments decline. This is why one strategy to manage the risks of rising interest rates is to adjust your fixed-income allocation to bonds with lower duration. Duration is a measure of a bond’s sensitivity to interest rates: When rates rise, bonds with a longer duration would suffer a greater loss of value than bonds with a shorter duration. So if you expect rates to climb higher, you would look to shift your fixed-income holdings to bonds with shorter durations.

But duration is not necessarily bad for a fixed-income allocation. In the case of an equity market sell-off, spreads on credit-sensitive bonds would widen and prices would decline as investors look to lower their risk exposure and seek the relative safety of higher quality bonds, including U.S. Treasurys, agency-backed securities and investment-grade corporate bonds. Taking on additional duration risk by investing in longer-term bonds would provide an effective counterweight to the risk of equity exposure.

This is why some duration is worthwhile: It creates the benefits of diversification, which helps bonds counter the volatility of equities.

Spread (difference) between 10-year and 2-year Treasury yields

Sept. 1988–Sept. 2018

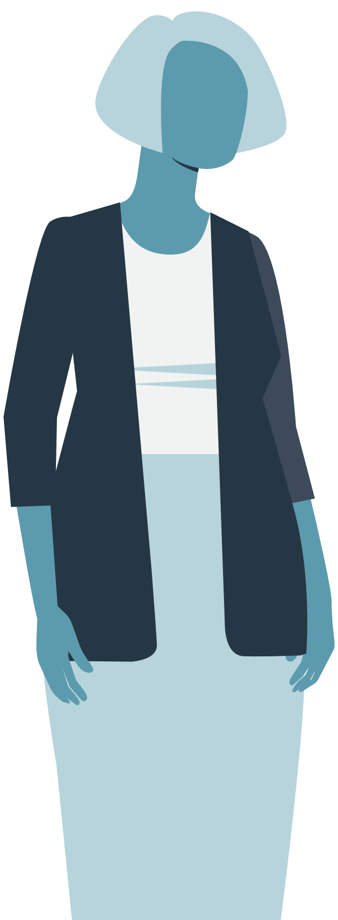


Opportunities and risks in today's bond market

Fixed-income strategies that are flexible and actively managed are better positioned to help investors manage through periods of market transitions, because they can adjust their allocations in response to changing conditions or rising interest rates.

Passive investing can be difficult to do successfully with bonds because of difficulties that come with trying to replicate a bond market index. A passive manager would seek to accomplish this either by fully replicating the target index, which is more difficult to do with bonds than it is for stocks; or sampling the index, which is not ideal.

An active bond manager has more levers at their disposal, and they can use these levers to adjust different aspects of the portfolio to keep the fund on track toward its goals.



Some of the ways active bond managers can respond to market conditions include:

Duration and yield curve positioning — In a climate of rising interest rates, an active manager can shift the fund's allocation to the area of the yield curve offering the best risk/reward trade-off. Shorter duration bonds are less sensitive to changes in interest rates.

Sector allocation and security selection — An active manager can be more selective or deliberate in picking bonds to add or sell from the portfolio, either to increase portfolio quality or assume additional risk to capture higher yields.

Out-of-benchmark allocations — If included in the fund's investment mandate, an active manager can look to add risk and increase total return by venturing outside of the fund's benchmark, such as adding high-yield bonds to an investment-grade portfolio or using derivatives such as credit default swaps to lower risk.

Use of derivatives — While there are risks in including derivatives in a portfolio, they also have benefits if used properly and strategically. For example, interest rate futures offer an active manager an easy solution for changing portfolio duration, which can be beneficial in times of rising or falling rates.

Active management of fixed-income can be valuable for helping investors navigate shifting conditions in the bond market. Investors can stay aware of growing risks by monitoring the following indicators for signs of change:

- Rising quality spreads — As we discussed, adverse credit events can happen quickly and severely, presenting greater risk to investors than interest rate changes. Watching how spreads develop between investment grade and high-yield bonds can help investors stay aware of possible changes.
- Increased bond issuance — A series of large bond offerings could be a sign that the market is reaching a stage of overleverage.
- Increased leverage in the lower end of investment grade.

Key takeaways

1

Building a better understanding of how bonds work may help investors position bond investments more effectively in their portfolios.

2

Be aware of the risks that come with different bond investments, especially as the interest rate environment shifts from falling rates to rising rates.

3

Active bond strategies may be better suited to the changing climate of higher interest rates as managers are in position to respond to shifting market conditions.

Nationwide®
is on your side

IMPORTANT DISCLOSURES

This material is not a recommendation to buy, sell, hold or roll over any asset, adopt an investment strategy, retain a specific investment manager or use a particular account type. It does not take into account the specific investment objectives, tax and financial condition or particular needs of any specific person. Investors should discuss their specific situation with their financial professional.

Except where otherwise indicated, the views and opinions expressed are those of Nationwide as of the date noted, are subject to change at any time and may not come to pass.

Bloomberg Barclays US Aggregate Bond Index: An unmanaged, market value-weighted index of U.S. dollar-denominated, investment-grade, fixed-rate, taxable debt issues, which includes Treasuries, government-related and corporate securities, mortgage-backed securities (agency fixed-rate and hybrid adjustable-rate mortgage pass-throughs), asset-backed securities and commercial mortgage-backed securities (agency and non-agency). **Bloomberg Barclays U.S. Treasury Total Return Index:** The Bloomberg Barclays US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index. **Bloomberg Barclays U.S. Aggregate Government-Related Total Return Index:** An unmanaged, market value-weighted index of U.S. dollar-denominated, investment-grade, fixed-rate, taxable debt issues, which only includes government-related securities as defined by the Bloomberg Barclays Classification system. **Bloomberg Barclays US Mortgage Backed Securities (MBS) Index:** The Bloomberg Barclays US Mortgage Backed Securities (MBS) Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage. **Bloomberg Barclays U.S. Aggregate Asset Backed Securities Index:** An unmanaged, market value-weighted index of U.S. dollar-denominated, investment-grade, fixed-rate, taxable debt issues, which only includes asset-backed securities as defined by the Bloomberg Barclays Classification system. **Bloomberg Barclays U.S. Corporate Bond Index:** The Bloomberg Barclays US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers. **Bloomberg Barclays U.S. Corporate High Yield Bond Index:** The Bloomberg Barclays US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays EM country definition, are excluded.

Investing in international markets involves risks not associated with investing solely in the United States, such as currency fluctuation, political risk, differences in accounting and the limited availability of information.

Nationwide Funds are distributed by Nationwide Fund Distributors LLC (NFD), member FINRA, Columbus, Ohio.

The general distributor is Nationwide Investment Services Corporation (NISC), member FINRA, Columbus, Ohio.

MFM-2936AO.1 (01/19)