

Fixed Income Investing in a Rising Rate Environment



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After a decade-long slide in interest rates, bond investors may be facing a period of sustained rate hikes, prompting worries about the implications for their fixed income investments. While rising rates present unique challenges to bond investors, there are strategies for adapting to this evolving vista.

Anatomy of rising interest rates

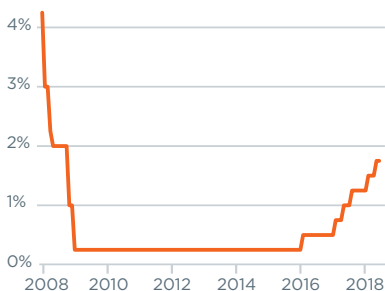
Interest rates have been at historical lows since the Federal Reserve (the Fed) implemented an unprecedented policy of monetary easing in response to the credit crisis that began to unfold in 2008. A decade later, as the Fed has begun to move toward monetary policy normalization, investors may now be confronting an unfamiliar economic and investment landscape marked by rising interest rates and rekindled inflation (Figure 1).

Interest rates rarely change direction for a single reason, and the path they travel isn't always a straight and predictable one. Still, there are several key influences that affect the direction of interest rates, which warrant close monitoring, including:

- **Federal Reserve policy:** The Fed controls short-term interest rates by setting the federal funds rate, and will raise or cut it depending upon its view of economic growth and inflation.* For example, if the Fed believes strong economic growth could become inflationary, it will seek to dampen that growth by raising rates. Conversely, if the Fed believes economic growth is slowing, it will seek to increase growth by cutting rates.
- **Economic conditions:** Similar to any product or service, interest rates rise or fall based on prevailing demand and supply. A healthy economy will typically translate into greater demand for consumer and business borrowing. This increased demand will tend to push interest rates higher. Conversely, a slowing economy will tend to reduce the need or desire for borrowing, often resulting in falling interest rates.

Figure 1

Historical federal funds rate



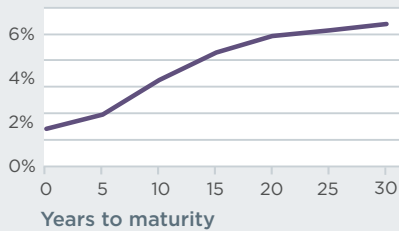
Data as of April 30, 2018.
Source: Bloomberg.

* For definitions of important fixed income terms, see the glossary on page 8.

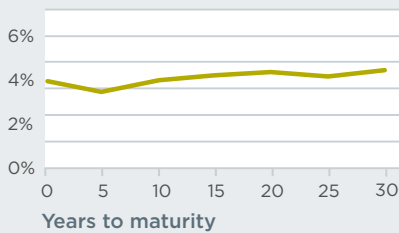
Figure 2

Types of yield curves

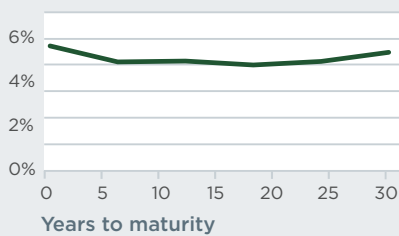
Normal (12/31/2010)



Flat (5/31/2006)



Inverted (12/31/2000)



Source: Bloomberg.

- **Inflation:** The Fed carefully watches the rate of inflation since one of its chief goals is to maintain stable prices. An accelerating inflation rate may be an indicator of an overheating economy. Additionally, investors' expectations of future inflation are a central factor in determining the long-term yields necessary to offset the perceived risk of inflation.

When tracking inflation, the media and investors focus on the Consumer Price Index (CPI). However, the Fed's preferred measure is the Personal Consumption Expenditures (PCE) index in determining its inflation outlook, as it is a broader measure of goods and services whose components constantly shift to reflect changing spending patterns.

- **Fiscal policy:** Whether through increased spending, tax cuts, or both, the federal government's fiscal policy can be crafted to stimulate economic activity. While expansionary fiscal policies are generally employed to combat recession, their use in times of healthy economic growth can be an inflation catalyst.
- **The bond market:** While the Fed may hold command over short-term rates, it is the bond market that sets longer-term rates through the pricing mechanism of an open market of buyers and sellers. The prices (and associated yields) of bonds will be tied to the relative equilibrium established between supply and demand.

There are a number of factors that affect the supply-demand equilibrium. For instance, widening federal deficits will increase the supply of debt, which can send yields higher, absent any increase in demand. Conversely, a falling U.S. dollar may reduce the demand for bonds from overseas buyers or increase inflation, which can also trigger higher yields.

The intersection of inflation, rising interest rates, and bond prices

Interest rates and bond prices have an inverse relationship, meaning when interest rates rise, bond prices will decline. How much they decline depends on the magnitude of interest rate increases and very often on the length of a bond's term to maturity or duration. Future inflation expectations can also affect bond prices since inflation erodes the purchasing power of future interest payments. If investors believe that inflation will rise in the future, they will demand higher yields, causing bond prices to fall.

Typically, yields will be higher the longer the bond's maturity in order to compensate investors for the added risk of an uncertain interest rate future. Thus, the yield curve (i.e., the line that connects short-, intermediate-, and long-term bond yields) will ordinarily slope upward as it moves longer out on the time horizon (Figure 2).

There are occasions, however, when the yield curve flattens (yields are roughly the same regardless of length of maturity) or becomes inverted (long-term yields are lower than short-term yields). A flat or inverted yield curve can develop when the Fed and the bond market have opposing views about where inflation and the economy are headed. For instance, the Fed may raise the federal funds rate in response to a perceived acceleration in inflation or economic growth. However,

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The end of a grand economic experiment

The Great Recession was not an unprecedented economic event, but the intervention by the Federal Reserve and non-U.S. central banks to revive the economy and reflate assets was unparalleled.

Since climbing out of the economic downturn created by the 2008 credit crisis, many of the federal government's initiatives deemed essential to the health of the broader economy — including new lending programs to support housing prices, providing liquidity to financial institutions, and making capital infusions into large companies — have drawn to a close or been pared back.

The Fed's initial contribution to economic recovery related to lowering interest rates. After rising to 5.25% in mid-2006, the Fed, through a succession of interest rate cuts over the course of 2007 and 2008, reduced short-term rates until the federal funds rate reached 0.25%. It remained at that level until December 2015 when it was increased by 0.25%.¹

Recognizing its limited ability to bring down long-term rates, the Fed introduced a new tool for stimulating the economy: quantitative easing (QE). With QE, the Fed began its program of making large-scale asset purchases to inject liquidity into the economy in an effort to stimulate

growth, and also lower long-term interest rates in order to raise inflation. The absence of any prior experience with such an undertaking and any data supporting its efficacy made the Fed's actions both unconventional and unprecedented.

With the economy now on firmer footing, the Fed has begun an exit from its accommodative monetary policies and is now moving toward normalization. As with its implementation of extraordinary measures, the central bank's exit strategy is also two-fold: gradually reduce its balance sheet of the bond holdings it accumulated through its QE purchases and incrementally raise short-term rates until reaching a level consistent with historical rates and economic conditions.

This exit plan does hold some uncertainty for investors. For instance, though the Fed has been very transparent with its plans for raising short-term rates, it is unknown what the impact of the Fed's reduction of its bond holdings will be on future long-term yields. Depending on the pace with which the Fed unwinds its portfolio, this new source of supply could cause long-term rates to rise faster than the market expects.

if investors believe inflation is not a threat or that economic growth will slow in the future, yields in the bond market for longer-term securities may fall or remain stable. These two opposing outlooks may eventually result in a flat or inverted yield curve.

From an equity investor's perspective, rising yields may not necessarily be bad. If rising rates are the result of accelerating economic activity, then any such economic growth should increase corporate earnings, which should in turn support higher stock prices. That being said, higher yields may be a risk to continued economic growth, which could lead to declining stock prices. Moreover, should an inverted yield curve develop, equity investors may see this as an indication of a coming recession.

Navigating a rising rate environment

There is no single profile of a rising rate environment. Small incremental increases over an extended period of time will more easily allow the markets to adjust, while larger increases over a shorter time period could prove more disruptive. Additionally, different bond types and maturities may react differently depending upon the state of other economic and financial variables.

¹ <https://www.federalreserve.gov/monetarypolicy/openmarket.htm>.

If there is a positive aspect to higher interest rates, it is that investors will begin earning higher current income on their bond investments.

Though escalating interest rates are a fundamental risk to bond values, it remains essential not to overlook other risks embedded in different types of bonds. These include credit risk, call risk, liquidity risk, and reinvestment risk.

Consequently, when building a bond portfolio investors need to factor in multiple variables and their relative correlation to one another, along with the prevailing economic and financial conditions. There is no one-size-fits-all strategy. Instead, bond investors need to pursue a dynamic, multidimensional strategy that considers:

- **Managing bond durations:** Shortening a bond portfolio's overall duration will help mitigate the loss of principal inherent in a higher rate environment but does not come free of charge; an investor will need to sacrifice some interest income.
- **Evaluating interest rate sensitivity:** Different bond types have different sensitivities to increases in interest rates, and portfolios need to be reshaped to reflect that.
- **Owning bonds with lower correlations:** Different bond market sectors may be less correlated to one another and to Treasuries. Intelligently balancing these less correlated bond types in a portfolio can help reduce risk.
- **Assessing credit spreads:** Credit spreads between Treasuries and different bond sectors will narrow or widen based on the perception of relative risk. Bonds with a wide yield differential relative to Treasuries help offset the impact of price declines.
- **Analyzing issuer leverage:** As interest rates move up, companies with higher leverage may be in greater danger of a credit rating cut, which could lead to disproportionate principal losses. Avoiding issuers that may have too much outstanding debt can help protect against avoidable losses. Higher rates can impact a company's sales or its cost of financing, stressing its ability to pay future interest payments. Accordingly, issuers with deteriorating prospects should be bypassed for investment or discarded from current holdings.

Though rising interest rates represent an adverse environment for fixed income portfolios, the benefits of the asset class remain in place. In any market cycle, bonds can offer a number of important advantages in an investor's portfolio, including current income, protection against overall portfolio volatility, and principal preservation. If there is a positive aspect to higher interest rates, it is that investors will begin earning higher current income on their bond investments.

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The value of active bond management

While the Fed has clearly signaled that it remains committed to increasing rates, it is less clear how the bond market will respond. Will changes in long-term rates parallel those in short-term rates? How will higher rates affect the different bond sectors? How should bond holdings be positioned along the yield curve?

The level of uncertainty in bond markets has introduced heightened risk to investors, making the case for active bond management even more compelling.

There are a number of ways active bond management can bring value to investors, including:

- **Reducing a portfolio's sensitivity to interest rates:** Protecting against principal loss due to rising rates may be achieved by managing a portfolio's duration, its position along the yield curve, and tilting holdings toward bond sectors that are less sensitive to rising yields.
- **Employing strategies to capitalize on rising rates:** There are techniques to take advantage of increasing rates, including rotating holdings toward floating rate notes, executing interest rate swaps, and exploiting the credit spread opportunities that prevail among bond sectors.
- **Managing credit risk:** An in-depth analysis of cash flow, business operations, tangible assets, and the financial leverage of bond issuers helps avoid investment in bonds whose issuer may encounter difficulty in making future interest and principal repayments.
- **Ascertaining bond structure and market liquidity:** The coupon and maturity are important elements when evaluating bonds for investment, but so is a bond's ranking in the capital structure of the company and the market liquidity of the issue.
- **Identifying value opportunities:** The size of the bond market and the vagaries of the bond issuance calendar may create opportunities for a portfolio manager to uncover bonds that offer unique value and capital appreciation potential. Additionally, active managers will frequently have access to new issues before the broader market and occasionally at discounted prices.
- **Managing currency risks:** For global bonds, currency fluctuations are an added level of risk, which active management can help mitigate.
- **Accessing robust intellectual capital resources:** The investment decisions of a portfolio manager are informed by the collective knowledge and experience of a team of bond strategists, credit analysts, and traders, and supported by proprietary analytical tools.

Individual investors typically do not have the resources, purchasing power, or the time to effectively manage a bond portfolio. Nor are passively managed bond index investments equipped to provide the benefits of active management. Indeed, by their very definition, bond index funds or exchange-traded funds are unable to dynamically respond to the opportunities or dangers that emerge from the shifting currents that characterize a rising interest rate environment. Instead, they are forced to stick to the investments comprising the bond index it is designed to mirror regardless of any changes in market realities.

Strategies for investing in a rising interest rate environment

There are a number of ways that investors can protect against the risks of rising interest rates and capitalize on these changing market conditions:

1. Rotate bond holdings to short-term duration bonds

By selling long-duration bonds and replacing them with shorter-duration bonds, investors can lessen the adverse price impact that rising rates will have on long-duration securities. This strategy also affords investors the flexibility to eventually move back into higher-yielding long-term bonds as the risk of climbing rates recedes.

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Since it is difficult to determine the path of interest rates and the pace of change, the bond ladder removes the need to time the market by maintaining a continuous turnover of bonds along the maturity timeline.

Short-duration bonds may reduce the risk of principal loss, but they do not eliminate it. Moreover, by shifting into short-duration bonds, investors may forsake some current interest income by investing in lower-yielding bonds.

2. Create a bond ladder

A bond ladder is a portfolio of individual bonds held in equal amounts over a series of different maturities. As the shortest-duration bonds mature, the proceeds are invested into bonds on the far end of the bond ladder. This continuous process of rolling over the proceeds into new holdings at the longer end of the maturity range helps investors to programmatically capture higher yields as rates rise.

Since it is difficult to determine the path of interest rates and the pace of change, the bond ladder removes the need to time the market by maintaining a continuous turnover of bonds along the maturity timeline. A bond ladder does not eliminate interest rate risk, and should interest rates fall, reinvestment of the proceeds will be at a lower rate. Constructing such a portfolio does require a substantial investment commitment, and returns may be dragged down by portfolio turnover expenses, such as commissions or the “bid-ask spread” (the difference between the best possible price that the buyer is willing to bid and the seller is willing to ask).

3. Shift holdings into variable rate bonds

A variable rate bond is a security whose interest payments are tied to an interest rate or some other index. Owning a variable rate instrument can protect investors from principal loss since their interest payments will increase as interest rates move higher.

There are several ways to invest in variable rate instruments, e.g., investment-grade floating-rate corporate bonds and bank loan securities—a portfolio of business loans made by banks whose interest rate is periodically reset; typically, every 30, 60, or 90 days. Bank loan securities are rated below investment grade and carry a higher credit risk than investment-grade floating rate corporate bonds.

Floating rate securities are typically tied to the London Interbank Offered Rate (LIBOR), a global benchmark for short-term interest rates. Historically, the 3-month LIBOR rate has tended to move in advance of the federal funds rate, creating opportunities for investors (Figure 3).

4. Sell bonds, move to cash

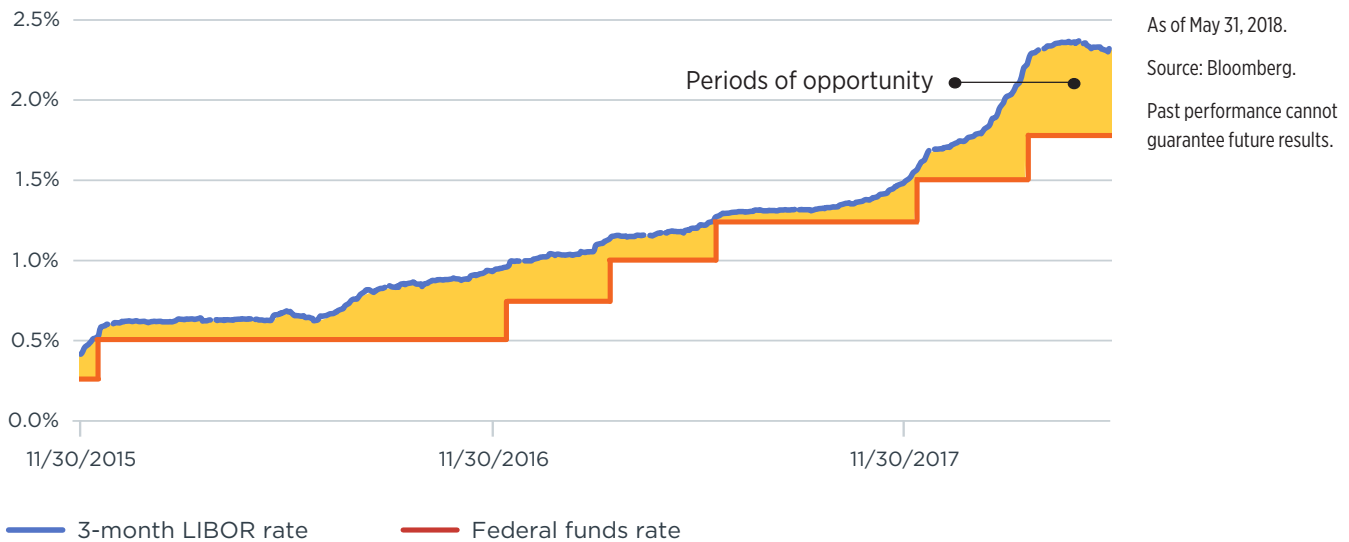
An investor inclined to avoid any principal loss may want to sell his or her bond holdings and move them into cash-equivalent instruments, such as money market funds or bank deposits. This strategy may protect the investor from losses, but it can come at the cost of a sharp reduction in current interest income.

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Figure 3

The disparity between LIBOR and fed funds rates %

The greater the dislocation, the greater the cash flow which aides in principal preservation from investing in floating rate securities.



Historically, the 3-month LIBOR rate has tended to move in advance of the federal funds rate, creating opportunities for investors.

This approach may also eliminate an important buffer of protection against volatility in an investor's overall portfolio. It may seem counterintuitive that bonds, whose prices will decline as rates rise, can continue to blunt overall portfolio volatility. However, it must be remembered that bond prices tend to rise during times of stock market stress, helping to offset the declines suffered in the stock portion of a portfolio.

The most appropriate strategy for an individual investor will depend on his or her investment objective and risk tolerance. In fact, for many investors, the best strategy may be one that combines elements of two or more of the aforementioned strategies.

Building an intelligently designed bond portfolio is not a set-it-and-forget-it exercise. As financial and market conditions change, so must a bond portfolio adapt.

If you have any questions regarding your bond investments, or would like to talk about how to reorient your portfolio to a rising interest rate environment, reach out to your Relationship Manager.

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Glossary of important fixed income terms

Average maturity

The average time a bond portfolio's holdings will take to be fully payable. Interest rate fluctuations have a greater impact on the value of a portfolio holding bonds with longer average lives.

Coupon

The interest payment made on a bond, usually paid twice a year. A \$1,000 bond paying \$65 per year has a \$65 coupon, or a 6.5% coupon rate. Bonds that pay no interest are said to have a "zero coupon."

Credit risk

The possibility that the bond's issuer may default on interest payments or not be able to repay the bond's face value at maturity.

Current yield

The yearly coupon payment divided by the bond's price, stated as a percent. For example, let's say a newly issued \$1,000 bond paying \$65 has a current yield of 6.5 percent. Current yield can fluctuate: If the price of the bond dropped to \$950, the yield would rise to 6.84%.

Duration

Although stated in years, duration is not simply a measure of time. Duration signals how much the price of a bond is likely to fluctuate in response to changes in interest rates. The higher the duration number, the more sensitive a bond will be to changes in interest rates.

Federal funds rate

The overnight rate at which depository institutions, such as banks and credit unions, lend money to one another.

Fixed-rate bond

A bond with an interest rate that remains constant or fixed during the life of the bond.

Floating-rate bond

A bond with an interest rate that fluctuates, or floats, usually in tandem with a benchmark interest rate during the life of the bond.

High-yield bond

A bond issued by an issuer that is considered a credit risk by a Nationally Recognized Statistical Rating Organization, as indicated by a low bond rating (e.g., "Ba" or lower by Moody's Investors Services, or "BB" or below by Standard & Poor's

Corporation). Because of this risk, a high-yield bond generally pays a higher return (yield) than a bond with an issuer that carries lower default risk. High-yield bonds are also sometimes referred to as "junk" or speculative bonds.

Inflation risk

The risk that a bond's returns may not keep pace with inflation, eroding purchasing power.

Interest rate risk

The risk that a bond's price will fall when interest rates rise.

Investment-grade bond

A bond whose issuer's prompt payment of interest and principal (at maturity) is considered relatively safe by a nationally recognized statistical rating agency as indicated by a high bond rating (e.g., "Baa" or better by Moody's Investors Service, or "BBB" or better by Standard & Poor's Corporation).

Maturity date

The date when the principal amount of a bond, note, or other debt instrument is typically repaid to the investor, along with the final interest payment.

Real rate of return

The rate of return minus the rate of inflation. For example, if you are earning 6% interest on a bond in a period when there is 2% inflation, 4% would be your real rate of return.

Yield

The return earned on a bond, expressed as an annual percentage rate.

Yield curve

A yield curve is a graph showing the relationship between yield (on the y- or vertical axis) and maturity (on the x- or horizontal axis) among bonds of different maturities of the same credit quality.

Yield to call (YTC)

The rate of return you receive if you hold the bond to its call date and the security is redeemed at its call price. YTC assumes interest payments are reinvested at the yield-to-call date.

Yield to maturity (YTM)

The overall interest rate earned by an investor who buys a bond at the market price and holds it until maturity. Mathematically, it is the discount rate at which the sum of all future cash flows (from coupons and principal repayment) equals the price of the bond.

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