Bond Basics

A FIXED-INCOME PRIMER

When the Federal Reserve is actively raising or cutting interest rates, the question of how much value bonds bring to a portfolio can tie investors in knots. Our view is that bonds serve an important role for long-term investors year in and year out, no matter where we are in the interest-rate cycle. To help you gain a better understanding of fixed-income investing and provide a foundation for future conversations, let's go over some of the basics.

BONDS 101

Bonds* are like an I.O.U.

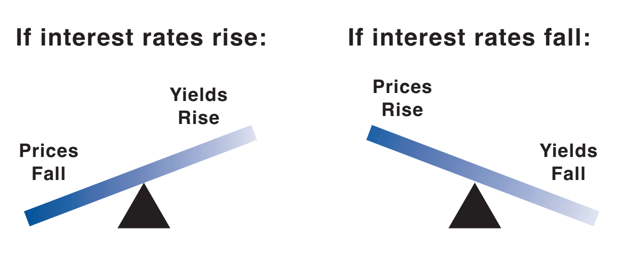
When a company or government (the **issuer**) wants to raise money, it borrows money by selling bonds. The investor purchasing a bond is essentially making a loan to the issuer. In return, the investor is entitled to interest payments (the **coupon**) and a promise that the face value of the bond will be repaid at a specified time (the **maturity** date). The appeal of bonds thus lies in the rewards of interest plus the safeguarding of your investment.

As bond investors, we know what our income will be and how much money will be returned to us at maturity on the day we buy a bond; this is why bonds are commonly referred to as **fixed-income securities**.

THE PRICE/INTEREST-RATE SEESAW

Bond prices and interest rates move in opposite directions. If interest rates rise, most bond prices fall. If interest rates go down, bond prices go up.

The Price/Interest-Rate Seesaw



The concept looks simple enough, but why does it work this way?

When a new bond is first issued, it typically, but not exclusively, is sold at "**par**" value, which simply means that $1,000 will buy you $1,000 worth of bonds. Say you buy a new 10-year Treasury bond with a 2% interest rate at par. The government will pay you $20 each year in interest for the 10-year life of the bond.

If interest rates rise, a new 10-year Treasury costing $1,000 might now be issued with a 3% **yield** and pay $30 a year. Why would anyone pay $1,000 for the 2% bond issued earlier and earn just $20 a year in interest when they could buy the same type of bond paying them $30 a year for the same price?

They wouldn't. The price of the bond paying $20 will fall and it will trade at a **discount** to (or below) par. This is why bond prices fall when interest rates rise, and vice versa. (Depending on what buyers will pay, if you sell a bond before maturity, you risk selling at a discount and may not recover your full principal.)

INTEREST-RATE RISK

Interest-rate risk is the impact on a bond's price due to changes, up or down, in interest rates. This risk is commonly measured by **duration**. A bond or **bond fund**'s duration is a number expressed in years, although it is easier to understand as a percentage—a bond fund with a duration of 8 years could be expected to lose 8% of its value if interest rates rise 1% and gain 8% if rates drop 1%. The longer the duration, the greater the interest-rate risk.

*All terms in bold are referenced in the AI Bond Basics Glossary on the back page.

CREDIT RISK

Credit risk is the risk of **default**—failure of the borrower to pay interest or to pay back the bond's face value at maturity.

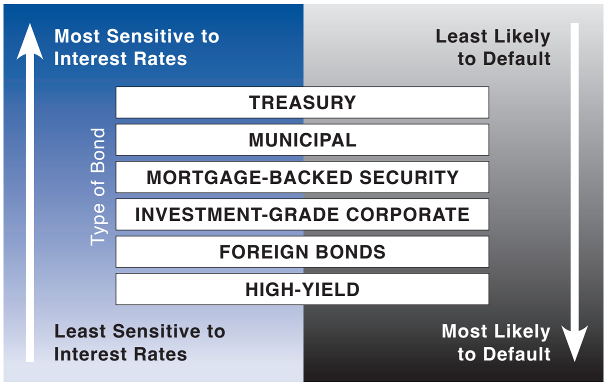
U.S. Treasury bonds have little to no credit risk. The U.S. government is going to be able to keep paying off its I.O.U.'s through thick and thin—either by raising taxes or printing money. The only real risk they bear is interest-rate risk; Treasurys are the most sensitive bonds to changes in interest rates. But not everyone asking to borrow your money has the resources of the federal government.

In contrast, the primary concern with high-yield or "**junk**" bonds is default. And the greater investors' concern about this negative outcome, the more compensation they demand. These riskier bonds can offer eye-popping yields relative to extra-safe U.S. Treasury bonds.

High-yield bonds, unlike Treasurys, are more dependent on the economic climate—similar to stocks—than they are on the movement of interest rates, since a weak economy can have a greater impact on the financial strength of the lower-quality companies that typically issue junk bonds.

In the graphic to the right, you can see the spectrum of interest-rate and default risk for broad categories of bonds.

The Spectrum of Bond Risks



INFLATION RISK

In periods when interest rates are low or the economy is booming, inflation can become a concern for fixed-income investors. If inflation is 4% and you own a bond with a yield of 3%—over the course of a year, even though you are earning regular income, your **real return** is -1%.

THE BENEFITS OF BOND FUND INVESTING

When you buy a bond fund, you are purchasing shares of that fund and its portfolio of fixed-income securities. Just as with a stock fund, the share price may rise and fall.

Unlike an individual bond, bond fund shares do not provide a promise to return your initial investment at a predetermined end date (maturity). So why own a bond fund over an individual bond? A bond fund offers instant diversification. Your portfolio won't get wiped out if an individual bond defaults.

Also, while a bond's interest payments are fixed, a fund's dividends are not. With bond funds, while prices may initially fall when interest rates rise, reinvested income purchases more shares of the fund at lower prices. This enables the fund manager to buy additional bonds at higher yields, eventually generating gains as prices stabilize and those greater interest payments begin accruing to the shareholder.

Common Bond Fund Categories

Types of Bond Funds	What They Invest In	What They Offer
Short-Term	Government or corporate bonds, or a mix, with maturities of five years or less.	Good for a little bit of income with limited exposure to interest-rate risk.
Intermediate-Term	Government or corporate bonds, or a mix, with maturities of five to 10 years.	Generates more income than short-term bond funds with greater interest-rate risk.
Long-Term	Government or corporate bonds, or a mix, with maturities of 15 to 30 years.	A steady source of income with higher interest-rate risk.
High-Yield (or Junk)	Bonds below investment-grade quality that offer potentially high profits as a reward for taking more risk.	Higher-than-average yield and returns tied to the economic cycle more than interest rates.
Municipal	Bonds issued by state and local governments.	Income free from federal income taxes.
Single-State	Bonds issued by only one state's governments and agencies.	Interest earned is free of federal and the issuing state's income taxes. Highest tax-equivalent yields.
Foreign	Mix of established and emerging market bonds.	Additional diversification.

Because of the almost constant flow of income into the portfolio, a strong bond fund manager can spot opportunities and capitalize in ways that simply aren't possible for an individual bondholder to achieve—purchasing undervalued bonds, managing risk and repositioning the portfolio in anticipation of changing interest rates or credit availability.

If you're looking for exposure to a wide variety of fixed-income securities within or across asset classes, a bond fund is likely a better fit to achieve your goals.

BOND FUNDS' ROLE IN YOUR PORTFOLIO

Diversification is at the core of Adviser's longstanding investment discipline.

So while there is always a spirited debate about the types of bond funds to invest in, we don't think there can be any debate about the importance of holding bond funds as part of a well-diversified portfolio. Bond funds function as a critical buffer during inevitable stock market declines, while generating income and the potential to grow your investment.

When the Fed begins cutting rates, and bond yields become less attractive, investors will inevitably begin to question why they should even own bonds—here's why: We don't know when stock market pullbacks like those we saw during the coronavirus pandemic or in 2022 will occur, but when they inevitably happen, the shock absorbing characteristics of bonds and bond funds can help limit the impact on your overall investment portfolio. Prudent and pragmatic long-term investors should always have some bonds in their asset mix.

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Glossary of Terms

BOND
An I.O.U. issued by a corporate or government entity in return for a promise of repayment of the face value, plus interest payments on specified dates.

BOND FUND
A mutual fund that invests primarily in bonds.

COUPON
Annual interest rate paid on a bond's face value.

CREDIT RATING
Letter grading of potential risk. Standard & Poor's (S&P) and Moody's are the top rating companies. The scale runs from AAA (highest-rated) to D (lowest-rated). Some bonds are not covered by S&P or Moody's.

CURRENT YIELD
Determined by dividing the bond's annual interest by its current market price.

DEFAULT
Failure of bond issuers to make interest payments or repay principal.

DISCOUNT
When a bond sells at a price below face or redemption value.

DURATION
Measures a bond fund's interest-rate sensitivity. A fund with a duration of 4 should lose 4% if interest rates rise 1%, and gain 4% if interest rates drop 1%.

FIXED-INCOME SECURITIES
Another term for bond investments.

ISSUER
Company or government borrowing the money and selling the bond.

JUNK BOND
(See High-Yield below)

MATURITY
Time between today and the date on which the bond's face value is repaid to the owner.

NET ASSET VALUE (NAV)
The market price of a fund, derived daily at the close of the market. Total assets minus liabilities divided by number of outstanding shares.

PAR
Face value of a bond. This is the amount paid when the bond matures.

PREMIUM
When a bond sells at a price above face or redemption value.

PRINCIPAL
Initial investment in a bond.

REAL RETURN
Your return on an investment when adjusted for inflation. Calculated by subtracting the rate of inflation from the return of the investment.

YIELD
The rate of return the investor receives if a bond is held from issuance to maturity.

TYPES OF BONDS

- **Treasurys** Debt securities issued by the U.S. Treasury. Considered to be some of the safest bonds in the world, they are backed by the full faith and credit of the U.S. government. Treasury bills (T-Bills) are securities with maturities of one year or less. Treasury notes have maturities up to and including 10 years, and Treasury bonds are those with maturities greater than 10 years. Treasurys have historically provided an offset to declining stock prices, but they also tend to be the most sensitive to changes in interest rates.

- **Treasury Inflation-Protected Securities (TIPS)** TIPS, like other Treasury bonds, are backed by the full faith and credit of the U.S. Government. What sets TIPS apart is that their face value is adjusted quarterly, based on inflation (specifically the consumer price index for all urban consumers, or headline consumer price index, unadjusted for seasonal variations).

- **Municipals (aka Munis)** Bonds issued by states, cities or local governments whose interest payments are free from federal taxes and taxes in the state that issued them. They are also referred to as tax-free bonds. Historically, the municipal market has experienced very few defaults, but investors need to evaluate each municipality on its own merits. Municipal bonds are also subject to interest-rate risk.

- **Corporate** Bonds issued by a private corporation. Investors can often find higher yields compared to Treasurys, but the risk of default is also higher.

- **Investment-Grade** Bonds rated BBB or higher by S&P and Baa or higher by Moody's. Investors have to consider both interest-rate risk and the potential for default.

- **High-Yield** Also known as "junk" bonds, they are typically issued by weaker corporations, hence they must pay a higher rate of interest to entice investors. Junk bonds are rated BB or lower by S&P and Ba or lower by Moody's. The primary concern with these bonds is default.

- **Mortgage-Backed Securities (MBS)** Securities created by pooling mortgages with similar rates of interest and maturities. Monthly interest and principal payments on these mortgages are passed through to investors as interest. MBS are subject to interest-rate risk beyond that of other bonds, which is related to borrowers' behavior when paying back their loans. When interest rates are falling, homeowners prepay their loans and refinance, leaving the investor with cash that must be reinvested at lower prices—this is known as "prepayment risk." On the flip side, when interest rates rise, homeowners stop refinancing their homes, the investor continues to receive the lower interest rate even though rates have gone up—this is known as "extension risk."