



# Smart Bond Investing

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# Smart Bond Investing

You've heard it before: Asset allocation is key to prudent, long-term investing. You've probably heard this before, too—depending on your age and tolerance for risk, your portfolio should contain a mixture of investments, including stocks, bonds and cash. This is sound advice. But do you understand the critical characteristics of bonds?

That's where this guide comes in. We've written it to help those who already invest in bonds and mutual funds that primarily invest in bonds—and those who are considering investing—better understand this important component of a balanced portfolio.

Bonds and bond funds can be extremely helpful to anyone concerned about capital preservation and income generation. Bonds and bond funds also can help partially offset the risks that come with equity investing—regardless of prevailing market conditions. They can be used to accomplish a variety of investment objectives. Bonds and bond funds hold opportunity—but they also carry risk.

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## Bond Basics

### What's a Bond?

A bond is a loan that an investor makes to a corporation, government, federal agency, or other organization. Consequently, bonds are sometimes referred to as debt securities. Since bond issuers know you aren't going to lend your hard-earned money without compensation, the issuer of the bond (the borrower) enters into a legal agreement to pay you (the bondholder) interest.

The bond issuer also agrees to repay you the original sum loaned at the bond's maturity date, though certain conditions, such as a bond being called, may cause repayment to be made earlier. The vast majority of bonds have a set maturity date—a specific date when the bond must be paid back at its face value, called par value. Bonds are called fixed-income securities because many pay you interest based on a regular, predetermined interest rate—also called a coupon rate—that is set when the bond is issued.

Understanding bond basics is critical to making informed investment decisions about this investment category. The more you know now, the less likely you will be to make a decision you later regret.

### Bond Maturity

A bond's term, or years to maturity, is usually set when it is issued. Bond maturities can range from one day to 100 years, but the majority of bond maturities range from one to 30 years. Bonds are often referred to as being short-, medium-, or long-term. Generally, a bond that matures in one to three years is referred to as a **short-term bond**. **Medium- or intermediate-term bonds** are generally those that mature in four to 10 years, and **long-term bonds** are those with maturities greater than 10 years. The borrower fulfills its debt obligation typically when the bond reaches its maturity date, and the final interest payment and the original sum you loaned (the principal) are paid to you.

### Callable Bonds

Not all bonds reach maturity, even if you want them to. Callable bonds are common. They allow the issuer to retire a bond before it matures. Call provisions are outlined in the bond's prospectus (or offering statement or circular) and the indenture—both are documents that explain a bond's terms and conditions. While firms are not formally required to document all call provision terms on the customer's confirmation statement, many do so. (When you buy municipal securities, firms are required to provide more call information on the customer confirmation than you will see for other types of debt securities.)

You usually receive some call protection for a period of the bond's life (for example, the first three years after the bond is issued). This means that the bond cannot be called before a specified date. After that, the bond's issuer can redeem that bond on the predetermined call date, or a bond may be continuously callable, meaning the issuer may redeem the bond at the specified price at any time during the call period. Before you buy a bond, always check to see if the bond has a call provision, and consider how that might impact your portfolio investment strategy.

### Bond Coupons

A bond's coupon is the annual interest rate paid on the issuer's borrowed money, generally paid out semiannually. The coupon is always tied to a bond's face or par value, and is quoted as a percentage of par. For instance, a bond with a par value of \$1,000 and an annual interest rate of 4.5 percent has a coupon rate of 4.5 percent (\$45).

#### Coupon Choices

Say you invest \$5,000 in a six-year bond paying 5 percent per year, semiannually. Assuming you hold the bond to maturity, you will receive 12 interest payments of \$125 each, or a total of \$1,500. This coupon payment is simple interest.

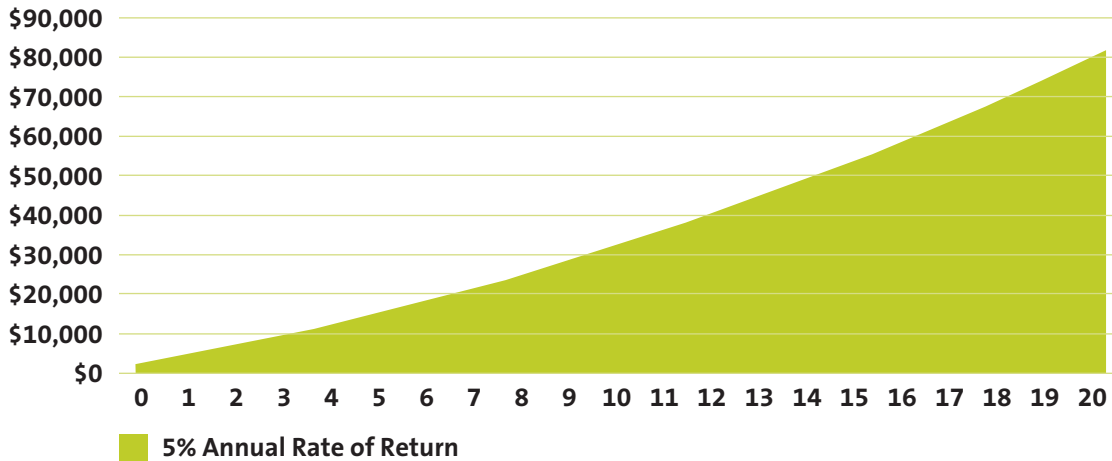
You can do two things with that simple interest—spend it or reinvest it. Many bond investors rely on a bond's coupon payments as a source of income, spending the simple interest they receive.

When you reinvest a coupon, however, you allow the interest to earn interest. The precise term is “interest-on-interest,” though we know it by another word: compounding. Assuming you reinvest the interest at the same 5 percent rate and add this to the \$1,500 you made, you would earn a cumulative total of \$1,724, or an extra \$224. Of course, if the interest rate at which you reinvest your coupons is higher or lower, your total return will be more or less. Also be aware that taxes can reduce your total return.

#### *The Power of Compounding*

Regardless of the type of investment you select, saving regularly and reinvesting your interest income can turn even modest amounts of money into sizable investments through the remarkable power of compounding. If you save \$200 a month and receive a 5 percent annual rate of return, you will have more than \$82,000 in 20 years' time.

### THE POWER OF COMPOUNDING



#### Accrued Interest

Accrued interest is the interest that adds up (accrues) each day between coupon payments. If you sell a bond before it matures or buy a bond in the secondary market, you most likely will catch the bond between coupon payment dates. If you're selling, you're entitled to the price of the bond, plus the accrued interest that the bond has earned up to the sale date. The buyer compensates you for this portion of the coupon interest, which is generally handled by adding the amount to the contract price of the bond.

#### Accrued Interest Calculator

Interest on a bond accrues between regularly scheduled payments. To find out how much interest is owed on a given bond, use FINRA's calculator.

- ▶ **Accrued Interest Calculator:** [www.finra.org/interestcalculator](http://www.finra.org/interestcalculator)

### Zero-Coupon Bonds

Bonds that don't make regular interest payments are called zero-coupon bonds—zeros for short. As the name suggests, these are bonds that pay no coupon or interest payment. Instead of getting an interest payment, you buy the bond at a discount from the face value of the bond, and you are paid the face amount when the bond matures. For example, you might pay \$3,500 to purchase a 20-year zero-coupon bond with a face value of \$10,000.

Federal agencies, municipalities, financial institutions, and corporations issue zeros. One of the most popular zeros goes by the name of STRIPS (Separate Trading of Registered Interest and Principal Securities). A financial institution, government securities broker, or government securities dealer can convert an eligible Treasury security into a STRIP bond. As the name implies, the interest is stripped from the bond. A nice feature of STRIPS is that they are non-callable, meaning they can't be called to be redeemed should interest rates fall. This feature offers protection from the risk that you will have to settle for a lower rate of return if your bond is called, you receive cash, and you need to reinvest it, also known as reinvestment risk.

#### Caution—Interest Is NOT Invisible to the IRS

The difference between the discounted amount you pay for a zero-coupon bond and the face amount you later receive is the imputed interest. This is interest that the IRS considers to have been paid, even if you haven't actually received it. While interest on zeros is paid out all at once, the IRS demands that you pay tax on this "phantom" income each year, just as you would pay tax on interest you received from a coupon bond. Some investors avoid paying the imputed tax by buying municipal zero-coupon bonds (if they live in the state where the bond was issued) or purchasing the few corporate zero-coupon bonds that have tax-exempt status.

### Floating-Rate Bonds

While the majority of bonds are fixed-rate bonds, a category of bonds called floating-rate bonds (floaters) have a coupon rate that is adjusted periodically, or "floats," using an external value or measure, such as a bond index or foreign exchange rate.

Floater offer protection against interest rate risk, because the fluctuating interest coupon tends to help the bond maintain its current market value as interest rates change. However, their coupon rate is usually lower than that of fixed-rate bonds. Because a floating bond's rate increases as interest rates go up, they tend to find favor with investors during periods when economic forces are causing interest rates to rise. Most floater coupon rates are generally reset more than once a year at predetermined intervals (for example, quarterly or semiannually). Floaters are slightly different from so-called variable rate or adjustable rate bonds, which tend to reset their coupon rate less frequently. (**Note:** Floating and adjustable-rate bonds may have restrictions on the maximum and minimum coupon reset rates.)



## Bond Prices

Bonds are generally issued in multiples of \$1,000, also known as a bond's face or par value. But a bond's price is subject to market forces and often fluctuates above or below par. If you sell a bond before it matures, you may not receive the full principal amount of the bond and will not receive any remaining interest payments. This is because a bond's price is not based on the par value of the bond. Instead, the bond's price is established in the secondary market and fluctuates. As a result, the price may be more or less than the amount of principal and the remaining interest the issuer would be required to pay you if you held the bond to maturity.

The price of a bond can be above or below its par value for many reasons, including interest rate adjustments, whether a bond credit rating has changed, supply and demand, a change in the credit-worthiness of a bond's issuer, whether the bond has been called or is likely to be (or not to be) called, a change in the prevailing market interest rates, and a host of other factors. If a bond trades above par, it is said to trade at a premium. If a bond trades below par, it is said to trade at a discount. For example, if the bond you desire to purchase has a fixed interest rate of 8 percent, and similar-quality new bonds available for sale have a fixed interest rate of 5 percent, you will likely pay more than the par amount of the bond that you intend to purchase, because you will receive more interest income than the current interest rate (5 percent) being attached to similar bonds.

## Bond Yield

**Yield** is a general term that relates to the return on the capital you invest in the bond.

You hear the word "yield" a lot with respect to bond investing. There are, in fact, a number of types of yield. The terms are important to understand because they are used to compare one bond with another to find out which is the better investment.

There are several definitions that are important to understand: coupon yield, current yield, yield-to-maturity, yield-to-call and yield-to-worst.

Let's start with the basic yield concepts.

- ▶ **Coupon yield** is the annual interest rate established when the bond is issued. It's the same as the coupon rate and is the amount of income you collect on a bond, expressed as a percentage of your original investment. If you buy a bond for \$1,000 and receive \$45 in annual interest payments, your coupon yield is 4.5 percent. This amount is figured as a percentage of the bond's par value and will not change during the lifespan of the bond.
- ▶ **Current yield** is the bond's coupon yield divided by its market price. Here's the math on a bond with a coupon yield of 4.5 percent trading at 103 (\$1,030).

$$\frac{4.5}{103} \times 100 = 4.37\%$$

$$\frac{4.5}{101} \times 100 = 4.46\%$$

If you buy a new bond at par and hold it to maturity, your current yield when the bond matures will be the same as the coupon yield.

### Yields That Matter More

Coupon and current yield only take you so far down the path of estimating the return your bond will deliver. For one, they don't measure the value of reinvested interest. They also aren't much help if your bond is called early—or if you want to evaluate the lowest yield you can receive from your bond. In these cases, you need to do some more advanced yield calculations. Fortunately, there is a spate of financial calculators available—some that even estimate yield on a before- and after-tax basis. The following yields are worth knowing, and should be at your broker's fingertips:

- ▶ **Yield to maturity (YTM)** is 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. YTM is often quoted in terms of an annual rate and may differ from the bond's coupon rate. It assumes that coupon and principal payments are made on time. It does not require dividends to be reinvested. Further, it does not consider taxes paid by the investor or brokerage costs associated with the purchase.
- ▶ **Yield-to-Call (YTC)** is figured the same way as YTM, except instead of plugging in the number of months until a bond matures, you use a call date and the bond's call price. This calculation takes into account the impact on a bond's yield if it is called prior to maturity and should be performed using the first date on which the issuer could call the bond.
- ▶ **Yield-to-Worst (YTW)** is whichever of a bond's YTM and YTC is lower. If you want to know the most conservative potential return a bond can give you—and you *should* know it for every callable security—then perform this comparison.

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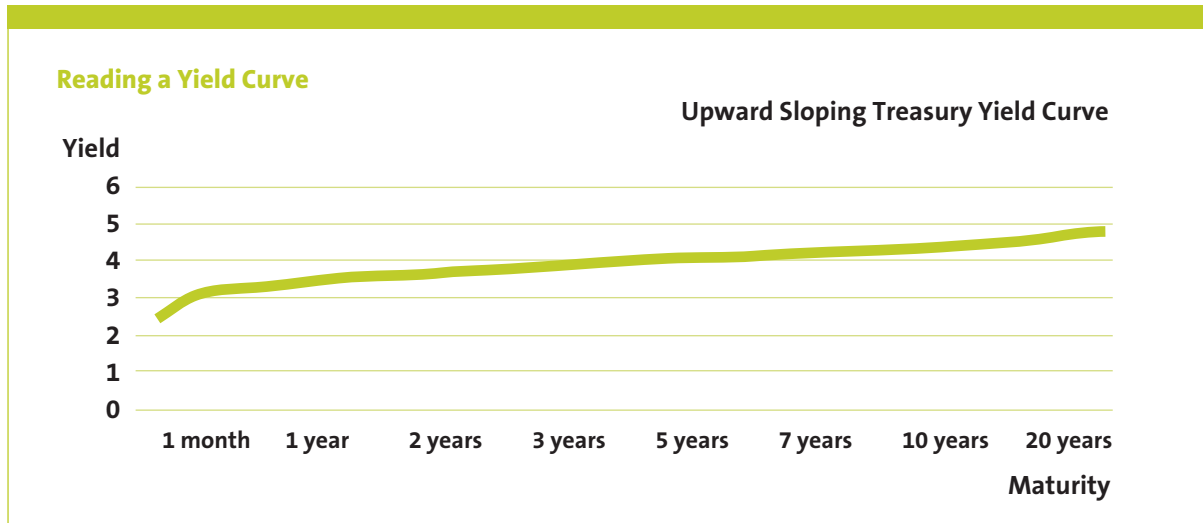
#### Smart Move

When someone tells you a bond's yield is 7 percent, ask: "What definition of yield are you using?"

### Reading a Yield Curve

You've probably seen financial commentators talk about the Treasury Yield Curve when discussing bonds and interest rates. It's a handy tool because it provides, in one simple graph, the key Treasury bond data points for a given trading day, with interest rates running up the vertical axis and maturity running along the horizontal axis.

A typical yield curve is upward sloping, meaning that securities with longer holding periods carry higher yield.



In the yield curve above, interest rates (and also the yield) increase as the maturity or holding period increases—yield on a 30-day T-bill is 2.55 percent, compared to 4.80 percent for a 20-year Treasury bond—but not by much. When an upward-sloping yield curve is relatively flat, it means the difference between an investor's return from a short-term bond and the return from a long-term bond is minimal. Investors would want to weigh the risk of holding a bond for a long period (see Interest Rate Risk on page 15) versus the only moderately higher interest rate increase they would receive compared to a shorter-term bond.

Indeed, yield curves can be flatter or steeper depending on economic conditions and what the Federal Reserve Board is doing, or what investors expect the Fed to do, with the money supply. A flattened positive yield curve means there's little difference between short-term and long-term interest rates. Sometimes economic conditions and expectations create a yield curve with different characteristics. For instance, an inverted yield curve slopes downward instead of up. When this happens, short-term bonds pay more than long-term bonds. Yield curve watchers generally read this as a sign that interest rates may decline.

The Department of Treasury provides daily Treasury Yield Curve rates, which can be used to plot the yield curve for that day.



#### Bond Fact

Price and yield are inversely related: As the price of a bond goes up, its yield goes down, and vice versa.

### Figuring Return

If you've held a bond over a long period of time, you might want to calculate its annual percent return, or the percent return divided by the number of years you've held the investment. For instance, a \$1,000 bond held over three years with a \$145 return has a 14.5 percent return, but a 4.83 percent annual return.

When you calculate your return, you should account for annual inflation. Calculating your real rate of return will give you an idea of the buying power your earnings will have in a given year. You can determine real return by subtracting the inflation rate from your percent return. As an example, an investment with 10 percent return during a year of 3 percent inflation is usually said to have a real return of 7 percent.

To figure total return, start with the value of the bond at maturity (or when you sold it) and add all of your coupon earnings and compounded interest. Subtract from this figure any taxes and any fees or commissions. Then subtract from this amount your original investment amount. This will give you the total amount of your total gain or loss on your bond investment. To figure the return as a percent, divide by the beginning value of your investment and multiply by 100:

$$\begin{array}{r}
 \text{Total Return} \\
 (\text{End Value of Principal} + \text{Coupon Interest} + \text{Compound Interest}) \\
 - (\text{Taxes} + \text{Fees/Commission}) \\
 - \text{Beginning Value of Principal} \\
 \hline
 \text{Beginning Value of Principal}
 \end{array}
 \times 100$$

### Historical Returns

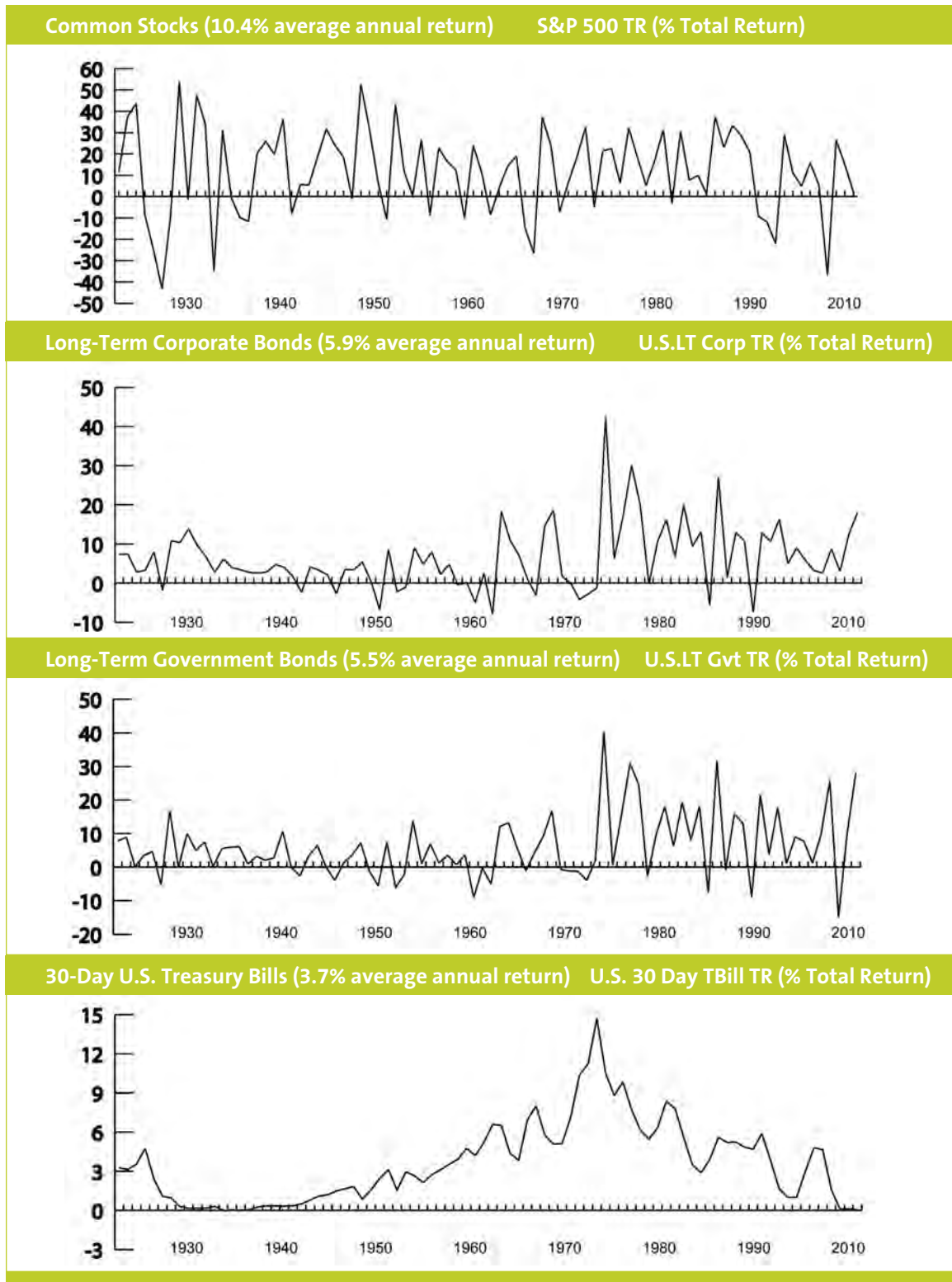
Like virtually all investment products, bonds generate returns that fluctuate from year to year. Longer-term stocks have enjoyed a performance edge, outperforming bonds by a margin of almost 2 to 1 since 1926. But there is a tradeoff: Stocks' performance edge has come with more uncertainty and bumps in the road. But bonds—even U.S. Treasury bills—can have their ups and downs, too.



#### Bond Fact

Nobody can give you a bond's actual total return ahead of time. It can only be figured after the bond has matured or is sold.

**Historical Returns Chart—Price Fluctuation Varies by Investment Type**



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## Bonds and Interest Rates

### *Three Cardinal Rules*

- ▶ **1.** When interest rates rise—bond prices fall.
- ▶ **2.** When interest rates fall—bond prices rise.
- ▶ **3.** Every bond carries interest rate risk.

Interest rate changes are among the most significant factors affecting bond return.

To find out why, we need to start with the bond's coupon. This is the interest the bond pays out. How does that original coupon rate get established? One of the key determinants is the federal funds rate, which is the prevailing interest rate that banks with excess reserves at a Federal Reserve district bank charge other banks that need overnight loans. The Federal Reserve (or "the Fed") sets a target for the federal funds rate and maintains that target interest rate by buying and selling U.S. Treasury securities.

When the Fed buys securities, bank reserves rise, and the federal funds rate tends to fall. When the Fed sells securities, bank reserves fall, and the federal funds rate tends to rise. While the Fed doesn't directly control this rate, it effectively controls it through the buying and selling of securities. The federal funds rate, in turn, influences interest rates throughout the country, including bond coupon rates.

Another rate that heavily influences a bond's coupon is the Federal Reserve Discount Rate, which is the rate at which member banks may borrow short-term funds from a Federal Reserve Bank. The Federal Reserve Board directly controls this rate. Say the Federal Reserve Board raises the discount rate by one-half of a percent. The next time the U.S. Treasury holds an auction for new Treasury bonds, it will quite likely price its securities to reflect the higher interest rate.

What happens to the Treasury bonds you bought a couple of months ago at the lower interest rate? They're not as attractive. If you want to sell them, you'll need to discount their price to a level that equals the coupon of all the new bonds just issued at the higher rate. In short, you'd have to sell your bonds at a discount.

It works the other way, too. Say you bought a \$1,000 bond with a 6 percent coupon a few years ago and decided to sell it three years later to pay for a trip to visit your ailing grandfather, except now, interest rates are at 4 percent. This bond is now quite attractive compared to other bonds out there, and you would be able to sell it at a premium.

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### Smart Move

As your time horizon shortens, and with it your need for more stable investments, adjusting your portfolio to include a greater percentage of bonds is generally recommended—in part because bonds and stocks tend to move in different directions. In other words, when stock prices rise, bond interest rates often fall, and vice versa. Finding the right investment mix depends upon your age, financial objectives and tolerance for accepting a higher level of risk in return for a greater potential return.

### **Basis Point Basics**

You often hear the term basis points—bps for short—in connection with bonds and interest rates. A basis point is one one-hundredth of a percentage point (.01). One percent = 100 basis points. One half of 1 percent = 50 basis points. Bond traders and brokers regularly use basis points to state concise differences in bond yields. The Federal Reserve Board likes to use bps when referring to changes in the federal funds rate.

#### *Where to Find Economic Indicators*

Smart bond investors pay close attention to key or “leading” economic indicators, primarily watching for any potential impact they may have on inflation and, because there is a close correlation, interest rates. Various branches of the federal government keep tabs on many, but not all, of these leading indicators. Here are a few useful online resources:

- ▶ **U.S. Census Bureau’s Economic Briefing Room and Economic Calendar:** [www.census.gov/cgi-bin/briefroom/BriefRm](http://www.census.gov/cgi-bin/briefroom/BriefRm)
- ▶ **U.S. Department of Labor, Bureau of Labor Statistics:** [www.bls.gov](http://www.bls.gov)
- ▶ **The Conference Board’s Economic Indicators:** [www.conference-board.org/economics](http://www.conference-board.org/economics)
- ▶ **The Federal Reserve Board’s calendar of Federal Open Market Committee (FOMC) meetings.** The FOMC sets certain interest rates that are used by others in the bond market to determine all other interest rates: [www.federalreserve.gov/monetarypolicy/FOMC](http://www.federalreserve.gov/monetarypolicy/FOMC)





# Understanding Risk

## Interest Rate Risk

Remember the cardinal rule of bonds: When interest rates fall, bond prices rise, and when interest rates rise, bond prices fall. Interest rate risk is the risk that changes in interest rates in the U.S. or the world may reduce (or increase) the market value of a bond you hold. Interest rate risk—also referred to as **market risk**—increases the longer you hold a bond.

Let's look at the risks inherent in rising interest rates.

If you bought a 10-year, \$1,000 bond today at a coupon rate of 4 percent, and interest rates rise to 6 percent, two things can happen.

Say you need to sell your 4 percent bond prior to maturity. In doing so, you must compete with newer bonds carrying higher coupon rates. These higher coupon rate bonds decrease the appetite for older bonds that pay lower interest. This decreased demand depresses the price of older bonds in the secondary market, which would translate into you receiving a lower price for your bond if you need to sell it. In fact, you may have to sell your bond for less than you paid for it. For this reason, interest rate risk is also referred to as market risk.

Rising interest rates also make new bonds more attractive (because they earn a higher coupon rate). This results in what's known as opportunity risk—the risk that a better opportunity will come around that you may be unable to act upon. The longer the term of your bond, the greater the chance that a more attractive investment opportunity will become available, or that any number of other factors may occur that negatively impact your investment. This also is referred to as holding period risk—the risk that not only a better opportunity might be missed, but that something may happen during the time you hold a bond to negatively affect your investment.

Bond fund managers face the same risks as individual bondholders. When interest rates rise—especially when they go up sharply in a short period of time—the value of the fund's existing bonds drops, which can put a drag on overall fund performance.

Since bond prices go up when interest rates go down, you might ask what risk, if any, do you face when rates fall? The answer is call risk.

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### Smart Move

To protect against unwelcome calls, always study the call provisions and any published call schedules thoroughly before buying a bond. Ask your broker for complete call information. Remember that bonds are generally called during periods of declining interest rates, so it pays to be particularly mindful of a bond's potential to be called during such times.

### Call Risk

Similar to when a homeowner seeks to refinance a mortgage at a lower rate to save money when loan rates decline, a bond issuer often calls a bond when interest rates drop, allowing the issuer to sell new bonds paying lower interest rates—thus saving the issuer money. For this reason, a bond is often called following interest rate declines. The bond's principal is repaid early, but the investor is left unable to find a similar bond with as attractive a yield. This is known as call risk.

With a callable bond, you might not receive the bond's original coupon rate for the entire term of the bond, and it might be difficult or impossible to find an equivalent investment paying rates as high as the original rate. This is known as reinvestment risk. Additionally, once the call date has been reached, the stream of a callable bond's interest payments is uncertain, and any appreciation in the market value of the bond may not rise above the call price.

### Refunding Risk and Sinking Funds Provisions

A sinking fund provision, which often is a feature included in bonds issued by industrial and utility companies, requires a bond issuer to retire a certain number of bonds periodically. This can be accomplished in a variety of ways, including through purchases in the secondary market or forced purchases directly from bondholders at a predetermined price, referred to as **refunding risk**.

Holders of bonds subject to sinking funds should understand that they risk having their bonds retired prior to maturity, which raises reinvestment risk. Unlike other bonds subject to call provisions, depending upon the sinking fund provision, there may be a relatively high likelihood that the bondholders will be forced to redeem their bonds prior to maturity, even if market-wide interest rates remain unchanged.

It is important to understand that there is no guarantee that an issuer of these bonds will be able to comply strictly with any redemption requirements. In certain cases, an issuer may need to borrow funds or issue additional debt to refinance an outstanding bond issue subject to a sinking fund provision when it matures.

### Default and Credit Risk

If you have ever loaned money to someone, chances are you gave some thought to the likelihood of being repaid. Some loans are riskier than others. The same is true when you invest in bonds. You are taking a risk that the issuer's promise to repay principal and pay interest on the agreed upon dates and terms will be upheld. U.S. Treasury securities (for example, a Treasury bond, bill or note) and other bonds backed by the "full faith and credit of the U.S. government," are generally deemed to be risk-free. However, most bonds face a *possibility of* default. This means that the bond obligor will either be late paying creditors (including you, as a bondholder), pay a negotiated reduced amount or, in worst-case scenarios, be unable to pay at all.



#### Firing Bullets

Non-callable bonds are called bullet securities—"bullets" for short. Why the funny name? Because they take aim at the maturity date—and once fired (issued), they don't stop (get called) until that maturity date is hit.

## Ratings Agencies

Ratings are a way of assessing default and credit risk. The Securities and Exchange Commission (SEC) has designated 10 rating agencies as Nationally Recognized Statistical Rating Organizations (NRSROs). They are: AM Best; DBRS Ltd.; Egan-Jones Rating Company; Fitch Ratings (Fitch); Japan Credit Rating Agency, Ltd.; LACE Financial Corp.; Moody's Investors Service (Moody's); Rating and Investment Information, Inc. (R&I); Realpoint LLC, which focuses on commercial mortgage-backed securities; and Standard & Poor's (S&P). These organizations review information about selected issuers, especially financial information, such as the issuer's financial statements, and assign a rating to an issuer's bonds—from AAA (or Aaa) to D (or no rating).

Each NRSRO uses its own ratings definitions and employs its own criteria for rating a given security. It is entirely possible for the same bond to receive a rating that differs, sometimes substantially, from one ratings agency to the next. While it is a good idea to compare a bond's rating across the various NRSROs, not all bonds are rated by every agency, and some bonds are not rated at all.

### *Ratings Rise for Munis*

A number of ratings agencies have moved to a uniform ratings scale for all bonds. In the past, most ratings agencies have used a separate, and more stringent, set of standards for rating municipal bonds than corporate bonds. As ratings agencies employ this uniform standard, investors can expect to see a rise in the ratings of thousands of municipal bonds. Investors should not take this to mean these bonds have been deemed to carry reduced credit risk. Rather, the improved rating reflects a method of evaluating risk that is in keeping with the calibration used for corporate bonds.

## Slow Down When You See “High Yield”

### *Junk Bonds*

Generally, bonds are lumped into two broad categories—investment grade and non-investment grade. Bonds that are rated BBB, bbb, Baa or higher are generally considered investment grade. Bonds that are rated BB, bb, Ba or lower are non-investment grade. Non-investment grade bonds are also referred to as high yield or junk bonds. Junk bonds are considered riskier investments because the issuer's general financial condition is less sound. This means the entity issuing the bond—a corporation, for instance—may not be able to pay the interest and principal to bondholders when they are due.

Junk bonds typically offer a higher yield than investment-grade bonds, but the higher yield comes with increased risk—specifically, the risk that the bond's issuer may default

Many investors heavily weigh the rating of a particular bond in determining if it is an appropriate and suitable investment. Although credit ratings are an important indicator of creditworthiness, you should also consider that the value of the bond might change depending upon changes in the company's business and profitability. Some credit rating agencies issue outlooks and other statements to warn you if they are considering upgrading or downgrading a credit rating. In the worst scenario, holders of bonds could suffer significant losses, including the loss of their entire investment. Finally, some bonds are not rated. In such cases, you may find it difficult to assess the overall creditworthiness of the issuer of the bond.

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### Don't Reach

Do not make your investment decision based solely on a bond's yield. This is referred to as “reaching for yield,” and is one of the most common mistakes bond investors make. See FINRA's Investor Alert *The Grass Isn't Always Greener—Chasing Return in a Challenging Investment Environment*.

### *Distressed Debt*

Believe it or not, there is a market for distressed and even defaulted debt. This is a playing field for sophisticated bond investors who are seeking—often through painstaking research, or with the intent to assume increased investment risk—to find a few diamonds in this very rough environment characterized by bankruptcies and steep debt downgrades.

## **Inflation and Liquidity Risk**

### *Inflation Risk*

This is the risk that the yield on a bond will not keep pace with purchasing power (in fact, another name for inflation risk is **purchasing power risk**). For instance, if you buy a five-year bond in which you can realize a coupon rate of 5 percent, but the rate of inflation is 8 percent, the purchasing power of your bond interest has declined. All bonds but those that adjust for inflation, such as TIPS, expose you to some degree of inflation risk.

### *Liquidity Risk*

Some bonds, like U.S. Treasury securities, are quite easy to sell because there are many people interested in buying and selling such securities at any given time. These securities are liquid. Others trade much less frequently. Some even turn out to be “no bid” bonds, with no buying interest at all. These securities are illiquid.

Liquidity risk is the risk that you will not be easily able to find a buyer for a bond you need to sell. A sign of liquidity, or lack of it, is the general level of trading activity: A bond that is traded frequently in a given trading day is considerably more liquid than one which only shows trading activity a few times a week. Investors can check corporate bond trading activity—and thus liquidity—by using FINRA’s Market Data Center. For insight into municipal bond liquidity, investors can use trade data found on the Municipal Securities Rulemaking Board’s website.

If you think you might need to sell the bonds you are purchasing prior to their maturity, you should carefully consider liquidity risk, and what steps your broker will take to assist you when liquidating your investment at a fair price that is reasonably related to then-current market prices. It is possible that you may be able to re-sell a bond only at a heavy discount to the price you paid (loss of some principal) or not at all.

## **Event Risk**

In the 1980s, buyouts, takeovers and corporate restructurings became prevalent. With such upheavals often came swift, and very often negative, changes to a company’s credit rating. To this day, mergers, acquisitions, leveraged buyouts, and major corporate restructurings are all events that put corporate bonds at risk, thus the name **event risk**.

Other events can also trigger changes in a company’s financial health and prospects, which may trigger a change in a bond’s rating. These include a federal investigation of possible wrongdoing, the sudden death of a company’s chief executive officer or other key manager, or a product recall. Energy prices, foreign investor demand and world events also are triggers for event risk. Event risk is extremely hard to anticipate and may have a dramatic and negative impact on bondholders.

# Types of Bonds

## U.S. Treasury Securities

Once you've decided to invest in bonds, the next question is—which type of bond? Bonds tend to be broadly categorized according to who is issuing them.

U.S. Treasury securities (“Treasury securities”) are issued by the federal government and are considered to be among the safest investments you can make, because all Treasury securities are backed by the “full faith and credit” of the U.S. government. This means that come what may—recession, inflation, war—the U.S. government is going to take care of its bondholders.

Treasuries are also liquid. A group of nearly 20 primary dealers are required to buy large quantities of Treasuries every time there is an auction and stand ready to trade them in the secondary market.

There are other features of Treasuries that are appealing to the individual investor. They can be bought in denominations of \$100, making them affordable, and the buying process is quite convenient. You can either buy Treasuries through brokerage firms and banks, or you can simply follow the instructions on the TreasuryDirect website. For more information, see the Buying and Selling Treasuries and Savings Bonds section.

As an added bonus, while you must pay federal income taxes on the interest paid to you from Treasuries held outside of a tax-deferred retirement account, you won't have to pay state income taxes on the interest you received.

### Treasury Bills, Notes and Bonds

#### Treasury Bills

Short-term securities that are non-interest bearing (zero-coupon) with maturities of only a few days (these are referred to as cash management bills), four weeks, 13 weeks, 26 weeks or 52 weeks. Also called T-bills, you buy them at a discount to face value (par) and are paid the face value when they mature. Interest income is subject to federal income tax, but exempt from state and local income taxes.

#### Treasury Notes

Fixed-principal securities issued with maturities of two, three, five, seven and 10 years. Sometimes called T-Notes, interest is paid semiannually, with the principal paid when the note matures. Interest income is subject to federal income tax, but exempt from state and local income taxes.

#### Treasury Bonds

Long-term, fixed-principal securities issued with a 30-year maturity. The Treasury Department stopped issuing Treasury bonds in October 2001, but brought back the 30-year bond in February 2006. Outstanding fixed-principal bonds have terms from 10 to 30 years. Interest is paid on a semiannual basis with the principal paid when the bond matures. Interest income is subject to federal income tax, but exempt from state and local income taxes.

You can learn more about Treasuries on the TreasuryDirect website.

As safe as an investment in legitimate Treasury securities is, even the Treasury bond market has its share of scams. The Bureau of the Public Debt alerts investors to fraudulent schemes through a website called Frauds, Phonies, and Scams.



### TREASURIES RISK REPORT CARD

- No call risk and virtually no liquidity, event or credit and default risk.
- Interest rate risk: If interest rates rise, the value of your bond on the secondary market will likely fall.
- Inflation risk: Treasury security yields may not keep up with inflation.
- Opportunity risk: The longer the term of your U.S. Treasury security, the greater the chance you will not be able to act upon a more attractive investment opportunity should one become available.



### TREASURIES SNAPSHOT

|                              |   |
|------------------------------|---|
| <b>Issuer</b>                | U.S. Treasury   |
| <b>Minimum Investment</b>    | \$100   |
| <b>Interest Payment</b>      | Treasury bills are non-interest bearing: Sold at discount from face value and pay interest upon maturity. Treasury notes and bonds pay semiannual interest. |
| <b>How to Buy/Sell</b>       | At original issue through TreasuryDirect or broker. On the secondary market through a broker.   |
| <b>Bond Interest Rate</b>    | Determined at auction. Look up at Bureau of the Public Debt or through a broker.  |
| <b>Price Information</b>     | TreasuryDirect for original issues. Broker, newspapers and data vendors for secondary trade data.   |
| <b>Website for More Info</b> | <a href="http://www.treasurydirect.gov">www.treasurydirect.gov</a>  |

## TIPS

If you are concerned about inflation, the U.S. Treasury Department has some bonds that might interest you. They're called Treasury Inflation Protected Securities, or TIPS. Issued with maturities of five, 10 and 30 years, TIPS shelter you from inflation risk because their principal is adjusted semiannually for inflation based on changes in the Consumer Price Index-Urban Consumers (CPI-U), a widely used measure of inflation. Interest payments are calculated on the inflated principal. So, if inflation occurs throughout the life of the bond, interest payments will increase. At maturity, if the adjusted principal is greater than the face or par value, you will receive the greater value.

Because they are U.S. Treasury securities, TIPS are backed by the "full faith and credit" of the U.S. government and, therefore, carry virtually no credit or default risk. Remember the trade-off between risk and reward? It holds for TIPS as well. While the TIPS investor is sheltered from inflation risk and, in fact, benefits during periods of inflation, the trade-off is that the base interest rate on TIPS is usually lower than that of other Treasuries with similar maturities. In periods of deflation, low inflation or no inflation, a conventional Treasury bond can be the better-performing investment.

You might ask, "What happens if deflation (a negative inflation rate) occurs? Would my TIP investment be worth less than what I paid for it?" No, unless you paid more than the face value of the bond. Upon maturity, the Treasury Department agrees to pay the initial face value of the bond or the inflation-adjusted face value, whichever is greater.

For more information on TIPS, see TreasuryDirect's Treasury TIPS web page.



### TIPS RISK REPORT CARD

- Interest rate risk: If interest rates rise, the value of your bond on the secondary market will likely fall.
- No inflation risk, because principal is adjusted semiannually for inflation based on CPI-U.
- No call risk and virtually no liquidity, event or credit and default risk.
- Opportunity risk: In periods of no or low inflation, other investments, including other Treasury bonds, may perform better.



### TIPS SNAPSHOT

|                              |  |
|------------------------------|--|
| <b>Issuer</b>                | U.S. Treasury  |
| <b>Minimum Investment</b>    | \$100  |
| <b>Interest Payment</b>      | Semiannually   |
| <b>How to Buy/Sell</b>       | At original issue through TreasuryDirect or broker. On the secondary market through a broker.  |
| <b>Bond Interest Rate</b>    | Tied to Consumer Price Index. Rate information at TreasuryDirect website or through a broker.  |
| <b>Price Information</b>     | TreasuryDirect for original issues. Broker data vendors for secondary trade data.  |
| <b>Website for More Info</b> | <a href="http://www.treasurydirect.gov/indiv/products/prod_tips_glance.htm">www.treasurydirect.gov/indiv/products/prod_tips_glance.htm</a> |

## STRIPS

The U.S. Treasury STRIPS program was introduced in the mid-1980s. STRIPS is the acronym for Separate Trading of Registered Interest and Principal of Securities. The STRIPS program lets investors hold and trade the individual interest and principal components of eligible Treasury notes and bonds as separate securities. While “stripping” also happens to non-U.S. Treasury securities, this discussion applies to stripped U.S. Treasury securities.

When a U.S. Treasury fixed-principal note or bond or a Treasury inflation-protected security (TIPS) is stripped, each interest payment and the principal payment becomes a separate zero-coupon security. Each component has its own identifying number and can be held or traded separately. For example, a 10-year Treasury note consists of 20 interest payments—one every six months for 10 years—and a principal payment payable at maturity. When this security is “stripped,” each of the 20 interest payments and the principal payment become separate STRIPS, and can be held and transferred separately. STRIPS can only be bought and sold through a financial institution or brokerage firm (not through TreasuryDirect), and held in the commercial book-entry system.

Like all zero-coupon bonds, STRIPS sell at a discount because there are no interest payments. Your income on a STRIP that is held to maturity is the difference between the purchase price and the amount received at maturity. When you buy a STRIP, the only time you receive an interest payment is when your STRIP matures.

Risk-adverse investors who want to receive a known interest payment at some specific date in the future favor STRIPS. State lotteries and pension funds regularly invest in STRIPS to be assured they will be able to meet annual payout obligations to prizewinners or pensioners.



### STRIPS RISK REPORT CARD

- No call risk and virtually no liquidity risk, event risk, or credit and default risk.
- Interest rate risk: If interest rates rise, the value of your STRIP on the secondary market will likely fall.
- Inflation risk: STRIP yields may not keep up with inflation.



### STRIPS SNAPSHOT

|                              |  |
|------------------------------|--|
| <b>Issuer</b>                | Financial institutions, government securities broker-dealers   |
| <b>Minimum Investment</b>    | \$100  |
| <b>Interest Payment</b>      | Non-interest bearing: Pays out at maturity.  |
| <b>How to Buy/Sell</b>       | At original issue and on the secondary market through a broker. U.S. Treasury does not sell STRIPS to investors. |
| <b>Bond Interest Rate</b>    | Determined at origination and varies by bond. Ask your broker for the rate of individual STRIPS.                 |
| <b>Price Information</b>     | Broker: Quotes are disseminated and traded over-the-counter. No automated quotation service available.           |
| <b>Website for More Info</b> | <a href="http://www.treasurydirect.gov">www.treasurydirect.gov</a>   |



## U.S. Savings Bonds

Savings bonds are also issued by the federal government and backed by the “full faith and credit” guarantee. But unlike Treasuries, savings bonds may be purchased for an investment as low as \$25. Like Treasuries, the interest earned on your savings bonds is subject to federal income tax, but not state or local income taxes.

Savings bonds can be purchased from the U.S. Treasury, at banks and credit unions, and are often offered by employers through payroll deduction. But unlike most other Treasuries, savings bonds cannot be bought and sold in the secondary market. In fact, only the person or persons who have registered a savings bond can receive payment for it.

### Say Goodbye to Paper Saving Bonds

As of January 1, 2012, paper savings bonds are no longer sold at financial institutions. Electronic savings bonds in Series EE and I will remain available through purchase in TreasuryDirect®, a secure, web-based system operated by the Bureau of the Public Debt.

### Types of Savings Bonds

The two most common types of savings bonds are I Bonds and Series EE Savings Bonds. Both are accrual securities, meaning the interest you earn accrues monthly at a variable rate and the interest is compounded semiannually. You receive your interest income when you redeem the bonds.

The I Bond tracks inflation to prevent your earnings from being eroded by a rising cost of living. Series EE Savings Bonds issued after May 2005 earn a fixed rate of interest. Both types of bonds are exempt from all state and local income taxes.

### Purchasing Savings Bonds

You can purchase savings bonds electronically through the TreasuryDirect Website. No physical certificate will exist. TreasuryDirect allows you to buy, track, change registration and redeem your bond—all electronically via a secure online account. A program called SmartExchangeSM allows TreasuryDirect account owners to convert their paper savings bonds to electronic securities in a special Conversion Linked Account in their online account.

### Taking Savings Bonds at Face Value

Whether you buy savings bonds electronically or in paper form, most savings bonds are sold at face value in amounts from \$25 to \$30,000. This means that if you buy a \$100 bond, it costs you \$100, on which you earn interest.



#### Remember to Redeem!

Always check the savings bond's issue dates to find out if it is still earning interest. Depending upon the date that you purchased your securities, it may be time to redeem them.



### SAVINGS BOND RISK REPORT CARD

- No call or liquidity risk and virtually no credit and default risk.
- Except for Series EE bonds issued before May 2005, all savings bonds are exposed to interest rate risk.
- Inflation risk: I bonds are protected from inflation, but EE bonds are not.
- Opportunity risk exists, particularly for I bonds, which are particularly susceptible during periods of low inflation and the rare instances of deflation.



### I BONDS AND EE BONDS SNAPSHOT

|                              |  |
|------------------------------|--|
| <b>Issuer</b>                | U.S. Treasury  |
| <b>Minimum Investment</b>    | \$25   |
| <b>Interest Payment</b>      | Interest accrues monthly—paid when bond is redeemed  |
| <b>How to Buy/Sell</b>       | TreasuryDirect, Broker   |
| <b>Bond Interest Rate</b>    | I Bond interest rate is a combination of two separate rates—a fixed rate of return and a variable semiannual inflation rate. See TreasuryDirect I Bonds. |
|                              | EE Bonds issued after May 2005 offer fixed rates determined when the bonds are issued. See TreasuryDirect EE Bonds.                                      |
| <b>Price Information</b>     | TreasuryDirect or through a broker   |
| <b>Website for More Info</b> | <a href="http://www.treasurydirect.gov">www.treasurydirect.gov</a>   |

## Agency Securities

“Agencies” is a term used to describe two types of bonds: (1) bonds issued or guaranteed by U.S. federal government agencies; and (2) bonds issued by government-sponsored enterprises (GSEs)—corporations created by Congress to foster a public purpose, such as affordable housing.

Bonds issued or guaranteed by federal agencies such as the Government National Mortgage Association (Ginnie Mae) are backed by the “full faith and credit of the U.S. government,” just like Treasuries. This is an unconditional commitment to pay interest payments, and to return the principal investment in full to you when a debt security reaches maturity.

Bonds issued by GSEs such as the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage (Freddie Mac) are not backed by the same guarantee as federal government agencies. Bonds issued by GSEs carry credit risk.

It is also important to gather information about the enterprise that is issuing the agency bond, particularly if it is issued by a GSE. Two of the largest players in the agency bond market—Fannie Mae and Freddie Mac—are publicly traded companies who register their stock with the SEC and provide disclosures that are publicly available including annual reports, quarterly reports, and reports of current events that stand to impact the company. These documents can give you insight into the economic health of the company, the challenges and opportunities it faces, and short- and long-term corporate goals. These company filings are available online on the SEC’s website. It is important to learn about the issuing agency because it will affect the strength of any guarantee provided on the agency bond. Evaluating an agency’s credit rating before you invest should be standard procedure.

It takes \$10,000 to invest in most agency bonds (Ginnie Maes are an exception, requiring a minimum investment of \$25,000), with the majority of agency bonds paying a semiannual fixed coupon. There is a relatively active (liquid) secondary trading market for agencies, though it is important for investors to understand that many agencies are tailored to the needs of a particular investor or class of investors—with the expectation that they will be held until maturity. This is especially true of structured agency securities (agencies with special features, which are often not suitable for individual investors).

Most agency bonds pay a semiannual fixed coupon and are sold in a variety of increments, though the minimum investment level is generally \$10,000 for the first increment, and \$5,000 increments thereafter. The tax status of agency bonds varies. Interest from bonds issued by Freddie Mac and Fannie Mae is fully taxable, while those issued by some other GSEs offer state and local tax exemptions. Capital gains and losses on the sale of agency bonds are taxed at the same short- and long-term rates (for bonds held for one year or less or for more than one year) as for stocks.

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### Freddie and Fannie

On September 6, 2008, both Freddie Mac and Fannie Mae were placed into conservatorship by the Federal Housing Finance Agency (FHFA), which regulates the country’s secondary mortgage markets. As conservator, FHFA has ultimate control over the two organizations.

### Most Active GSE Agency Bond Issuers

| Legal Name                                    | Common Name | Tax Status             |
|---|-------------|------------------------|
| Federal Farm Credit Banks Funding Corporation | Farm Credit | State and local exempt |
| Federal Home Loan Banks                       | FHL Banks   | State and local exempt |
| Federal Home Loan Mortgage Corporation        | Freddie Mac | Fully taxable          |
| Federal National Mortgage Association         | Fannie Mae  | Fully taxable          |
| Tennessee Valley Authority                    | TVA         | State and local exempt |

#### Types of Agencies

Agency bonds can be structured to meet a specific need of an investor, issuer or both.

For instance, in addition to the traditional coupon-paying agency bond, some organizations issue no-coupon discount notes—called “discos”—generally to help them meet short-term financing demands. This explains why disco maturities are usually quite short, ranging from a single day to a year. Discos resemble STRIPS in that they are zero-coupon securities that are issued at a discount to par. As with all bonds that trade at such a discount, if you sell the bond before it matures, you may lose money.

Another type of structured agency security is a step-up note, or “step-up.” These securities are callable with a coupon rate that “steps up” over time according to a pre-set schedule. The goal of a step-up is to minimize the impact of interest rate risk. Provided the security is not called, the step-up will keep providing the bondholder with an increased coupon rate, cushioning the investor from interest rate risk. Step-ups are not problem-free, however, as they often offer limited call protection.

Yet another type of agency is a floating-rate security, or “floater.” Floaters pay a coupon rate that changes according to an underlying benchmark, such as the six-month T-bill rate.

Keep in mind that such structured notes, and other esoteric products such as index floaters and range bonds, can be quite complicated and may be unsuitable for individual investors.



#### Bond Fact

Unlike most bonds that pay semiannual coupons, investors in mortgage-backed securities receive monthly payments of interest *and* principal.



### AGENCY RISK REPORT CARD

- ✔ Credit and default risk are real for GSE-issued agencies: The federal government is under no legal obligation to save a GSE from default.
- ✔ Call risk: Many agency securities—step-ups in particular—carry call provisions that allow the issuer to pay you prior to the bond’s maturity date, typically when interest rates drop, leaving you to reinvest at lower prevailing rates.
- ✔ Interest rate risk: If interest rates rise, the value of an agency bond on the secondary market will likely fall.



### AGENCY BONDS SNAPSHOT

|                              |  |
|------------------------------|--|
| <b>Issuer</b>                | Government-sponsored enterprises (GSEs)  |
| <b>Minimum Investment</b>    | Varies—generally \$10,000  |
| <b>Interest Payment</b>      | Fixed coupon or floating/variable coupon rates. Interest is paid semiannually for fixed-coupon security. |
| <b>How to Buy/Sell</b>       | Through a broker   |
| <b>Bond Interest Rate</b>    | Determined at origination and varies by bond   |
| <b>Price Information</b>     | Issue price and secondary trade data available through a broker and data vendors                         |
| <b>Website for More Info</b> | The GSE Debt Market: <a href="http://www.investinginbonds.com">www.investinginbonds.com</a>              |

### Mortgage-Backed Securities

Mortgage-backed securities, called MBSs, are bonds secured by home and other real estate loans. They are created when a number of these loans, usually with similar characteristics, are pooled together. For instance, a bank offering home mortgages might round up \$10 million worth of such mortgages. That pool is then sold to a federal government agency like Ginnie Mae or a government sponsored-enterprise (GSE) such as Fannie Mae or Freddie Mac, or to a securities firm to be used as the collateral for the new MBS.

The majority of MBSs are issued or guaranteed by an agency of the U.S. government such as Ginnie Mae, or by government-sponsored enterprises (GSEs), including Fannie Mae and Freddie Mac. Mortgage-backed securities carry the guarantee of the issuing organization to pay interest and principal payments on their mortgage-backed securities. While Ginnie Mae’s guarantee is backed by the “full faith and credit” of the U.S. government, those issued by GSEs are not.

A third group of MBSs is issued by private firms. These “private label” mortgage-backed securities are issued by subsidiaries of investment banks, financial institutions, and homebuilders whose credit-worthiness and rating may be much lower than that of government agencies and GSEs.

The minimum investment amount is generally \$1,000 (although it's \$25,000 for Ginnie Maes). Secondary trading of mortgage-backed bonds is relatively liquid in normal economic conditions and done over the counter, between dealers. Investors work with brokers, preferably those with specialized expertise in the mortgage bond arena, to buy and sell these bonds.

Because of the general complexity of mortgage-backed securities, and the difficulty that can accompany assessing the creditworthiness of an issuer, use caution when investing. They may not be suitable for many individual investors.

### **Varied Monthly Interest Payments**

Unlike a traditional fixed-income bond, most MBS bondholders receive monthly—not semiannual—interest payments. There's a good reason for this. Homeowners (whose mortgages make up the underlying collateral for the MBS) pay their mortgages monthly, not twice a year. These mortgage payments are what ultimately find their way to MBS investors.

There's another difference between the proceeds investors get from mortgage-backed bonds and, say, a Treasury bond. The Treasury bond pays you interest only—and at the end of the bond's maturity, you get a lump-sum principal amount, say \$1,000. But a mortgage-backed bond pays you interest *and* principal. Your cash flow from the mortgage-backed security at the beginning is mostly from interest, but gradually more and more of your proceeds come from principal. Since you are receiving payments of both interest and principal, you don't get handed a lump-sum principal payment when your MBS matures. You've been getting it in portions every month.

MBS payments (cash flow) may not be the same each month because the original “pass-through” structure reflects the fact that homeowners themselves don't pay the same amount each month. They often make unscheduled payments of principal, or prepayments. For this reason, MBS investors are subject to prepayment risk. The risk is highest when interest rates fall and homeowners refinance (prepay an existing mortgage). The resulting wave of prepayments means that there's a greater chance that the MBS investor will be paid all of the interest and principal ahead of schedule.

There are advantages to this payment structure—namely, you have your money in hand—but the climate for reinvestment has deteriorated. Interest rates have declined and you can't get the same return you had with your original bond. So, be aware that refinancing booms can be a bust for MBS investors. At the same time, issuers increasingly apply statistical models to smooth out monthly payments. Also, the pass-through structure of aggregating large numbers of loans at a single fixed rate also helps keep cash flows relatively consistent. Since the mid-1980s, issuers have also offered a type of collateralized mortgage bond called *planned amortization class*, or PAC bonds, designed to reduce volatility associated with prepayments.

### *Varied Monthly Payments*

There's one more thing about those portions you've been getting—they are not the same each month. For this reason, investors who draw comfort from a dependable and consistent semiannual payment may find the unpredictability of mortgage-backed securities unsettling.

## Types of Mortgage-Backed Securities

### *Pass-Throughs*

The most basic mortgage securities are known as pass-throughs. They are a mechanism—in the form of a trust—through which mortgage payments are collected and distributed (or passed through) to investors. The majority of pass-throughs have stated maturities of 30 years, 15 years and five years. While most are backed by fixed-rate mortgage loans, adjustable-rate mortgage loans (ARMs) and other loan mixtures are also pooled to create the securities. Because these securities “pass through” the principal payments received, the average life is much less than the stated maturity life, and varies depending upon the paydown experience of the pool of mortgages underlying the bond.

### *Collateralized Mortgage Obligations (CMOs)*

Collateralized mortgage obligations, CMOs for short, are a complex type of pass-through security. Instead of passing along interest and principal cash flow to an investor from a generally like-featured pool of assets (for example, 30-year fixed mortgages at 5.5 percent, which happens in traditional pass-through securities), CMOs are made up of many pools of securities. In the CMO world, these pools are referred to as tranches, or slices. There could be scores of tranches, and each one operates according to its own set of rules by which interest and principal gets distributed. If you are going to invest in CMOs—an arena generally reserved for sophisticated investors—be prepared to do a lot of homework and spend considerable time researching the type of CMO you are considering (there are dozens of different types), and the rules governing its income stream.

Many bond funds invest in CMOs on behalf of individual investors. To find out whether any of your funds invests in CMOs, and if so, how much, check your fund’s prospectus or SAI under the headings “Investment Objectives” or “Investment Policies.”

To recap, both pass-throughs and CMOs differ in a number of significant ways from traditional fixed-income bonds.

| Fixed-Coupon Bonds                     | Mortgage Bonds   |
|--|--|
| Semiannual coupon                      | Monthly coupon   |
| Coupon amount stays the same each time | Coupon amount varies each month                          |
| Coupon is interest only                | Coupon is interest <i>and</i> principal                  |
| Collect principal when bond matures    | Collect principal incrementally each month               |
| Concise maturity date                  | “Average life,” an estimate of when the bond will mature |



### Bond Fact

Unlike most bonds that pay semiannual coupons, investors in mortgage-backed securities receive monthly payments of interest *and* principal.



### MORTGAGE-BACKED SECURITIES RISK REPORT CARD

- ✓ Credit and default risk are real for MBSs issued by GSEs: The federal government is under no legal obligation to save a GSE from default.
- ✓ Prepayment risk that acts much like call risk: You get your principal back sooner than the stated maturity, but the reinvestment opportunities are limited due to the inconsistent prepayment rates, which are driven by real estate mortgage interest rates and refinancing trends; population, geographic mobility and employment opportunities; and social and economic factors that are difficult to model.
- ✓ Extension risk: The opposite of prepayment risk—the risk that interest rates will go up, lengthening the estimated maturity (but not the stated maturity) of your MBS and creating more holding-period risk.
- ✓ Interest rate risk: If interest rates rise, the value of a mortgage-backed security on the secondary market will likely fall.



### MORTGAGE-BACKED SECURITIES SNAPSHOT

|                              |   |
|------------------------------|---|
| <b>Issuer</b>                | Agencies of the federal government, GSEs and private financial organizations                |
| <b>Minimum Investment</b>    | Varies—generally \$10,000   |
| <b>Interest Payment</b>      | Generally paid monthly with payments varying each month                                     |
| <b>How to Buy/Sell</b>       | Through a broker  |
| <b>Bond Interest Rate</b>    | Determined at origination and varies by bond  |
| <b>Price Information</b>     | Issue price and secondary trade data available through a broker and data vendors            |
| <b>Website for More Info</b> | Mortgage Securities: <a href="http://www.investinginbonds.com">www.investinginbonds.com</a> |



## **Municipal Bonds**

Municipal securities, or “munis,” are bonds issued by states, cities, counties and other governmental entities to raise money to build roads, schools and a host of other projects for the public good.

Munis pay a specified amount of interest (usually semiannually) and return the principal to you on a specific maturity date. Most munis are sold in minimum increments of \$5,000 and have maturities that range from short term (2 – 5 years) to very long term (30 years).

### *Muni Price and Disclosure Information*

On January 31, 2005, investors gained the ability to see municipal bond prices in real time when the Municipal Securities Rulemaking Board (MSRB) began making intraday pricing information available for all municipal bond trades.

Price data is available to investors and dealers alike at SIFMA’s website. This information is also accessible on the left navigation of all pages of FINRA’s Smart Bond Investing.

You can buy and sell municipal notes or bonds at issue or in the secondary market through the roughly 2,200 banks and brokerages registered to trade municipal securities. In spite of newly improved pricing transparency, be prepared to shop around for the best price, with different dealers often quoting you much different prices for the same bond.

The MSRB currently makes official statements and other muni bond disclosures available to the public for free through its Electronic Municipal Market Access (EMMA) website. Ongoing disclosures submitted by issuers are available to the public for free through EMMA, along with real-time trade pricing and up-to-date interest rate information on variable rate and auction rate securities.

When considering an investment in municipal bonds, bear in mind that no two municipal bonds are created equal—and carefully evaluate each investment, being sure to obtain up-to-date information about both the bond and its issuer. For more information, see FINRA’s Investor Alert, *Municipal Bonds—Staying on the Safe Side of the Street in Rough Times* at [www.finra.org/investors](http://www.finra.org/investors).

### Buying and Selling Munis

While the muni bond market is active, with a daily trading volume in excess of \$10 billion, some bonds are more liquid than others. Some bonds trade actively, while others may have no activity (no interested buyers or sellers) for weeks at a time. As a general category, municipal bonds tend to be more sensitive to forces of supply and demand than other fixed-income categories. This has the net effect of increasing your market risk: If your bond is out of favor with other investors at the time you need to sell, the price you will get for the bond in the secondary market will suffer. And of course, like all bonds, munis are subject to interest rate risk—if rates rise above the rate of your bond, the value of the bond in the secondary market declines.

Because of the dizzying number of muni bonds available (virtually no two bonds are alike), and the fierce competition among dealers to gain a piece of the business, you should enter into muni investing with care. Do your homework, starting with the selection of an investment professional with a proven track record of municipal securities expertise.

When considering an investment in municipal bonds, bear in mind that no two municipal bonds are created equal—and carefully evaluate each investment, being sure to obtain up-to-date information about both the bond and its issuer. For more information, see FINRA's Investor Alert, *Municipal Bonds—Staying on the Safe Side of the Street in Rough Times*.

### Munis and Taxes

The primary reason most individual investors buy municipal bonds is because they afford favorable tax treatment on the interest an investor earns. Interest on the vast majority of municipal bonds is free of federal income tax. Indeed, municipal securities are the ONLY securities for which this is the case.

Furthermore, if you live in the state or city issuing the bond, you may also be exempt from state or city taxes on your interest income. Bonds issued by Puerto Rico, Guam and other U.S. territories are tax-exempt for residents of all states.

Not all municipal bonds are free from federal tax. Taxable municipal bonds may be issued to finance projects that the federal government won't subsidize. To compensate investors for their lack of a tax break, these bonds tend to offer yields higher than tax-exempt municipal bonds, and more in line with rates of corporate or agency bonds.

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#### AMT Awareness

The alternative minimum tax (AMT) is a tax some people have to pay. The AMT is figured by a different set of rules than your normal income tax computation, but whichever computation comes out higher is the one you have to pay. Investors who purchase "private activity" bonds—bonds that are not exclusively used for government functions—may be subject to the AMT. Unlike other municipal bonds—including 501(c)(3) private activity bonds—interest earned on these "private activity bonds" cannot be deducted according to AMT rules and may trigger an AMT payment. A responsible financial professional should evaluate your AMT liability before recommending a tax-exempt investment. You should also seek the advice of a tax professional.

### Muni Math

Because interest payments from municipal bonds are usually exempt from federal income tax, their after-tax rates of return are attractive if you're in a higher tax bracket—even though a tax-free bond usually has a lower yield than a taxable bond. For comparison purposes, you can determine your net (after-tax) yield from a taxable bond by subtracting the amount of yield from your marginal tax rate (based on your filing status).

#### Figuring Taxable Equivalent Yield

Figuring the taxable equivalent yield of a municipal bond is the first step in deciding whether to buy it.

$$\text{Tax-Free Yield} / (1 - \text{Tax Bracket}) = \text{Taxable Equivalent}$$

For example, if a municipal bond is offered at a yield of 6 percent and you are in the 30 percent bracket, do the following:

- ▶ Convert your tax bracket to a decimal, or 0.30.
- ▶ The taxable equivalent yield is 6 divided by  $(1 - .30) = 6 \div .70 = 8.57$ .

$$\frac{6}{1 - 0.30} = 8.57\%$$

To match the 6 percent tax-free yield, you'd need a taxable bond paying at least 8.57 percent:

Useful Resource: SIFMA offers a Tax Year Tax-Exempt Taxable Yield Equivalent Chart on its websites: [www.investinginbonds.com](http://www.investinginbonds.com).

#### Investor Warning:

Unrated and low-rated muni bonds exist and are actively sold, and defaults occur. You should carefully weigh the significant risk of investing in highly speculative securities. While the absence of a credit rating is not, by itself, a determinant of low credit quality, investors in non-rated bonds should be prepared to make their own independent credit analysis of the bonds. If you are unable to do so, then ask yourself if losing your investment is worth the higher coupon rate these bonds may carry.

## Types of Munis

There are two common types of municipal bonds:

- ▶ **General Obligation Bonds**, also known as GOs, are issued by states, cities or counties. They are backed by the “full faith and credit” of the government entity issuing the bonds. This backing is only as strong as the entity’s ability to levy taxes on its citizens, and in some cases charge user or assessment fees. The creditworthiness of GOs is based primarily on the economic vitality of the issuer’s tax base. Highly-rated GOs tend to have a strong tax base.
- ▶ **Revenue Bonds** are backed solely by fees or other revenue generated or collected by a facility, such as tolls from a bridge or road, or leasing fees. The creditworthiness of revenue bonds tends to rest on a debt service coverage ratio—the relationship between revenue coming in and the cost of paying interest on the debt. Highly-rated revenue bonds usually have a debt service ratio of two or more (the revenue that comes in is twice as much as the cost of paying interest on the debt).

In addition to the general muni bond categories above, you can buy muni bonds with special features. For example, some muni bond issuers include a repayment protection feature—most often bond insurance—to insure their bonds at the time they are issued. A bond with insurance generally is able to come to market with a higher credit rating, making the bond more attractive to buyers, and at the same time lowering the issuing cost to the municipality. The protection can shield an investor from default risk to the extent that the protection provider promises to buy the bonds back or to take over payments of interest and principal if the issuer defaults.

Anticipation notes are short-term notes that are used by states and cities to meet a short-term financing need. They usually mature in less than a year and are generally issued at par and pay interest at maturity.

Other types of munis are floating-rate and variable-rate muni bonds. These bonds are extremely short-term investments that are issued with seven-day and 28-day put features, allowing the investor to “put” the bond back to the issuer or issuer agent. Generally, the bond’s interest rate is recalculated on the “put” date based upon a percentage of prevailing rates for Treasury bills or other interest rates.

There are also municipal securities, including zero-coupon munis, that are structured to give investors a lump-sum payment at maturity that is equivalent to the principal invested, but have no regular interest payments. These bonds are issued at a deep discount to the maturity. This type of muni is often used to save for a specific event, such as college education, but because they do not pay interest until maturity, their prices can be volatile.

Like most other bonds, munis can have call provisions. Indeed, a high percentage of munis are callable, a feature that helps protect the issuer from interest rate risk and manage spending.

### Smart Muni Moves

Do your homework before investing in munis:

- ▶ Before buying GOs, research the state, city or county that's issuing the bond. Pay particular attention to population rates and other measures of the region's tax base, as well as any legal limits on taxation authority. Keep in mind that a region's economic picture can change quickly, and with it the taxes a bond issuer is able to levy and collect.
- ▶ Before buying a revenue bond, ask your broker to give you the bond's debt service coverage ratio, which is the net operating income divided by total debt service. Highly-rated bonds tend to have a ratio greater than two.
- ▶ With all munis, check to see if the rating has gone up, down or remained stable.
- ▶ Do the tax math (or ask your broker) to make sure you are really better off buying a muni; you may be better off with a lower-risk Treasury bond.
- ▶ Weigh factors such as liquidity, maturity length, callability and transaction costs in your decision-making.
- ▶ Ask your broker if a bond's issuer is up to date with its reporting of its annual financial/operating data. Treat missing or past due financial information as a potential red flag.



#### MUNI BOND RISK REPORT CARD

- Credit and default risk can vary greatly from bond to bond. Insured bonds help offset this risk.
- Call risk exists, not just for investors who buy bonds at issue, but also for those who may have paid a premium for the bond in the secondary market, where it was priced as if it would not be called. Should such a premium-priced bond in fact be called, its value would drop.
- Interest rate risk: If interest rates rise, the value of a municipal on the secondary market will likely fall.
- Liquidity risk: Some munis are more liquid than others.



#### MUNICIPAL SECURITIES SNAPSHOT

**Issuer** States, cities, counties and other governmental entities

**Minimum Investment** Generally \$5,000

**Interest Payment** Fixed, floating/variable and zero-coupon; interest is paid semiannually for fixed-coupon security.

**How to Buy/Sell** Through a broker

**Bond Interest Rate** Determined at origination, varies by bond

**Price Information** Municipal Bonds: [www.investinginbonds.com](http://www.investinginbonds.com)

**Website for More Info** [www.msrb.org](http://www.msrb.org)

## Corporate Bonds

Companies issue corporate bonds (or corporates) to raise money for capital expenditures, operations and acquisitions. Corporates are issued by all types of businesses, and are segmented into major industry groups.

Corporate bondholders receive the equivalent of an IOU from the issuer of the bond. But unlike equity stockholders, the bondholder doesn't receive any ownership rights in the corporation. However, in the event that the corporation falls into bankruptcy and is liquidated, bondholders are more likely than common stockholders to receive some of their investment back.

There are many types of corporate bonds, and investors have a wide-range of choices with respect to bond structures, coupon rates, maturity dates and credit quality, among other characteristics. Most corporate bonds are issued with maturities ranging from one to 30 years (short-term debt that matures in 270 days or less is called "commercial paper"). Bondholders generally receive regular, predetermined interest payments (the "coupon"), set when the bond is issued. Interest payments are subject to federal and state income taxes, and capital gains and losses on the sale of corporate bonds are taxed at the same short- and long-term rates (for bonds held for less, or for more, than one year) that apply when an investor sells stock.

Most corporate bonds trade in the over-the-counter (OTC) market. The OTC market for corporates is decentralized, with bond dealers and brokers trading with each other around the country over the phone or electronically. Some bonds trade in small quantities (or odd lots) in the centralized environments of the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX), and are also traded in the OTC market.

### *TRACE®—Corporate Bond Trade Reporting Comes of Age*

TRACE (the Trade Reporting and Compliance Engine®) was launched in 2002 to bring transparency to the corporate bond market and create a regulatory database of corporate bond information. TRACE enables individual investors to receive real-time information on the actual sale price of virtually all U.S. corporate bonds and to see intra-day transaction data, as well as aggregate end-of-day statistics (such as most active bonds, total volume, advances and declines and new highs and lows). All broker-dealers that FINRA regulates are required to report corporate bond transactions to the TRACE system.

- ▶ **Go to the [TRACE Corporate Bond Data page](http://www.finra.org/trace_corp_bonds) for a snapshot of TRACE-reported corporate bond information: [www.finra.org/trace\\_corp\\_bonds](http://www.finra.org/trace_corp_bonds)**

### **Sweeteners—Special Features that Often Come at a Price to Investors**

In an effort to make bonds more attractive to investors, issuers sometimes add special features called "sweeteners" to a bond. For instance, one such sweetener is a survivor option, where the issuer agrees to repurchase the bond at par from the investor's estate in the event of death. Survivor options are not all alike and may contain limitations and special conditions. The insurance feature of insured bonds is another type of sweetener. Investors should understand that sweeteners almost always come at a price—either as a direct cost to investors or a lower rate of return.

## Types of Corporate Bonds

There are two concepts that are important to understand with respect to corporate bonds. The first is that there are classifications of bonds based on a bond's relationship to a corporation's capital structure. This is important because where a bond structure ranks in terms of its claim on a company's assets determines which investors get paid first in the event a company has trouble meeting its financial obligations.

### *Secured Corporates*

In this ranking structure, so-called senior secured debt is at the top of the list (senior refers to its place on the payout totem pole, not the age of the debt). Secured corporate bonds are backed by collateral that the issuer may sell to repay you if the bond defaults before, or at, maturity. For example, a bond might be backed by a specific factory or piece of industrial equipment.

### *Junior or Subordinated Bonds*

Next on the payout hierarchy is unsecured debt—debt not secured by collateral, such as unsecured bonds. Unsecured bonds, called debentures, are backed only by the promise and good credit of the bond's issuer. Within unsecured debt is a category called subordinated debt—this is debt that gets paid only after higher-ranking debt gets paid. The more junior bonds issued by a company typically are referred to as subordinated debt, because a junior bondholder's claim for repayment of the principal of such bonds is subordinated to the claims of bondholders holding the issuer's more senior debt.

### *Who Gets Paid First?*

1. Secured (collateralized) bondholders
2. Unsecured bondholders
3. Holders of subordinated debt
4. Preferred stockholders
5. Common stockholders

However, other types of claims also may have priority over the issuer's remaining assets over the claims of all bondholders (*e.g.*, certain supplier or customer claims). Therefore, although bondholders generally are paid prior to stockholders in a bankruptcy proceeding, this may offer little comfort if the issuer's assets are reduced to zero by other creditors that have the right to be paid before bondholders of a particular class of bonds.



### **Junk Bond Caution**

Investing in below investment-grade (high yield) debt is risky: There is a real risk of default by non-investment-grade companies. The cost of buying and selling junk bonds also can be high. If you invest in high yield bond funds, be advised that expenses associated with these funds can be steep, as mutual funds pass on the cost of buying and selling to the investor.

### Investment and Non-Investment Grade Corporates

The second concept that is important to understand when dealing with corporate bonds is that of credit quality. As discussed in “Risk from A to D”, corporate bonds tend to be categorized as either investment grade or non-investment grade. Non-investment grade bonds are also referred to as “high yield” bonds because they tend to pay higher yields than Treasuries and investment-grade corporate bonds. However, with this higher yield comes a higher level of risk. High yield bonds also go by another name: junk bonds.

Some corporate bonds are more liquid than others. Credit rating, yield and a host of other factors play on supply and demand. While you may not have trouble finding a buyer for the bond of a giant company, the ability to find a buyer for a low-grade, infrequently traded bond issued by a small company that few have heard about may be quite difficult (reflected in a much wider bid-ask spread). For more information, see *Buying and Selling Corporate and Municipal Bonds*.

### *Guaranteed and Insured Bonds*

Certain bonds may be referred to as guaranteed or insured. This means that a third party has agreed to make the bond’s interest and principal payments, when due, if the issuer is unable to make these payments. You should keep in mind that such guarantees are only as valuable as the creditworthiness of the third-party making the guarantee or providing the insurance.

### *Convertibles*

Convertible bonds offer holders the income of regular bonds and also an option to convert into shares of common stock of the same issuer at a pre-established price, even if the market price of the stock is higher. Convertible bond prices are influenced most by the current price—and the perceived prospects of the future price—of the underlying stock into which they are convertible. As a tradeoff for this conversion privilege, convertible bonds typically yield less.

### Reading a Corporate Bond Table

Unlike stocks, the bond prices you see online or in the newspaper are not the actual dollar prices. They’re really percentages of a bond’s par value (usually \$1,000). A corporate bond quoted at 99.2 is actually 99.2 percent of \$1,000, which makes the price \$992. The easiest procedure for arriving at a bond’s price is to simply move the decimal point one position to the right.



#### Smart Idea

You should be careful to understand the conditions under which the bonds may be converted as this right is often contingent upon, among other things, the issuer’s stock reaching a certain price level. You also should ask your broker or financial adviser whether there is any charge or fee associated with making a conversion.



### Most Active Investment-Grade Bonds

|                                   |                        |
|-----------------------------------|------------------------|
| <b>Issuer Name</b>                | AT&T Wireless Services |
| <b>Symbol</b>                     | AWE.GB                 |
| <b>Coupon</b>                     | 7.875%                 |
| <b>Maturity Moody's / S&amp;P</b> | Mar 2011               |
| <b>Rating</b>                     | Baa2/--                |
| <b>High</b>                       | 118.055                |
| <b>Low</b>                        | 117.797                |
| <b>Last</b>                       | 118.032                |
| <b>% Change</b>                   | 0.017                  |
| <b>% Yield</b>                    | 4.445                  |

| Header             |   |
|--------------------|---|
| <b>Issuer Name</b> | Type of bond, in this case, investment-grade corporate  |
| <b>Symbol</b>      | The entity that issued the bond.  |
| <b>Coupon</b>      | FINRA trading symbol that identifies the individual issue.  |
| <b>Maturity</b>    | The stated interest rate that the issuer pays to the bondholder. This rate can be fixed or variable depending on the structure of the bond.   |
| <b>Rating</b>      | The date on which the bond's issuer will pay back the principal value to the bondholder. In some charts, only the last two digits of the year are quoted: for example, 20 means 2020, 12 is 2012.   |
| <b>High</b>        | The credit rating from a Nationally Recognized Statistical Rating Organization (NRSRO) that is an assessment of the creditworthiness of the issuer and likelihood of its default, which impacts its ability to pay a bond's principal and interest.   |
| <b>Low</b>         | The intraday (if real-time) or previous day's highest price at which the bond traded. Prices below 100 are trading at a discount to par, and those above 100 are trading at a premium to par.   |
| <b>Last</b>        | The intraday (if real-time) or previous day's lowest price at which the bond traded. Prices below 100 are trading at a discount to par, and those above 100 are trading at a premium to par.  |
| <b>% Change</b>    | The intraday (if real-time) or previous day's most recent or last price at which the bond traded. Prices below 100 are trading at a discount to par, and those above 100 are trading at premium to par.   |
| <b>% Yield</b>     | Change in price from the previous price at which the bond traded.   |
|                    | The annual percentage rate of return an investor will receive until the bond is called (Yield-to-Call or YTC) or matures (Yield-to-Maturity or YTM). YTM is commonly used. However, the Yield-to-Worst (YTW), which is the lower of the YTC or YTM, is also used frequently. When a bond is trading at a premium (above 100), a bond's yield is less than its coupon. When a bond is trading at a discount (below 100), the bond's yield is more than its coupon. |



### CORPORATE BOND RISK REPORT CARD

- Credit and default risk: Varies significantly from bond to bond and is sometimes hard to determine.
- Liquidity risk: Many corporate bonds are illiquid, making it hard to find a buyer if you need to sell your bond.
- Interest rate risk: If interest rates rise, the value of a corporate bond on the secondary market will likely fall.
- Event risk: Mergers, acquisitions and other tumultuous events can have a negative impact on a bond issuer's ability to pay its creditors.



### CORPORATE SECURITIES SNAPSHOT

|                              |   |
|------------------------------|---|
| <b>Issuer</b>                | Corporate entity  |
| <b>Minimum Investment</b>    | Generally \$1,000   |
| <b>Interest Payment</b>      | Fixed, floating/variable and zero-coupon. Interest is paid semiannually for fixed-coupon security.    |
| <b>How to Buy/Sell</b>       | Through a broker  |
| <b>Bond Interest Rate</b>    | Determined at origination, varies by bond   |
| <b>Price Information</b>     | FINRA Market Data: <a href="http://www.finra.org/marketdata/bonds">www.finra.org/marketdata/bonds</a> |
| <b>Website for More Info</b> | FINRA Market Data: <a href="http://www.finra.org/marketdata/bonds">www.finra.org/marketdata/bonds</a> |

### **International and Emerging Market Bonds**

Just as you can buy bonds from the U.S. government and U.S. companies, you can purchase bonds issued by foreign governments and companies. Since interest rate movements may differ from country to country, international bonds are another way to diversify your portfolio. Since information is often less reliable and more difficult to obtain, you risk making decisions on incomplete or inaccurate information.

Like Treasuries, international and emerging market bonds are structured similarly to U.S. debt, with interest paid semiannually, although European bonds traditionally pay interest annually. Unlike U.S. Treasuries, however, there are increased risks in buying international and emerging market bonds (described below), and the cost associated with buying and selling these bonds is generally higher and requires the help of a broker.

International bonds expose you to a mixture of risks that are different for each country. A country's unique set of risks is known collectively as sovereign risk. A nation's political, cultural, environmental and economic characteristics are all facets of sovereign risk. Unlike Treasuries, which carry essentially zero default risk, default risk is real in emerging markets, where the sovereign risk (such as political instability) could result in the country defaulting on its debt.

Furthermore, investing internationally also exposes you to currency risk. Simply stated, this is the risk that a change in the exchange rate between the currency in which your bond is issued—euros, say—and the U.S. dollar can increase or decrease your investment return. Because an international bond trades and pays interest in the local currency, when you sell your bond or receive interest payments, you will need to convert the cash you receive into U.S. dollars. When a foreign currency is strong compared to the U.S. dollar, your returns increase because your foreign earnings convert into more U.S. dollars. Conversely, if the foreign currency weakens compared to the U.S. dollar, your earnings are reduced because they translate into fewer dollars. The impact of currency risk can be dramatic. It can turn a gain in local currency into a loss in U.S. dollars, or it can change a loss in local currency into a gain in U.S. dollars.

Some international bonds pay interest and are bought and sold in U.S. dollars. Called yankee bonds, these bonds are generally issued by large international banks and most receive investment-grade ratings. Indeed, credit rating services such as Moody's and Standard & Poor's, which evaluate and rate domestic bonds, also provide Country Credit Risk Ratings that are helpful in determining risk levels associated with international and emerging market government and corporate bonds.



### INTERNATIONAL BOND RISK REPORT CARD

- Credit and default risk:** Varies significantly from bond to bond and is sometimes hard to determine.
- Liquidity risk:** As with many U.S. corporate bonds, it can be difficult to find a buyer for an international government or corporate bond.
- Currency risk:** The risk that a change in the price of the U.S. dollar or currency of the country in which the bond is issued will have a negative impact on return.
- Interest rate risk:** If interest rates rise, the value of an international bond on the secondary market will likely fall.
- Event risk:** Mergers, acquisitions and other tumultuous events can have a negative impact on a bond issuer's ability to pay its creditors.



### INTERNATIONAL BOND SNAPSHOT

|                              |  |
|------------------------------|--|
| <b>Issuer</b>                | International government, corporate entity or other non-domestic issuer                                  |
| <b>Minimum Investment</b>    | \$1,000  |
| <b>Interest Payment</b>      | Fixed, floating/variable and zero-coupon; interest may be paid semi-annually or (for Eurobonds) annually |
| <b>How to Buy/Sell</b>       | Through a broker with international expertise  |
| <b>Bond Interest Rate</b>    | Determined at origination, varies by bond  |
| <b>Price Information</b>     | Through a broker with international expertise  |
| <b>Website for More Info</b> | European Government Bonds: <a href="http://www.investinginbonds.com">www.investinginbonds.com</a>        |

## Money Market Securities and More

A number of other bond categories exist that are primarily traded by professional investors and differ from Treasuries, munis, corporates, agencies and mortgage-backed securities.

### *Money Market Securities*

Money market instruments include bankers' acceptances, certificates of deposit and commercial paper. Bankers' acceptances are typically used to finance international transactions in goods and services, while certificates of deposit (CDs) are large-denomination, negotiable time deposits issued by commercial banks and thrift institutions. Commercial paper takes the form of short-term, unsecured promissory notes issued by both financial and non-financial corporations.

Some combination of these products makes up a money market fund. All money market funds are required to have a dollar-weighted average portfolio maturity that cannot exceed 90 days. While money market securities are highly liquid (you can usually receive your money in a few days, compared to months or years with a CD), the interest you earn on your money tends to be quite low and may not keep pace with inflation.

### *Asset-Backed Securities*

Asset-backed securities (ABSs) are certificates that represent an interest in a pool of assets such as credit card receivables, auto loans and leases, home equity loans, and even the future royalties of a musician (for instance, Bowie bonds). Once you get beyond mortgage-backed securities, which are a type of asset-backed security, investing and trading in the asset-backed market is almost exclusively done by more sophisticated investors. The interest and principal payments on the pool of assets are passed through to investors in the form of short-term bonds that generally carry an investment-grade credit rating, and these bonds are relatively liquid.

### *Preferred Securities*

There are two common types of preferred securities: equity preferred stock and debt preferred stock. Equity preferred stock is much like common stock in that it never matures, and it declares dividends rather than awarding regular interest payments. Debt preferreds, on the other hand, pay interest like traditional bonds, and since they are corporate debt, they stand ahead of equity preferred securities in the payout hierarchy should the company default. However, many preferreds are hybrids—they contain a combination of debt and equity features, and it is not always clear which type of security they are. Unlike traditional bonds, preferreds generally have a par value of \$25 instead of the traditional \$1,000. They also tend to pay interest quarterly, rather than the traditional semiannual payment associated with most bonds. Most preferreds are listed just like stocks, with the majority trading on the New York Stock Exchange. Like traditional bonds, preferreds tend to have credit ratings, and upgrades and downgrades often play an important role in the price a preferred can command in the secondary market.

### *Auction Rate Securities*

Auction rate securities (ARS) are often debt instruments (corporate or municipal bonds) with long-term maturities, but their interest rates can be regularly reset through Dutch auctions. ARS can also refer to preferred stocks with dividend payments that reset through the same process. The frequent auctions—held every seven, 14, 28 or 35 days—also allow investors who want to liquidate their investments to do so. But when there is no demand for ARS, the auctions fail and investors can't access their investments. They have to wait until the next successful auction or until the security matures, which may not occur for several years. When an ARS auction fails, current investors will generally receive an interest rate or dividend set above market rates for the next holding period—up to any maximum disclosed in the offering documents.

For many years, investors purchased ARS seeking cash-like investments that paid a higher yield than money market mutual funds or certificates of deposit. Those expectations changed in early 2008 when credit market turbulence led many ARS auctions to fail. Many ARS investors who treated these securities as a ready source of cash before 2008 found themselves short on readily available funds. In response, some issuers of ARS offered to redeem shares at par value. Others have only offered to redeem some but not all of the outstanding shares. For more information, see FINRA's Investor Alert, *Auction Rate Securities: What Happens When Auctions Fail*.

### *Event-Linked Bonds*

Event-linked bonds—also called insurance-linked, or “catastrophe” bonds—are financial instruments that allow investors to speculate on a variety of events, including catastrophes such as hurricanes, earthquakes and pandemics. It is one way that insurance and reinsurance companies can transfer the risk of some or all the policies they underwrite for a particular disaster or disasters to investors who are willing to assume the risk. Event-linked securities generally offer higher interest rates than similarly rated corporate bonds. But, if a triggering catastrophic event occurs, holders can lose most or all of their principal and unpaid interest payments.

While individual retail investors generally cannot invest directly in event-linked securities, you can find out whether any of the bond funds you own invest in catastrophe bonds or other similar event-linked instruments. Check your fund's prospectus and statement of additional information (SAI) to see whether your fund is authorized to invest in event-linked securities and if so, how much. You can typically find this information under the headings “Investment Objectives” or “Investment Policies.” For more information, see FINRA's Investor Alert, *Catastrophe Bonds and Other Event-Linked Securities*.

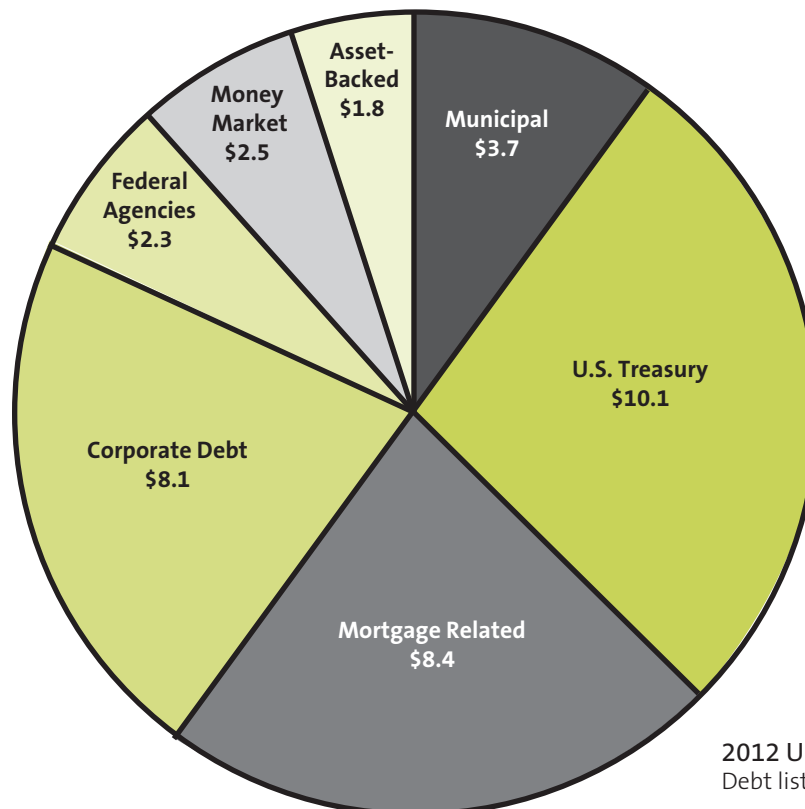
# Buying and Selling Bonds

## The Bond Market

Bonds are issued to raise money for cities, states, the federal government and corporations. The primary and secondary bond markets are an essential part of the capital-raising process. The public and private sectors use the vast sums of money raised to do all sorts of things—build roads, improve schools, open new factories and buy the latest technology.

Bonds are bought and sold in huge quantities in the U.S. and around the world. Some bonds are easier to buy and sell than others—but that doesn't stop investors from trading all kinds of bonds virtually every second of every trading day. To understand the process of buying and selling, it is first helpful to understand the size and scope of the bond market, why bonds are issued in the first place, and who regulates this vast financial arena.

Bonds are big players on the global financial stage. U.S. bond market debt (generally referred to as “the bond market”) exceeds \$35 trillion—making it by far the largest securities marketplace in the world. The term “bond market” is a bit misleading, because each type of bond has its own market and trading systems.



2012 U.S. Outstanding Public and Private Debt  
Debt listed in trillions

Source: SIFMA

## Bond Regulation

FINRA is among a number of organizations that oversee bond issuers' and dealers' activities. Here is a breakdown of regulators and their responsibilities:

- ▶ FINRA licenses brokers and brokerage firms that sell stocks, bonds and other securities; writes rules to govern their conduct; conducts regulatory reviews of brokerage firm business activities; and disciplines violators. If you believe you have been the subject of unfair or improper business conduct by a brokerage firm or broker, you may file a complaint online at the [www.finra.org/complaint](http://www.finra.org/complaint).
- ▶ The SEC registers and regulates stocks, bonds, and other securities and companies that issue securities. The SEC also regulates mutual fund products and companies, and financial advisers. If you believe that you were defrauded or encountered problems with the issuer of a bond, a mutual fund company or a financial adviser, you may file a complaint at the SEC Complaint Center: [www.sec.gov/complaint.shtml](http://www.sec.gov/complaint.shtml).
- ▶ The Municipal Securities Rulemaking Board (MSRB) develops rules regulating securities firms and banks involved in underwriting, trading and selling municipal bonds. Responsibility for examination and enforcement of MSRB rules is delegated to FINRA for all securities firms, and to the Federal Deposit Insurance Corporation, the Federal Reserve Board and the Comptroller of the Currency for banks.
- ▶ State securities agencies enact and enforce state rules and regulations, and register and regulate securities sellers and securities sold in their states.

## Buying and Selling Treasuries and Savings Bonds

Treasury and savings bonds may be bought and sold through an account at a brokerage firm, or by dealing directly with the U.S. government. New issues of Treasury bills, notes and bonds—including TIPS—can be bought through a brokerage firm, or directly from the government through auctions at the U.S. Treasury Department's TreasuryDirect website. You can also hold these in a TreasuryDirect account set up at the same website, and sell them for a fee on the secondary market.

Savings bonds can also be purchased from the government, or through banks, brokerages and many workplace payroll deduction programs. When it comes time to cash in your bond, most full-service banks and other financial institutions are “paying agents” for U.S. savings bonds. Want to know the current value of your savings bonds? You can download TreasuryDirect's Savings Bond Wizard.

## Buying and Selling Corporate and Municipal Bonds

Like other types of bonds, corporate and municipal bonds may be purchased, like stock, through a broker. Investors may either buy the bond at issue or in the secondary market. You buy a bond at issue through full-service, discount or online brokers, as well as through investment and commercial banks. Once new-issue bonds have been priced and sold, they begin trading on the secondary market, where buying and selling is also handled by a broker. You will generally pay brokerage fees when buying or selling corporates and munis through a brokerage firm.

When secondary trading begins, most corporate and municipal bonds sell on the over-the-counter (OTC) market. Some bonds are traded in smaller quantities on the facilities of the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX), and a few trade on The Nasdaq Stock Market.

FINRA's TRACE system provides price and trade data for corporate and agency bonds, and the MSRB's Electronic Municipal Market Access website provides trade data for municipals.



### **Buying and Selling Bond Funds**

Bond funds may be bought and sold through a broker or other investment professional, or through the fund directly. Keep in mind that if you work with a broker, the choice of bond funds is limited to those the brokerage firm allows its professionals to sell.

As with other mutual funds, when you buy shares of a bond fund, you pay the fund's current net asset value (NAV) per share plus any fee the fund or broker assesses at the time of purchase. This may include a sales load or other type of purchase fee. When you sell your shares, the fund will pay you the NAV minus any fee the fund or investment professional charges at the time of sale, such as a back-end sales load or redemption fee. Most funds have a toll-free number or website that can provide information about the fund and the net asset value (NAV) of a fund's shares, as well as the ability to request or download a prospectus.

### **Buying and Selling Bonds through a Broker**

You can buy virtually any type of bond through a brokerage firm. Some firms specialize in buying and selling a specific type of bond, such as municipal bonds or junk bonds. Buying anything but Treasuries and savings bonds typically requires using a broker.

You should understand that your brokerage firm is being compensated for performing services for you. If the firm acts as agent, meaning it acts on your behalf to buy or sell a bond, you may be charged a commission.

In most bond transactions, the firm acts as principal. For example, it sells you a bond that the firm already owns. When a firm sells you a bond in a principal capacity, it may increase or mark up the price you pay over the price the firm paid to acquire the bond. The mark-up is the firm's compensation. Similarly, if you sell a bond, the firm, when acting as a principal, may offer you a price that includes a mark-down from the price that it believes it can sell the bond to another dealer or another buyer. You should understand that the firm very likely has charged you a fee for its transaction services.

If the firm acts as agent, the fee will be transparent to you. The firm must disclose the amount of the commission you were charged in the confirmation of the transaction. However, if the firm acts as principal, it is not required to disclose to you on the confirmation how much of the total price you paid to buy the security was the firm's mark-up; it is only required to disclose the price at which it sold the bond to you and the yield. Similarly, if you sell a security to a firm and it acts as principal, the firm is not required to tell you how much of a mark-down the firm incorporated in determining the price the firm would pay you.

### **Choosing a Broker**

Most bond transactions for individual investors are handled through a broker. The vast majority of brokers are honest, competent professionals, and there are organizations like FINRA to help make sure that the few who are not are identified and disciplined—sometimes even barred from the industry. But there is more to finding a broker than knowing which ones might not be trustworthy. The key is finding the broker and brokerage firm that make you feel comfortable and best meet your personal financial needs.

There are many different types of brokerage firms, and the costs for their services vary according to how much or how little they do for you. If you are a more experienced investor and have made up your own mind about the securities you want to buy or sell, you might consider a discount brokerage firm that charges a minimal fee for simply executing the transactions that you have selected. Online investing services are the latest trend in discount brokering—you do your own research, select your investment, and then trade online for a minimal fee. A full-service brokerage firm, on the other hand, charges a little more, but typically provides you with information, support, recommendations and investment advice, in addition to executing your transactions.

Whether you select a brokerage firm first and then choose a broker from among its associates, or find an individual broker and accept the firm at which he or she is employed, it is strictly up to you. Either way, when selecting a broker, you will want to take your time and do your homework.

You should also take time to understand how the broker is paid; ask for a copy of the firm's commission schedule. Firms generally pay brokers based on the amount of money you invest and the number of completed transactions in your account. More compensation may be paid if a broker is selling his or her firm's own investment products. Ask what the fees or charges are for opening, maintaining, and closing an account.

At the initial interview, obtain a copy of the account agreement, fee structure and any other documents you would be asked to sign if you were to open an account with that broker. That way, you can take the paperwork home to read carefully at your own pace, and make comparisons if you are considering brokers at several firms. If the prospective broker pushes you too hard to open an account on the spot, this might be an indication that he or she will be overly aggressive in pushing you toward certain investment decisions in the future. In addition to the documents that you would need to sign, some brokerage firms have brochures or other informative material that would be helpful to you.

It's also a good idea to check the background of the broker and brokerage firm before you make a selection. Investors may obtain information on the disciplinary record, professional background, and registration and license statuses of any FINRA-registered broker or brokerage firm by using FINRA BrokerCheck®. FINRA makes BrokerCheck available at no charge to the public. Investors can access this service by linking directly to BrokerCheck at [www.finra.org/brokercheck](http://www.finra.org/brokercheck), or by calling (800) 289-9999.

### FINRA Market Data

An array of bond information is available in the Market Data section of the FINRA website. The section provides data on equities, options, mutual funds and a wide range of bonds—corporate, municipal, Treasury and agency bonds. It offers a full profile for every exchange-listed company, including company description, recent news stories and Securities and Exchange Commission filings, and an interactive list of domestic securities the company issues. In addition, the site includes U.S. Treasury Benchmark yields, market news, an economic calendar and other information indicating current market conditions. You can find all of this information at [www.finra.org/marketdata](http://www.finra.org/marketdata).

#### *Using FINRA's Bond Market Data*

The Bonds section of FINRA's Market Data brings individual investors much-needed transparency (visible pricing) on corporate and other bond market transactions by providing investors with a means of easily obtaining market information. The Web content contains the price and other information from executed transactions in investment grade, non-investment grade and convertible corporate bonds as reported to TRACE, as well as bond market data for municipal, Treasury and Agency bonds. In addition, basic descriptive information and credit ratings on individual bonds are available.

Clicking on the Bonds link from the Market Data section takes you to a section devoted specifically to bond information. Here, you can quickly search for bonds by bond type, symbol, coupon, yield and maturity.

Quick Bond Search

Bond Type:  Treasury & Agency  Corporate  Municipal

Symbol:

Coupon:

Yield:

Maturity:

[Advanced Bond Search](#)

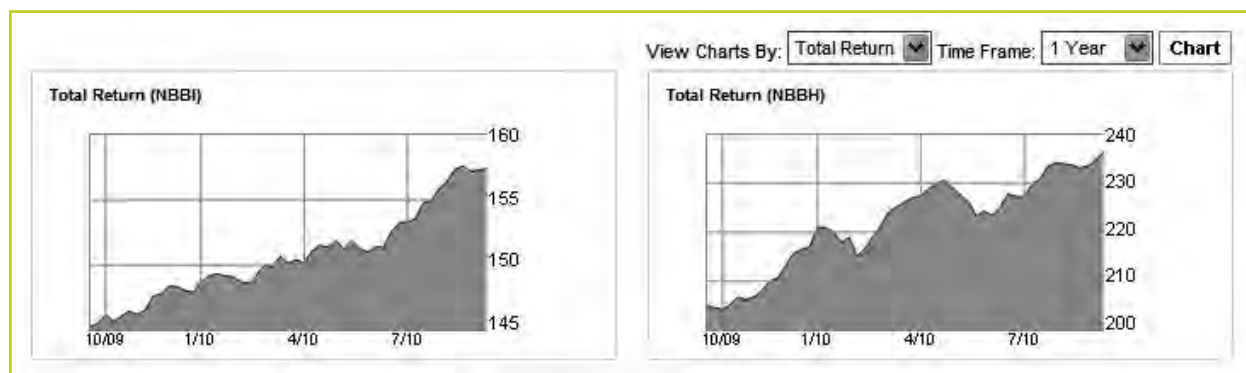
### Five Good Reasons to Use FINRA's Bond Market Data:

1. You have access to a broad database of bonds—a database that contains far more bonds than those a broker may recommend from his firm's inventory.
2. You can search a bond by criteria you select—such as maturity date, rating, CUSIP and industry category.
3. You can compare the pricing and bond information you find here with information you receive from your broker.
4. You can create and track a bond portfolio to evaluate performance.
5. You can familiarize yourself with bond pricing and terminology so that you are better prepared to talk about bonds with a securities industry professional.

### FINRA-Bloomberg Corporate Bond Indices

The Bonds area also features two valuable corporate bond indices—the FINRA-Bloomberg Active Investment Grade US Corporate Bond Index and the FINRA-Bloomberg Active High Yield US Corporate Bond Index. These are powerful tools that investors can use on a daily basis to gauge overall market direction and to measure the performance of their corporate bond holdings against the broader market. The indices' underlying transaction information is derived from data submitted to FINRA's Trade Reporting and Compliance Engine (TRACE). As such, it is comprised of 100 percent of over-the-counter transaction activity in the index components.

Each index is calculated the evening of every trading day, reflecting transactions through 5:15 p.m. Eastern Time. Each index provides index values for Total Return, Price, Yield and Volume, with changes from the previous close. Additional supporting information includes each index's 10 most active bonds, the top 10 leading movers and the top 10 lagging movers.



## Bonds and Taxes

As with buying and selling stocks, there are tax consequences associated with buying and selling bonds.

### *Interest Income*

Whether or not you will need to pay taxes on a bond's interest income (coupons) or a bond fund's dividends depends on the entity that issued the bond.

- ▶ **Corporate and Mortgaged-Backed Bonds**—The interest you get from corporate and mortgage backed bonds typically is subject to federal and state income tax.
- ▶ **Treasuries and Other Federal Government Bonds**—The interest you earn on Treasuries and agency bonds backed by the “full faith and credit” of the U.S. government is subject to federal income tax, but not state income tax. This does not include bonds in which the U.S. government only provides a guarantee such as with Ginnie Maes.
- ▶ **Municipal Bonds**—Municipal bonds are generally exempt from federal income tax. If the municipal bond was issued by your state or local government, the interest on the bond is usually exempt from state and local taxes, as well. However, if the bond was issued by a state or local government outside of the state in which you reside, the interest from the bond is usually subject to state income tax. Bonds issued by a U.S. Territory, such as Puerto Rico or Guam, however, are exempt from federal, state and local taxes in all 50 states.

### *Gains*

When you purchase an individual bond at face value and hold it to maturity, there is no capital gain to be taxed. Of course, if you sell the bond for a profit before it matures, you'll likely generate a taxable gain, even if it's a tax-exempt bond. If you owned the bond for more than a year, your gain is taxed at the long-term capital gain rate. If you owned the bond for one year or less, you are taxed at the short-term rate.

With a bond fund, you are unlikely to sell at the exact share price at which you bought, which means you incur a capital gain or loss. In addition, mutual fund managers buy and sell securities all year long, incurring capital gains and losses. If the gains are more than the losses, shareholders will receive a capital gain disbursement at the end of the year.

**Remember**—the tax rules that apply to bonds are complicated. Before investing, you may want to check with your tax advisor about the tax consequences of investing in individual bonds or bond funds.

# Smart Strategies

## Asset Allocation

Buying bonds can be an important part of an asset-allocation strategy that balances risk and reward. Asset allocation is all about diversification of investments, both within and among different asset classes. In short, it means not putting all of your eggs into one basket.

In putting together a diversified portfolio, you select a mix of stocks, bonds and cash so as to arrive at the risk-reward ratio that stands the best chance of reaching your investment objectives. In general, the longer you have to invest, the greater risk you can assume because you might have the opportunity to ride out short-term market losses in hopes of achieving greater long-term returns. But investing always involves some degree of risk—and risk comes in many flavors: inflation risk, liquidity risk, market risk and so forth. Remember that your risk analysis will always be unique to you. If you have limited assets or assets that you cannot or are not willing to lose, then you will want to think twice about the risks you take—especially risks that could result in your losing your principal or seeing the value of your investment eroded by inflation.

Generally speaking, the lower your tolerance for risk and the shorter your time horizon, the higher the percentage of your portfolio that you should keep in cash or short-term bonds. While bond values will fluctuate on the secondary market, in general (and with the exception of high-risk “junk” or emerging-market bonds) their upward and downward price swings will be narrower than those of stocks.

Of course, when you are planning to retire, how much income you’ll need in retirement will be important in determining your asset mix, since the longer you plan to invest the money, the more risk you can afford to take.

At least once a year, you should evaluate your portfolio with an eye to rebalancing your mix of stocks, bonds and cash to maintain the percentages you’re comfortable with. For example, if bonds have dramatically outperformed stocks in recent years, you might want to rebalance your portfolio by moving some of your assets (or investing new money) into stocks.

## Diversifying Within Your Bond Portfolio

Within the bond portion of your portfolio, you will also want to diversify your holdings. Here are two key factors to consider when determining your bond allocation:

### *Tax Bracket*

Your tax bracket may influence how you allocate investments among taxable and tax-exempt bonds. If your current federal income tax bracket is 28 percent or higher, the tax savings on municipal bonds, for instance, may be worth considering. Tax calculators are available on the Web, including SIFMA's Investing in Bonds website, to help you determine how tax-exempt yields compare to taxable yields.

### *Risk Tolerance*

Your risk tolerance depends on your own personal preferences as well as the number of years you have until retirement. If you can't sleep at night because you're worrying about a downgrade in a high-yield bond, then you'll want to consider lower-risk alternatives. You might consider diversifying your bond holdings by using a strategy called laddering.

## Bond Laddering

Laddering is a strategy that uses "maturity weighting," which involves dividing your money among several different bonds with increasingly longer maturities, and is frequently recommended for investors interested in using bonds to generate income. Laddering is used to minimize both interest-rate risk and reinvestment risk. If interest rates rise, you reinvest the bonds that are maturing at the bottom of your ladder in higher-yielding bonds. If rates fall, you are protected against reinvestment risk because you have longer-maturity bonds at the top of your ladder that aren't exposed to the drop.

For example, you might buy a two-year bond, a four-year bond and a six-year bond. If you put approximately equal amounts of money in each bond, the average maturity of the entire portfolio would be four years.

As each bond matures, you would replace it with a bond equal to the longest maturity in your portfolio. For example, when the two-year bond matures, you replace it with a six-year bond. But your older bonds are now two years closer to maturity, so the average weighted maturity of the portfolio remains the same—four years.

A laddered portfolio is not limited to the maturities described above. You can build a ladder to correspond to longer durations and include longer maturities. Your return would be higher than if you bought only short-term issues. Your risk would be less than if you bought only long-term issues. Laddering also helps you gain a greater degree of interest rate protection than if you owned bonds of a single maturity. If interest rates fall, you may have to invest your bonds with the shortest maturity date at a lower rate, but you'd be getting above-market return from the longer-maturity issues. If rates go up, your total portfolio is apt to pay a below-market return, but you could start correcting when your shorter-term bonds mature.

### Smart Move

Spend time reviewing FINRA's Smart 401(k) Investing, which has an Investing Strategies section, including information on asset allocation: [www.finra.org/smart401\(k\)](http://www.finra.org/smart401(k)).

There is a downside to laddering: Your overall return may be lower than a non-laddered bond portfolio.

### *Benefits of Laddering*

Laddering's mix of short- and medium-term bonds helps to:

- ▶ Minimize inflation risk
- ▶ Reduce holding-period risk
- ▶ Reduce the impact of interest rate fluctuations
- ▶ Generate total return on par with long-term bonds
- ▶ Encourage regular saving/investing

### **Bond Swapping**

As the name suggests, bond swapping involves selling one bond and simultaneously purchasing another similar bond with the proceeds from the sale. Why would you engage in this practice? You may wish to take advantage of current market conditions (*e.g.*, a change in interest rates), or perhaps a change in your own personal financial situation has now made a bond with a different tax status appealing.

Bond swapping can also cause you to receive certain tax benefits. In fact, tax swapping is the most common of bond swaps. Generally, anyone who owns bonds that are selling below their amortized purchase price and who has capital gains or other income that could be partially, or fully, offset by a tax loss can benefit from tax swapping. Tax law plays an important role in bond swaps so it is advised that investors consult a tax advisor for the most up-to-date advice.

### **Reinvestment of Interest Income**

Whenever possible—and especially if you have many years before retirement—you should reinvest your bond interest (coupons). If you buy individual bonds, this takes discipline because you need to put each coupon payment you receive to work earning interest rather than spend it. Consider putting them in a brokerage money market account, or even opening a standard savings account just for your coupon payments. At the end of each year, you can put them into the next bond in your laddering strategy.





# Bond Funds

There are four types of bond funds: Mutual funds, closed-end funds, unit investment trusts (UITs) and exchange traded funds (ETFs). While there are important distinctions between them, each type of fund allows an investor to instantly diversify risk among a pool of bonds at a low minimum investment. For those without a lot of money to invest, or who are investing through an employer-sponsored retirement plan, such as a 401(k) or 403(b) where mutual funds are the primary investment option, bond funds may represent the only realistic option to add this important asset class to your portfolio.

Before you invest in a bond fund, it is important that you understand the different fund types and how bond funds differ from individual bonds. For instance, one common misconception about bond mutual funds is that there is no risk to principal. This is not the case: Your initial and subsequent investments will fluctuate—and indeed may decline—just as they do if invested in a stock mutual fund.

## Bond Mutual Funds

Mutual funds have become a preferred way to invest for millions of Americans. A mutual fund is simply a pool of money invested for you by an investment firm in a variety of instruments like stocks, bonds or government securities. Each mutual fund is different in its make-up and philosophy.

A bond mutual fund is a mutual fund that invests in bonds. Bond mutual funds can contain all of one type of bond (munis, for instance) or a combination of bonds. Each bond fund is managed to achieve a stated investment objective.

Like most investments, bond mutual funds charge fees and expenses that are paid by investors. These costs can vary widely from fund to fund or fund class to fund class. Because even small differences in expenses can make a big difference in your return over time, we've developed a fund analyzer to help you compare how sales loads, fees, and other mutual fund expenses can impact your return.

Before investing in a bond mutual fund, find out if it's a load or no-load mutual fund. Load funds charge a sales commission; no-load funds do not. When you pay a sales commission going in, that's called a front-end load. A commission paid when you sell is known as a back-end load. The fee table is generally found at the front of a mutual fund's prospectus.

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### Good Reading

Investment companies that issue mutual funds are required by the SEC to provide you with a copy of the mutual fund's prospectus. A fund's prospectus contains the formal written offer to sell securities. It also sets forth specific information about the fund, including its investment objectives, risks, performance, fees and expenses; how to buy and sell shares; and how the fund is managed. You should read a fund's prospectus carefully before you invest.

**There are a number of reasons to consider bond mutual funds:**

- ▶ They offer a convenient way to invest in a diversified portfolio of bonds (you simply contact your broker or fund company)—and do so in a way that is far more affordable than if you had to buy each bond individually.
- ▶ Bond mutual funds offer a variety of investment objectives. A bond mutual fund might invest in a particular bond category (government, corporate, muni) or a particular maturity range (short-term, intermediate, long-term). Many bond funds offer a combination of maturity ranges and bonds from multiple categories.
- ▶ Interest reinvestment is easy with a bond mutual fund. Funds pay “dividends” monthly (as opposed to semiannually for most individual bonds). You can request to have these payments automatically deposited back into the fund.
- ▶ You can also invest incrementally. Most mutual funds allow you to invest even small amounts on a regular basis, as well as make additional investments as you wish.
- ▶ Finally, bond mutual funds offer considerable liquidity, you can generally get your money out of the fund quickly.

**Types of Bond Mutual Funds***Actively Managed Bond Mutual Funds*

The most common type of bond funds, open-end funds, are actively managed bond funds that allow you to buy or sell your share in the fund whenever you want. You buy and sell at a fund’s net asset value (NAV), which is the value or price per individual fund share and is priced at the end of each trading day—not throughout the day, as is the case with stocks.

*Index Bond Mutual Funds*

These funds are passively managed and are engineered to match the composition of a bond index, such as the Barclays Capital Aggregate Bond Index. Once the fund is constructed and trading, very little human intervention takes place; the fund’s performance is structured to track that of the index it mirrors.

Regardless of the type of bond mutual fund you select, keep these points in mind:

1. Return of principal is not guaranteed because of the fluctuation of the fund’s NAV due to the ever-changing price of bonds in the fund, and the continual buying and selling of bonds by the fund’s manager.
2. As with direct bond ownership, bond funds have interest rate, inflation and credit risk associated with the underlying bonds owned by the fund.
3. In contrast to owning individual bonds, there are ongoing fees and expenses associated with owning shares of bond funds.
4. As with individual bonds, you pay income tax on bond interest according to your tax bracket, not the 15 percent capital gains rate afforded to stock dividends in the 2003 Jobs and Growth Tax Relief Reconciliation Act. (See Understanding the Act on page 53.)

## Beyond Bond Mutual Funds

### *Closed-End Bond Funds*

Like bond mutual funds, closed-end bond funds are actively managed. However, a closed-end fund has a specific number of shares that are listed and traded on a stock exchange or over-the-counter market. Like stocks, shares of closed-end funds are based on their market price as determined by the forces of supply and demand in the marketplace. Shares may trade at a premium (above NAV) or, more often, at a discount (below NAV). Investors should be aware that closed-end funds may be leveraged, meaning the fund has issued or purchased stock or other investments using borrowed funds. While this leverage may result in increased yield during favorable market conditions, it could also result in losses if market conditions become unfavorable.

### *Exchange-Traded Funds*

An exchange-traded fund (ETF) is like a mutual fund, but trades on one of the major stock markets and can be bought and sold through a brokerage account throughout the trading day, like a stock. It can track a specific stock or bond index such as the S&P International Corporate Bond Index or be actively managed with a specific strategy in mind. And like stock investing, ETF investing involves principal risk—the chance that you won't get all the money back that you originally invested.

### *Unit Investment Trusts*

UITs, as they are referred to, are made up of a fixed parcel of bonds that are held in a trust and rarely change once the initial bond purchase is fixed, making it easier to estimate how much you will earn. UITs are passively managed funds. On the trust's maturity date, the portfolio is liquidated and the proceeds are returned to unit holders in proportion to the amount invested. Unit holders who want to sell before maturity may have to accept less than they paid. While UITs are more diversified than an individual bond, they are generally far less diversified than a bond mutual fund. Each bond in the UIT has its own maturity date and often its own call provision as well, which can impact return and should be considered when estimating earnings. As each bond matures, or is called (UITs carry call risk), the principal is paid out to the shareholders until the last bond matures.

### Bonds Versus Bond Funds

Individual bonds and bond funds are two very different animals. Understanding how bond funds and individual bonds differ will help you assess which is the best investment option for you. Here are four factors you should consider:

- 1. Return of Principal.** Unless there is a default, when an individual bond matures or is called, your principal is returned. That is not true with bond funds. Bond funds have no obligation to return your principal. Except for UITs, they have no maturity date. With a bond fund, the value of your investment fluctuates from day to day. While this is also true of individual bonds trading in the secondary market, if the price of a bond declines below par, you always have the option of holding the bond until it matures and collecting the principal.
- 2. Income.** With most fixed-rate individual bonds, you know exactly how much interest you'll receive. With bond funds, the interest you receive can fluctuate with changes to the underlying bond portfolio. Another consideration is that many bond funds pay interest monthly opposed to semiannually, as is the case with most individual bonds.
- 3. Diversification.** With a single purchase, a bond fund provides you with instant diversification at a very low cost. To put together a diversified portfolio of individual bonds, you'll need to purchase several bonds, and that might cost you \$50,000 or more. Most mutual funds only require a minimum investment of a few thousand dollars.
- 4. Liquidity.** Virtually all bond funds can be sold easily at anytime at the current fund value (NAV). The liquidity of individual bonds, on the other hand, can vary considerably depending on the bond. In addition to taking longer to sell, illiquid bonds may also be more expensive to sell.

## Comparing Bonds and Bond Funds

|                               | <b>Individual Bonds</b>   | <b>Bond Mutual Funds</b>  | <b>Closed-End Bond Funds</b>  | <b>Bond UITs</b>   | <b>Bond ETFs</b>  |
|-------------------------------|---|---|---|--|---|
| <b>Return of Principal</b>    | Principal returned at maturity or when bond is called   | Principal at risk   | Principal at risk   | Receive principal back as bonds in UIT mature or are called                                      | Principal at risk   |
| <b>Maturity Date</b>          | Set maturity date   | None  | None  | UIT liquidated on set date   | None  |
| <b>Income Payments</b>        | Usually fixed and paid semiannually (except zero coupon bonds)                                | Fluctuating monthly payments  | Fluctuating monthly or quarterly payments   | Fixed monthly, quarterly, or semiannual payments   | Fluctuating monthly payments  |
| <b>Liquidity</b>              | Trade on secondary market above or below their face value, but some bonds can be hard to sell | Bought and sold at net asset value  | Trade on an exchange with daily fluctuation in the unit price   | Bought and sold at NAV   | Trade on an exchange with daily fluctuation in the unit price               |
| <b>Redeemable</b>             | Redeemable only at maturity or when called  | By selling shares at prevailing NAV                                       | By selling shares at prevailing unit price  | By selling shares at NAV   | By selling shares at prevailing unit price                                  |
| <b>Default Risk</b>           | Varies by credit quality of bond  | Limited by diversification  | Limited by diversification  | Limited by diversification   | Limited by diversification  |
| <b>Interest Rate Risk</b>     | Exists but declines as bonds near maturity  | Exists and sensitivity to interest rates depends on portfolio of holdings | Because some closed-end funds are highly leveraged, they can be very sensitive to interest rate increases | Exists and sensitivity to interest rates depends on portfolio of holdings                        | Exists and sensitivity to interest rates depends on portfolio of holdings   |
| <b>Expenses</b>               | No ongoing expenses; transaction charge built into price for purchases and sales              | Annual fees; may have front-or back-end sales charge                      | Annual fees and brokerage commissions   | Annual fees (usually lower than mutual fund fees) and front-end sales charge                     | Annual fees (usually lower than mutual fund fees) and brokerage commissions |
| <b>Reinvestment</b>           | No automatic reinvestment option  | Automatic reinvestment option   | Automatic reinvestment option   | Automatic reinvestment option  | Automatic reinvestment option available for most but not all ETFs           |
| <b>Professionally Managed</b> | No management   | Actively managed (except index funds)                                     | Actively managed  | Passively managed  | Most are passively managed; some are now actively managed                   |
| <b>Diversification</b>        | Need to purchase multiple bonds to diversify  | Constantly changing portfolio of bonds                                    | Constantly changing portfolio of bonds  | Fixed portfolio of bonds; less diversified than many bond mutual funds, closed-end funds or ETFs | Constantly changing portfolio of bonds                                      |



# Before You Invest

Here is our Top 10 list of things to consider before you invest in bonds or bond funds:

- 1. Define your objectives.** Is your investment objective to have enough money for your child's college education? Is your goal to live comfortably in retirement? If so, how comfortably? You probably have multiple goals. Lay them all out and be as precise as you can. Remember: If you don't know where you're going, you'll never arrive.
- 2. Assess your risk profile.** Different bonds and bond funds, like stocks and stock funds, carry different risk profiles. Always know the risks before you invest. It's a good idea to write them down so they are all in plain sight.
- 3. Do your homework.** You're off to a good start if you've come this far—but keep going. Read books and articles about bond investing from the library. Look up information on the Web. Start following the fixed-income commentary on financial news shows and in newspapers. Familiarize yourself with bond math. You should also read the bond's offering statement. It's where you will find a bond's important characteristics, from yield to the bond's call schedule.
- 4. If you're considering buying a bond fund, read the prospectus closely.** Pay particular attention to the parts that discuss which bonds are in the fund. For instance, not all bonds in a government bond fund are government bonds. Also, pay attention to fees. Individual bonds also have prospectuses, which derive information from a bond's indenture, a legal document that defines the agreement between bond buyer and bond seller. Ask your broker for a copy of the prospectus or indenture to read it.
- 5. If you're buying individual bonds, locate a firm and broker specializing in bonds.** Not all firms, and not all brokers, know the bond business. Talk to a number of brokers, and find one you are satisfied with. Make sure your broker knows your objectives and risk tolerance. Check broker credentials and disciplinary history using FINRA BrokerCheck.
- 6. Ask your broker when, and at what price, the bond last traded.** This will give you insight into the bond's liquidity (an illiquid bond may not have traded in days or even weeks) and competitiveness of the pricing offered by the firm.
- 7. Understand all costs associated with buying and selling a bond.** Ask upfront how your brokerage firm and broker are being compensated for the transaction, including commissions, mark-ups or mark-downs. If you're not buying a Treasury bond, it's a good idea to assess whether the additional return is worth the added risk.
- 8. Plan to reinvest your coupons.** This allows the power of compounding to work on your behalf. It's a good idea to establish a "coupon account" before you start receiving coupons, so that you have a place to save the money and are not tempted to spend it. If you are buying a bond fund, you don't have to worry about this—the fund does this for you.
- 9. Don't try to time the market.** As hard as it is to time the stock market, it's even harder to time the bond market. Avoid speculating on interest rates. Decisions are too often made on where rates have been rather than where they are going. Instead, stick to the investment strategy that will best help you achieve your goals and objectives.
- 10. Don't reach for yield.** The single biggest mistake bond investors make is reaching for yield after interest rates have declined. Don't be tempted by higher yields offered by bonds with lower credit qualities, or be focused only on gains that resulted during the prior period. Yield is one of many factors an investor should consider when buying a bond. And never forget: With higher yield comes higher risk.

### Learning More about Bonds

Check out these resources to learn more about bonds and bond investing.

- ▶ SIFMA's website, **Investing in Bonds**, offers information on corporate, Treasury, municipal and agency bonds, along with many other categories of information. The site also includes real-time corporate and municipal bond data.  
*[www.investinginbonds.com](http://www.investinginbonds.com)*
- ▶ **TreasuryDirect** provides educational information, as well as the opportunity to buy Treasuries online and over the phone.  
*[www.treasurydirect.gov](http://www.treasurydirect.gov)*
- ▶ The **Ginnie Mae** Investment Center: *[www.ginniemae.gov](http://www.ginniemae.gov)*
- ▶ The Investment Company Institute's (ICI) **Research and Statistics** area provides information on bond fund inflows and outflows. Also see ICI's **Understanding the Risks of Bond Mutual Funds**.  
*[www.ici.org/stats/index.html](http://www.ici.org/stats/index.html)*
- ▶ The **Federal Reserve Bank of Minneapolis** provides a valuable inflation chart and calculator.  
*[minneapolisfed.org/research/data/us/calc/hist1913.cfm](http://minneapolisfed.org/research/data/us/calc/hist1913.cfm)*
- ▶ FINRA's **Market Data Center**: *<http://www.finra.org/MarketData/>*
- ▶ **NYSEEuronext (NYX)**: *[www.nyse.com/bonds](http://www.nyse.com/bonds)*



# Glossary of Bond Terms

## Agency security

Debt security issued or guaranteed by an agency of the federal government or by a government-sponsored enterprise (GSE). These securities include bonds and other debt instruments. Agency securities are only backed by the “full faith and credit” of the U.S. government if they are issued or guaranteed by an agency of the federal government, such as Ginnie Mae. Although GSEs such as Fannie Mae and Freddie Mac are government-sponsored, they are not government agencies.

## Asset allocation

A strategy for maximizing gains while minimizing risks in your investment portfolio. Specifically, asset allocation means dividing your assets on a percentage basis among different broad categories of investments, including stocks, bonds and cash.

## Asset class

Different categories of investments that provide returns in different ways are sometimes described as asset classes. Stocks, bonds, cash and cash equivalents, real estate, collectibles and precious metals are among the primary asset classes.

## Average maturity

The average time that a mutual fund’s bond holdings will take to be fully payable. Interest rate fluctuations have a greater impact on the price per share of funds holding bonds with longer average lives.

## Bear market

A bear market is one in which stock and/or bond prices decline over an extended period of time, at times accompanied by an economic recession, rising inflation or rising interest rates.

## Benchmark

A benchmark is a standard against which investment performance is measured. For example, the S&P (Standard & Poor’s) 500 Index, which tracks 500 major U.S. companies, is the standard benchmark for large-company U.S. stocks and large-company mutual funds. The Barclays Capital Aggregate Bond Index is a common benchmark for bond funds.

## Bond

A debt instrument, also considered a loan, that an investor makes to a corporation, government, federal agency or other organization (known as an issuer) in which the issuer typically agrees to pay the owner the amount of the face value of the bond on a future date, and to pay interest at a specified rate at regular intervals.

## Bondholder

Owner of a bond; may be an individual or institution such as a corporation, bank, insurance company or mutual fund. A bondholder is typically entitled to regular interest payments as due and return of principal when the bond matures.

## Bond rating

A method of evaluating the quality and safety of a bond. This rating is based on an examination of the issuer’s financial strength and the likelihood that it will be able to meet scheduled repayments. Ratings range from AAA (best) to D (worst). Bonds receiving a rating of BB or below are not considered investment grade because of the relative potential for issuer default.

## Bull market

A bull market is one in which prices rise during a prolonged period of time.

## Call

The issuer’s right to redeem outstanding bonds before the stated maturity.

**Call protection**

A feature of some callable bonds that protects the investor from calls for some initial period of time.

**Call risk**

The risk that a bond will be called prior to its maturity date, causing the bond's principal to be returned sooner than expected. If the bondholder wishes to reinvest the principal, it usually must be done at a lower rate than when the bond was originally purchased.

**Capital gains tax**

Tax assessed on profits you realize from the sale of a capital asset, such as stock, bonds or real estate.

**Commission**

A fee paid to a broker, as an agent of the customer, for executing a trade based on the number of bonds traded or the dollar amount of the trade.

**Collateralized Mortgage Obligation (CMO)**

A bond backed by multiple pools (also called tranches) of mortgage securities or loans.

**Corporate bond**

A bond issued by a corporation to raise money for capital expenditures, operations and acquisitions.

**Convertible bond**

A bond with the option to convert into shares of common stock of the same issuer at a pre-established price.

**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 coupon rate of 6.5 percent. Bonds that pay no interest are said to have a "zero coupon." Also called the coupon rate.

**Coupon yield**

The annual interest rate established when the bond is issued. The same as the coupon rate, it is the amount of income you collect on a bond, expressed as a percentage of your original investment.

**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. A newly issued \$1,000 bond paying \$65 has a current yield of .065, or 6.5 percent. Current yield can fluctuate: If the price of the bond dropped to \$950, the current yield would rise to 6.84 percent.

**Debenture**

An unsecured bond backed solely by the general credit of the borrower.

**Debt security**

Any security that represents loaned money that must be repaid to the lender.

**Discount**

The amount by which a bond's market price is lower than its issuing price (par value). A \$1,000 bond selling at \$970 carries a \$30 discount.

**Diversification**

Diversification is an investment strategy for allocating your assets available for investment among different markets, sectors, industries and securities. The goal is to protect the value of your overall portfolio by diversifying your investment risk among these different markets, sectors, industries and securities.

**Event risk**

The risk that an event will have a negative impact on a bond issuer's ability to pay its creditors.

**Face value**

The amount the issuer must pay to the bondholder at maturity, also known as par.

**Full faith and credit of the U.S. government**

A promise by the U.S. government to pay all interest when due and redeem bonds at maturity. Treasuries, savings bonds and debt securities issued by federal agencies are backed by the "full faith and credit" of the U.S. government.

**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 (floats), usually in tandem with a benchmark interest rate during the life of the bond.

**General Obligation bond (GO)**

A municipal bond secured by a governmental issuer's "full faith and credit," usually based on taxing power.

**Government-Sponsored Enterprise (GSE)**

Enterprises that are chartered by Congress to fulfill a public purpose, but are privately owned and operated, such as the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Unlike bonds guaranteed by a government agency such as Ginnie Mae, those issued by a GSE are not backed by the "full faith and credit" of the U.S. government.

**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. Also known as a "junk" bond.

**Holding period risk**

The risk, while you are waiting for your bond to mature (holding it), that a better opportunity will come around that you may be unable to act upon. The longer the term of your bond, the greater the chance a more attractive investment opportunity will become available, or that any number of other factors may occur that negatively impact your investment.

**Indenture**

A legal document between a bond issuer and a trustee appointed on behalf of all bondholders that describes all of the features of the bond, the rights of bondholders, and the duties of the issuer and the trustee. Much of this information is also disclosed in the prospectus or offering statement.

**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).

**Junk bond**

Another name for a high-yield bond.

**Liquidity risk**

The risk of not being able to execute a trade at the time you desire, or being forced to accept a significantly discounted price of a bond at the time you desire to sell.

**Maturity date**

A maturity date is 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.

**Mortgage-backed security**

A security that is secured by home and other real estate loans.

**Municipal bond**

A bond issued by states, cities, counties and towns to fund public capital projects like roads and schools, as well as operating budgets. These bonds are typically exempt from federal taxation and, for investors who reside in the state where the bond is issued, from state and local taxes, too.

**Non-callable bond**

A feature of some bonds that stipulates the bond cannot be redeemed (called) before its maturity date. Also called a “bullet.”

**Non investment-grade bond**

A bond whose issuer’s prompt payment of interest and principal (at maturity) is considered risky by a nationally recognized statistical rating agency, as indicated by a lower bond rating (*e.g.*, “Ba” or lower by Moody’s Investors Service, or “BB” or lower by Standard & Poor’s Corporation).

**Note**

A short- to medium-term loan that represents a promise to pay a specific amount of money. A note may be secured by future revenues, such as taxes. Treasury notes are issued in maturities of two, three, five and 10 years.

**Opportunity risk**

The risk that a better investment opportunity will come around that you may be unable to act upon because of a current investment. Generally, the longer the holding period of a bond, the greater the opportunity risk.

**Over-the-counter (OTC) securities**

Securities that are not traded on a national exchange. For such securities, broker-dealers negotiate directly with one another over computer networks and by phone.

**Par value**

An amount equal to the nominal or face value of a security. A bond selling at par, for instance, is worth the same dollar amount at which it was issued, or at which it will be redeemed at maturity—typically \$1,000 per bond.

**Phantom income**

Interest reportable to the IRS that does not generate income, such as interest from a zero-coupon bond.

**Prepayment risk**

The possibility that the issuer will call a bond and repay the principal investment to the bondholder prior to the bond’s maturity date.

**Premium**

The amount by which a bond’s market value exceeds its issuing price (par value). A \$1,000 bond selling at \$1,063 carries a \$63 premium.

**Primary market**

The market in which new issues of stock or bonds are priced and sold, with proceeds going to the entity issuing the security. From there, the security begins trading publicly in the secondary market.

**Principal**

1. For investments, principal is the original amount of money invested, separate from any associated interest, dividends or capital gains. For example, the price you paid for a bond with a \$1,000 face value the time of purchase is your principal. Once purchased, the value of your bond holdings can fluctuate, meaning you can see an increase or decrease to your principal.
2. A brokerage firm that executes trades for its own accounts at net prices (prices that include either a mark-up or mark-down).

**Prospectus**

A formal written offer to sell securities that sets forth the plan for a proposed business enterprise, or the facts concerning an existing business enterprise that an investor needs to make an informed decision.

**Real rate of return**

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

**Revenue bond**

A type of municipal security backed solely by fees or other revenue generated or collected by a facility, such as tolls from a bridge or road, or leasing fees. The creditworthiness of revenue bonds tends to rest on the bond's debt service coverage ratio—the relationship between revenue coming in and the cost of paying interest on the debt.

**Risk**

The possibility that an investment will lose, or not gain, value.

**Risk tolerance**

A person's capacity to endure market price swings in an investment.

**Savings bond**

U.S. government bond issued in face denominations ranging from \$25 to \$10,000.

**Secondary market**

Markets where securities are bought and sold subsequent to their original issuance.

**STRIPS**

Short for "Separate Trading of Registered Interest and Principal of Securities." STRIPS are Treasury Department-sanctioned bonds in which a broker-dealer is allowed to strip out the coupon, leaving a zero-coupon security.

**TIPS**

U.S. government securities designed to protect investors and the future value of their fixed-income investments from the adverse effects of inflation. Using the Consumer Price Index (CPI) as a guide, the value of the bond's principal is adjusted upward to keep pace with inflation.

**Treasury**

Negotiable debt obligations that include notes, bonds and bills issued by the U.S. government at various schedules and maturities. Treasuries are backed by the "full faith and credit" of the U.S. government.

**Treasury bill**

Non-interest bearing (zero-coupon) debt security issued by the U.S. government with a maturity of four, 13 or 26 weeks. Also called a T-bill.

**Treasury bond**

Long-term debt security issued by the U.S. government with a maturity of 10 to 30 years, paying a fixed interest rate semiannually.

**Treasury note**

Medium-term debt security issued by the U.S. government that has a maturity of two to 10 years.

**Total return**

All money earned on a bond or bond fund from annual interest and market gain or loss, if any, including the deduction of sales charges and/or commissions.

**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 and 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)**

Yield to maturity (YTM) is 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.

**Yield-to-Worst (YTW)**

The lower yield of yield-to-call and yield-to-maturity. Investors of callable bonds should always do the comparison to determine a bond's most conservative potential return.

**Yield reflecting broker compensation**

Yield adjusted for the amount of the mark-up or commission (when you purchase) or mark-down or commission (when you sell) and other fees or charges that you are charged by your broker for its services.

**Zero**

Short for zero-coupon bond.

**Zero-coupon bond**

A type of bond that does not pay a coupon. Zero-coupon bonds are purchased by the investor at a discount to the bond's face value (*e.g.*, less than \$1,000), and redeemed for the face value when the bond matures.

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The U.S. General Services Administration's Federal Citizen Information Center has reviewed this publication.



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