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# TREASURY

—*securities*—



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# U.S. Treasury Securities

## 1. Treasury Debt

When you invest in a debt security—also known as a fixed-income investment, or more generally, as a bond—you lend money to an entity that promises to pay back the loan at the end of a predetermined period called the term. For example, in the case of Treasuries, you lend money to the U.S. Treasury. The amount of the loan, the principal, is also called the security's face value or par value. The Treasury pays you interest for the use of your money throughout the term of the debt security, typically twice a year. When the principal is completely paid back, the security is said to have matured. The date on which that happens is called the maturity date.

The interest rate, stated as a percentage of par value, is sometimes called the coupon, from days past when you had to tear a paper coupon off the bond certificate and present it to a bank or other agent to receive your interest payment. Today certificates have been replaced with an electronic book-entry recordkeeping system, and interest is credited electronically to your account.

## **2. Marketable Securities: Bills, Notes, and Bonds**

When investors talk about Treasuries, they usually mean those government securities that are transferable or marketable—in other words, financial instruments that can change ownership. This means you don't need to be the original purchaser of the security to collect the interest and principal, and you can sell your investment if you choose.

There are three major classes of marketable Treasuries: bills, notes, and bonds, also known as T-bills, T-notes, and T-bonds respectively. The face value for a single Treasury security is \$100, which is the least amount you can invest (in 2008, Treasury lowered the investment minimum from \$1,000 to \$100). You can invest more, in increments of \$100 each—for example, \$200, \$300, and so forth. In fact, if you want, you can buy up to \$5 million of any of these securities at one time.

T-bills, T-notes, and T-bonds essentially differ in the length of time they take to mature, from several weeks to many years, making each of them suitable for a different investing purpose.

### ***T-Bills***

Treasury bills are extremely short-term debt investments that are sold with 4-week, 13-week, 26-week and 52-week maturities. With T-bills, you don't receive regular interest payments, as you normally would with debt securities. Instead, you receive the interest only once, at the end of the term.

T-bills are also priced differently from other debt securities at the time they are issued. Typically, an investor lends the issuer an amount called the face value, or par value, which is paid back at maturity. With bills, however, your initial investment is less than par. This is known as buying at a discount. At maturity, you're paid the face value, so the interest you've received is equivalent to the discount you got when you first bought the bill. For example, if you bought \$5,000 worth of T-bills at the discounted price of \$4,700, you would earn \$300 in interest when you receive the full \$5,000 face value at maturity.

Because T-bills have short maturities, they have limited exposure to inflation and interest rate risks. As a result, T-bills serve as a benchmark against which the risk of other investments is measured. They typically pay rates comparable to those on bank CDs or money market mutual funds. In fact, when you assign Treasuries to an asset class, T-bills are considered cash equivalents.

T-bills are often appropriate for financial goals that call for extremely liquid, low-risk investments. So you might use T-bills in an emergency fund, as a place to hold money while you choose what to invest in next, or as a place to save for short-term goals, such as buying a car.

### ***Treasury Notes***

Treasury notes come in a range of medium-length terms: 2, 3, 5, 7 and 10 years. They pay interest twice a year at rates that are fixed at the time they're issued. At maturity, you get the full face value of the note back.

T-notes can be useful sources of income and their maturity can be timed to correspond to certain mid-term financial goals, such as buying a home. Or you can buy and sell notes to take advantage of changes in interest rates. In a period of changing interest rates, investors often prefer notes to longer-term bonds, since their investment isn't tied up for such a long period of time.

The 10-year T-note has a special place in the economy because analysts and financial journalists use it as the benchmark to measure the performance of other debt securities, such as corporate or municipal bonds, and the state of the debt market as a whole.

### ***Treasury Bonds***

The long-distance runners of the debt securities universe, sometimes called "long bonds," have a 30-year term. Like T-notes, T-bonds pay interest on a semiannual schedule, at a fixed rate, and return the full face value of the bond at maturity. After a five-year break from 2001 to 2006, during which no T-bonds were issued, the U.S. Treasury is once again issuing them on a regular schedule.

T-bonds often appeal to buy-and-hold investors because they provide a source of regular income over an extended period of time without risk of default. The interest they pay tends to be higher than on shorter-term bonds, though that isn't always the case. In periods when interest rates are rising, investors may be reluctant to tie up their money for many years if they think that by waiting a bit longer to buy they might lock in a more favorable return.

### ***TIPS***

If you're concerned that investing in Treasury notes and bonds exposes you to the risk of inflation, you may be interested in Treasury Inflation Protected Securities, or TIPS, which are sold with 5-year, 10-year, and 30-year maturities. While the interest rates on TIPS are fixed for their terms, the principal on these securities is adjusted twice a year. The adjustment is based on changes in the Consumer Price Index, which is the main measure of inflation in the United States.

If inflation increases, as it typically does, the principal is increased according to a specific formula. As a result, you'll receive more interest, since the interest rate will apply to the higher principal amount. In addition, if the principal is larger than par value at maturity, you receive the larger amount.

If prices fall, however, in a period of deflation—which is less likely to occur than inflation—then the reverse situation occurs: Your principal is reduced and the interest you receive will decrease as well, since it will be based on the lower principal amount. However, if at maturity your inflation-adjusted principal is lower than the original principal you'll receive the original principal back, giving you some protection against possible deflation.

One drawback to TIPS, however, is that the interest rate that TIPS pay is substantially lower than the rate on Treasury securities of similar terms that aren't inflation protected. At the beginning of January 2010, for example, the rate on a recently issued 10-year Treasury note was 3.77% while the rate on a TIPS with the same term was 1.43%.

### ***STRIPS***

You may be familiar with zero-coupon bonds, a type of debt security that you buy at a discount and that pays you interest only once, at maturity. The unpaid interest simply accumulates until then, and you receive the principal and interest all at once. A T-bill is just such a zero-coupon bond. The Treasury doesn't offer longer-term zero-coupon Treasuries, but brokerage firms offer investments created from Treasury securities. They're known as STRIPS, which stands for Separate Trading of Registered Interest and Principal of Securities.

To create STRIPS, a single Treasury security is split into separate securities, one for the repayment of principal and one for each of the scheduled interest payments. Essentially, these securities act like zero-coupon Treasuries, and you are paid a return of principal plus interest only once, on the date those payments would have been due. You can buy STRIPS only through banks and brokerage firms, not directly through the Treasury.

### **3. Investment Risk**

Like all investments, Treasuries expose you to certain risks, including the potential for lower-than-expected returns and the unpredictable forces of supply and demand that affect the market for these securities. But because they are federal government issues, they also enjoy a strong reputation for safety.

#### ***Credit Risk***

Ordinarily, when you invest in a debt security you need to accept a certain level of credit risk, which is the risk that the borrower won't pay back the money you're owed or make interest payments on time. But Treasury debt is backed by the "full faith and credit" of the U.S. government, meaning that the government promises to use its powers to collect revenue through taxes and other means to make good on what it owes.

As long as the U.S. government is functioning, you can count on it to pay back its debts. That's why Treasuries are often described as having zero credit risk.

In contrast, if you were to buy a corporate bond, you'd be lending money to a company whose ability to repay you with interest would depend on that company's ability to earn the money it needed. If you buy a municipal bond, you're lending money to a state or city. Since there's some chance of default, or failure to pay you the money you're owed, both corporate and municipal bonds carry more credit risk than Treasury bonds.

While zero credit risk makes Treasury bonds safer than corporate and municipal bonds if you hold them to maturity, remember that, as with all investments, lower risk means lower potential return. Put another way, the safer the investment, the less interest the issuer has to pay to attract investors. That's why Treasury bonds ordinarily pay lower interest rates than other bonds with similar terms.

#### ***Interest Rate Risk***

While Treasuries are free of credit risk, they're not risk-free investments. Like all debt securities, Treasuries are subject to interest rate risk, which is the possibility that your investment will lose market value because of a change in interest rates. In this case, losing market value means that the sale price of the Treasury is less than its par value, which is what it cost when it was issued.

A lower market price isn't a problem if you plan to hold the bond to maturity, since you will still receive your entire principal back at that time. But interest rate risk does mean you could find yourself holding a bond that pays interest at a lower rate than newer bonds being issued, so you realize less income than if you owned the newer bonds.

Interest rate risk can be a greater problem if you want or need to sell a Treasury that you hold. For example, if you'd invested in a 10-year Treasury note paying 3%, but the current 10-year Treasury is paying 5%, investors would find the current note more attractive than the one you own. As a result, you'd have to sell the security at a discount to the note's original price. That way, an investor who bought a note paying less interest would get a comparable yield—measured as income per dollar invested—as he or she would with the current note paying the higher interest.

Of course, interest rate changes can work in your favor as well. If you bought a 30-year Treasury bond when the rate was 8% and current rates are 4%, your bond's higher rate would make it more attractive to investors. In this case, a buyer would be willing to pay a premium, or more than the bond's original price, to get that higher rate.

Interest rate risk increases with the length of the term. For instance, if you own a 2-year note, you won't be locked in to the interest rate on that note for too long. You'll get your principal back fairly quickly, and you'll be able to reinvest it at the then going rate. But if you're holding a bond that matures in 30 years, you'll be earning that interest rate for a long time. If you need the money, you may have to sell your long-term bond at a discount.

Another aspect of interest rate risk is reinvestment risk. For example, if your bond matures and you want to reinvest in another bond, the going interest rate may be lower than the rate you received on the old one. Consequently, you may have to reinvest at the lower rate or choose another investment that may not fit your financial goals or portfolio strategy as well.

One way to manage this type of interest rate risk is by using a technique called laddering. Instead of investing your entire principal in one bond, you divide the total and buy several bonds with different terms so that they mature in sequence—say, spaced one or two years apart—like the rungs of a ladder. As they mature, you reinvest in another bond with the same length term. Laddering is a way to diversify, providing you with a regular supply of cash to invest at current rates while providing investment income at a combination of different rates.

### ***Inflation Rate Risk***

Inflation risk is another consideration if you're investing in Treasuries. If the cost of goods and services is rising faster than the return on your investments, even though your money looks like it's growing, it will actually buy less and less over time. For instance, if your Treasury security is paying a fixed 3% interest per year, but the annual rate of inflation is also 3%, after accounting for taxes, your money will actually be losing buying power with each passing year.

Time makes a big difference with inflation risk. The longer you're invested in a security with a low return, the more impact inflation can have. And since bonds with longer maturities are more vulnerable to both inflation risk and interest rate risk, they offer higher interest rates than bonds with shorter maturities to offset the greater risk they pose.

### ***Call Risk***

Some Treasury securities issued before 1985 are callable, which means that the issuer—in this case the federal government—can decide to pay you back ahead of schedule. Having your Treasury security called can throw off your financial planning, especially if you were counting on the security to pay interest for a certain number of years and mature at a specific time. Chances are, if an issue is called, interest rates have dropped, and you'll be faced with reinvesting your principal for a lower return. To offset this risk, callable Treasuries usually provide higher yields than noncallable securities with the same term.

## **4. Buying and Selling Treasuries**

The Treasury makes it easy and inexpensive to buy Treasuries directly on its TreasuryDirect Web site at [www.treasurydirect.gov](http://www.treasurydirect.gov). Through your online account, you can authorize the purchase and sale of your securities, redeem maturing securities, or reinvest in new Treasuries. You can make the purchases with a direct debit from an account you designate. Interest payments and the proceeds from sales are deposited to that same account. The Web site also provides the latest rate and yield information, plus general information about each type of security that's available.

You can purchase newly issued securities on TreasuryDirect without a sales charge, and if you sell your securities using the Sell Direct area of the site you pay a \$45 fee for TreasuryDirect to facilitate the sale. If you prefer, you can also buy and sell Treasuries through your bank or brokerage account, though you will generally pay a commission on those transactions.

Another alternative, called a Legacy Treasury Direct account, is paper based, so you can make purchases by filling out a paper application and sending in a check for the amount owed rather than placing your order electronically.

### ***Treasury Auctions***

New Treasury securities are sold by auction. Auctions take place on a regular schedule, and you can participate as an individual through either your TreasuryDirect or Legacy Treasury Direct account. Institutional investors, such as banks, mutual funds, and pension funds, participate as well.

There are two kinds of bids: competitive and noncompetitive. Bidders who offer competitive bids state the rate they're willing to pay or the yield they are willing to accept. The government accepts bids, starting with the lowest, and working its way up the list until it has sold the full issue. The last—highest—yield it accepts becomes the yield for the issue that's being auctioned.

Individuals usually place noncompetitive bids, which means they agree to accept whatever yield is determined at the auction. Making a noncompetitive bid guarantees that you'll be able to buy the security in the quantity you want. In contrast, investors who put in competitive bids and specify the yield they're willing to accept aren't guaranteed a purchase if their bid is the same as or higher than the cut-off rate.

For example, in December 2009, the high yield on a 10-year note (issued as a 9-year 11-month note) was 3.375%, the low was 3.30%, and the median was 3.36%. All competitive bidders with bids below 3.375% received their full order,

as did about two-thirds (67.28 %) of those who bid at the highest level. Since 3.375% was the top bid that the Treasury accepted, all the successful bidders receive the benefit of that yield even though when they bid they were willing to take less. Because of the way the Treasury auctions its debt securities, even if you buy a Treasury note or bond at issue, the price you pay may be higher or lower than the face value. That's because the interest rate—the percentage of the face value that the note pays in interest—and the yield are determined by the auction.

If the yield set at auction is lower than the security's interest rate, it means demand is high, and investors will pay more than par for the issue—for example, \$100.40 for a note with a \$100 face value. But if demand is low, investors will want a higher yield to make the security more attractive. In this case, a note with a \$100 face value might be sold to investors for \$99.50. Remember that a higher yield means a lower price.

### ***Changing Demand***

Despite their relative price stability, the demand for Treasury securities continually rises and falls. There are a number of reasons for this fluctuation. One is the condition of the markets for more volatile investments, such as stock and stock funds, whose prices change more often—and often more dramatically than Treasuries. When the economy is strong, and returns on stock investments are strong, investors feel more comfortable taking on more risk for the potential of earning higher returns. At these times, demand for Treasuries drops as investors put their dollars in stock. This drives Treasury prices down and yields up.

However, when other markets aren't doing so well—for example, if the market for stock is slow—then investors don't get the returns they expect for the risks they're taking. They may be worried, in particular, about losing their principal. The result is called a flight to quality, when investors shift their money to lower-risk investments, such as Treasuries. This shift increases demand, which raises the price of Treasuries as a whole and lowers their yield.

Another reason that demand for Treasuries may change is that interest rates change, a fluctuation that affects all debt securities. However, changes in interest rates don't affect all Treasuries the same way, since a Treasury's exposure to interest rate risk depends on its maturity date. For example, T-bills, which have the shortest maturity, are less vulnerable than T-notes, and T-notes are less vulnerable than T-bonds, which have the longest maturity.

Here's what typically happens: If investors believe that the current interest rate is higher than they can expect to get on future issues—in other words, they expect

rates to fall—they try to put as much of their money as they can into investments earning the current rate, thereby locking in that rate for as long as they can. This pushes up demand for Treasuries with longer maturities and lowers their yield. As a result, long-term T-bonds may yield less than shorter term T-notes, which is exactly opposite the normal pattern.

### ***Secondary Market***

You can also buy and sell existing Treasuries in the secondary market. In fact, you may be able to find better yields by buying older Treasuries, since there traditionally tends to be more demand for newer issues. You'll need a bank or brokerage account to make these trades, and you should expect to pay transaction fees. And if you're selling Treasuries before they mature, you may have to pay capital gains taxes on any profit you make that isn't offset by your capital losses on other investments.

## ***5. Using Treasuries***

There are two ways to make money with debt securities: by holding them and collecting the interest income they earn until they mature, or by selling them at a profit to another investor. As with other debt securities, you can take advantage of Treasuries' predictable income payments and range of maturity dates to invest for financial goals with a specific time frame, such as the down payment on a home or a tuition bill that will be due.

Treasuries are highly liquid investments. New issues become available on regular schedules, and there is an enormous market of buyers and sellers who trade existing securities at high volume every day. That means that Treasuries are easy to buy and sell and the costs of trading them are usually fairly low. This liquidity is particularly important if you need to sell an investment quickly—for example if you need cash for an emergency or an important purchase, if you spot another investment opportunity that's a better fit for your financial plan, or if you want to trade these securities for profit.

Treasuries also have tax advantages. While you still have to pay federal income taxes at your regular rate on the interest you receive, those payments are exempt from state and local income taxes.

## **6. Nonmarketable Securities: Savings Bonds**

The U.S. Treasury also sells savings bonds. Unlike T-bills, T-notes, and T-bonds, savings bonds aren't marketable, which means they can't be bought and sold after they're issued. Only the person whose name is on the bond has the right to cash it. But you can buy savings bonds for other people by putting their name on the bond rather than your own.

In addition, the rules for purchasing savings bonds are somewhat different from those for buying Treasuries. To begin with, only U.S. residents, U.S. citizens living outside the country, and employees of the U.S. government can own savings bonds. That's not the case with Treasury securities, which may be purchased regardless of your citizenship, residency, or employment. Savings bonds can also be owned directly by children under 18, whereas minors generally can't own securities directly.

If you're a parent, you might consider using savings bonds as one part of your college savings plan. If your income is less than a specific level that Congress has set at the time you cash in the bond, the earnings are free of federal tax if you use the money to pay qualified college expenses. One thing to remember if you're considering this strategy is that you, as the parent, must be the owner of the bonds to receive this tax break. Your child can't be listed as the owner.

### ***Types of Savings Bonds***

There are two main types of savings bonds currently sold by the Treasury: EE savings bonds and I savings bonds, which have many common features:

- They accrue monthly interest until they're cashed.
- Interest compounds semiannually.
- They can be cashed in after 12 months.
- Bond owners forfeit 3 months of interest if they cash in the bonds within five years of purchase.
- Interest is free of state and local taxes.
- Earnings are free of federal tax if you are eligible to use them to pay qualified education expenses.
- A maximum of \$5,000 of each type of savings bond may be purchased per Social Security number or tax identification number each calendar year.

Savings bonds are sold electronically through TreasuryDirect at face value in any amount \$25 and over. You can also buy paper savings bonds through financial institutions like banks, but not through TreasuryDirect.

Some employers also offer purchase programs that let you buy paper savings bonds. The paper certificates come only in a limited number of denominations: \$50, \$75, \$100, \$200, \$500, \$1,000, \$5,000, and for Series EE bonds only, \$10,000. While Series I savings bonds are purchased at their face value (for example, a \$1,000 I bond costs \$1,000), Series EE paper bonds are purchased at 50% of their face value. In other words, a \$10,000 EE bond costs \$5,000, and accrued interest makes up the difference when you redeem. Once you have a paper savings bond, however, you can trade it in for an electronic savings bond through TreasuryDirect, which can make the bonds much easier to track and manage. Series I savings bonds differ from the EE variety because their interest rates are partly indexed to inflation. EE savings bonds pay a fixed rate of interest for up to 30 years and are guaranteed to double in value in 20 years due to accrued interest. (Note: The interest rate on EE savings bonds sold before May 2005 is variable and resets twice a year.) Series I savings bonds, on the other hand, actually pay a combination of two rates: a fixed rate, which stays the same as long as you hold the savings bond, and an inflation-adjusted rate, which is set every six months according to changes in the Consumer Price Index.

Starting in 2010, you can buy I bonds by checking a box on your tax return. The federal government is amending IRS Form 8888 to allow taxpayers to direct all or part of their refund to the purchase of I bonds, which will be issued as paper bonds and mailed to the taxpayer. For more information, visit the IRS's [Web site](#) at [www.irs.gov](http://www.irs.gov).