



وعي مالي شخصي  
Personal Financial Literacy

Lesson 18

# Investing in Bonds

[www.dirhami.ae](http://www.dirhami.ae)

مجلس أبوظبي للتطوير الاقتصادي  
ABU DHABI COUNCIL FOR ECONOMIC DEVELOPMENT



# Lesson 18

## Investing in Bonds

Think “bonds,” and you probably think “safe,” “reliable,” and . . . “boring.” But that is only half the story.

Bonds can provide a worry-free stream of income. But this class of securities, which crushed stocks during the three-year bear market of 2000 through 2002, also includes a wide array of instruments with varying degrees of risk and reward.

Used improperly, bonds can really mess up your financial life. Handled with care, however, bonds are among the most valuable tools in your investment kit. Here are some of the benefits they can provide:

### 1. Diversification

Large company stocks have posted compound annual returns of around 9.6% percent since 1926, versus 5.7% for long-term U.S. government bonds, according to Ibbotson Associates. Yet while stocks have returned more than bonds, they are also more volatile. Combining stocks with bonds will net you a more stable portfolio. As seen during the bear market, bonds’ positive returns offset the double-digit losses from stocks.

### 2. Income

Because bonds pay interest regularly, they are a good choice for investors – such as retirees – who desire a steady stream of income.

Security. Next to cash, U.S. Treasury Bonds are the safest, most liquid investments on the planet. Short-term bonds are a good place to park an emergency fund or money you’ll need relatively soon - say to buy a house or send a child to college.

Tax savings. Certain bonds provide tax-free income. Although these bonds usually pay lower yields than comparable taxable bonds, investors in high tax brackets (generally, 28 percent and above) can often earn higher after-tax returns from tax-free bonds.

## What Is a Bond?

Companies and governments issue bonds to fund their day-to-day operations or to finance specific projects. When you buy a bond, you are loaning your money for a certain period of time to the issuer, be it General Electric or Uncle Sam.

In exchange, the borrower promises to pay you interest every year and to return your principal at “maturity,” when the loan comes due, or at “call” if the bond is of the type that can be called earlier than its maturity (more on this later). The length of time to maturity is called the “term.” A bond’s face value, or price at issue, is known as its “par value.” Its interest payment is known as its “coupon.”

A \$1,000 bond paying 7 percent a year has a \$70 coupon (actually, the money would usually arrive in two \$35 payments spaced six months apart). Expressed another way, its “coupon rate” is 7 percent. If you buy the bond for \$1,000 and hold it to maturity, the “yield,” or actual earnings on your investment, is also 7 percent (coupon rate divided by price = yield).

The prices of bonds fluctuate throughout the trading day as, of course, do their yields. But the coupon payments stay the same.

Say you don't buy the bond right at the offering, and instead buy from somebody else in the "secondary" market. If you buy the bond for \$1,100 in the secondary market, though, the coupon will still be \$70, but the yield is 6.4 percent because you paid a "premium" for the bond.

For a similar reason, if you buy it for \$900, its yield will be 7.8 percent because you bought the bond at a "discount." If its current price equals its face value, the bond is said to be selling at "par." The bottom line: There are many ways of expressing a bond's return, but "total return" is the only one that really matters. This includes all the money you earn off the bond: the annual interest and the gain or loss in market value, if any.

If you sell that \$1,000 bond with the \$70 coupon for \$1,050 after one year, your total return is \$120, or 12 percent – \$70 in interest and \$50 in capital gains. (Prices are usually expressed based on a par value of 100, so when you sell that bond for \$1,050 the price would be quoted as 105.)

## Types of Bonds

U.S. Treasury Bonds (Treasuries) are the safest bonds of all because the interest and principal payments are guaranteed by the "full faith and credit" of the U.S. government. Interest is exempt from state and local taxes, but not from federal tax. Because of their almost total lack of default risk, Treasuries carry some of the lowest yields around.

Treasuries come in several types:

1. Treasury bills, or "T-bills," have the shortest maturities – 13 weeks, 26 weeks, and one year. You buy them at a discount to their \$10,000 face value and receive the full \$10,000 at maturity. The difference reflects the interest you earn. Treasury notes mature in two to 10 years. Interest is paid semiannually at a fixed rate. Minimum investment: \$1,000 or \$5,000, depending on maturity.
2. Treasury bonds have the longest maturities at 10 years. As with Treasury notes, they pay interest semiannually, and are sold in denominations of \$1,000.
3. Zero-coupon bonds, also known as "strips" or "zeros," are Treasury-based securities that are sold by brokers at a deep discount and redeemed at full face value when they mature in six months to 30 years. Although you don't actually receive your interest until the bond matures, you must pay taxes each year on the "phantom interest" that you earn (it's based on the bond's market value, which usually rises steadily during the time you hold it). For that reason, they are best held in tax-deferred accounts. Because they pay no coupon, zeros can be highly volatile in price.
4. Inflation-indexed Treasuries. These pay a real rate of interest on a principal amount that rises or falls with the consumer price index. You don't collect the inflation adjustment to your principal until the bond matures or you sell it, but you owe federal income tax on that phantom amount each year - in addition to tax on the interest you receive currently. Like zeros, inflation bonds are best held in tax-deferred accounts.
5. Mortgage-backed securities represent an ownership stake in a package of mortgage loans issued or guaranteed by government agencies such as the Government National Mortgage Association (Ginnie Mae), Federal Home Loan Mortgage Corp. (Freddie Mac), and Federal National Mortgage Association (Fannie Mae). Interest is taxable and is paid monthly, along with a partial repayment of principal. Ginnie Mae has always been backed by the full faith and credit of the U.S. government. Fannie Mae and Freddie Mac, on the other hand, have been under government control since Sept. 2008, putting Uncle Sam on the hook to guarantee their mortgage-backed securities. The volatile mortgage market in late 2007 taught investors



that risks for these kinds of bonds are by no means negligible. Mortgage-backed securities generally yield between 2% and 4% more than Treasuries of comparable maturities. Minimum investment: typically \$25,000.

6. Corporate bonds (Corporates) pay taxable interest. Most are issued in denominations of \$1,000 and have terms of one to 20 years, though maturities can range from a few weeks to 100 years. Because their value depends on the creditworthiness of the company offering them, corporates carry higher risks and, therefore, higher yields than super-safe Treasuries. Top-quality corporates are known as “investment-grade” bonds. Corporates with lower credit quality are called “high-yield,” or “junk,” bonds. Junk bonds typically pay higher yields than other corporates.
7. Municipal bonds, or “munis,” are one of America’s favorite tax shelters. They are issued by state and local governments and agencies, usually in denominations of \$5,000 and up, and mature in one to 30 or 40 years. Interest is exempt from federal taxes and, if you live in the state issuing the bond, state and possibly local taxes as well. (Note that there are exceptions). The capital gain you may make if you sell a bond for more than it cost you to buy it is just as taxable as any other gain; the tax-exemption applies only to your bond’s interest. Munis generally offer lower yields than taxable bonds of similar duration and quality. Because of their tax advantages, though, their after-tax returns are often higher than equivalent taxable bonds for people in the 28 percent federal tax bracket or above.

## What Are the risks?

Many people believe they can’t lose money in bonds. Wrong! Although the interest payments you’ll get from owning a bond are “fixed”, your return is anything but.

Here are the major risks that can affect your bond’s return:

### Inflation Risk

Since bond interest payments are fixed, their value can be eroded by inflation. The longer the term of the bond, the higher the inflation risk. On the other hand, bonds are a classic deflation hedge; deflation increases the value of the dollars that bond investors get paid.

### Interest Rate Risk

Bond prices move in the opposite direction of interest rates. When rates rise, bond prices fall because new bonds are issued that pay higher coupons, making the older, lower-yielding bonds less attractive. Conversely, bond prices rise when interest rates fall because the higher payouts on the old bonds look more attractive relative to the lower rates offered on newer ones. The longer the term of the bond, the greater the price fluctuation – or volatility – that results from any change in interest rates.

There is a close connection between inflation risk and interest rate risk since interest rates tend to rise along with inflation. Interest rate shifts are also a concern for mortgage-backed bondholders, but for a different reason: If interest rates fall, home owners may decide to prepay their existing mortgages and take out new ones at the lower rates.

That doesn’t mean you’ll lose your principal if you hold such a bond. But it does mean you get your principal back much sooner than expected, forcing you to reinvest it at the newly lower rates. For that reason, the prices of mortgage-backed securities don’t get as big a boost from falling rates as other kinds of bonds.

Note that price fluctuations only matter if you intend to sell a bond before maturity, or you invest in a bond fund whose manager trades regularly. If you hold a bond to its maturity, you will be repaid the bond's full face value.

But what if interest rates fall and the issuer of your bond wants to lower its interest costs? This brings us to the next type of risk . . .

## Call Risk

Many corporate and muni bond issuers reserve the right to redeem, or "call", their bonds before they mature, at which point the issuer is required to pay bondholders only par value. Typically, this happens if interest rates fall and the issuer sees it can lower its costs by selling new bonds with lower yields.

If you happen to own one of the called bonds, not only do you get less than the market price of the bond, but you also have to find a place to reinvest the money. Because of the risk that you won't get the income you expect, callable bonds usually pay a higher rate of interest than comparable, noncallable bonds. So, when you buy bonds, make sure to ask not only about the time to maturity, but also about the time to a likely call.

## Credit Risk

This is the risk that your bond issuer will be unable to make its payments on time – or at all – and it depends on the type of bond you own and the borrower's financial health. U.S. Treasuries are considered to have virtually no credit risk, junk bonds the highest.

Bond rating agencies such as Standard & Poor's and Moody's evaluate corporations and municipalities for their credit worthiness. Bonds from the strongest issuers are rated triple-A. Junk bonds are rated Ba and lower from Moody's, or BB and lower from S&P. (You can check out a bond's rating for free by calling S&P at 212-438-2400 or Moody's at 212-553-0377, or by checking some of the bond websites we identify in "Buying bonds.")

The highest-quality municipal bonds are backed by bond insurance companies, but there is a trade-off: Insured munis typically yield up to 0.3 percentage points less than comparable uninsured munis. Further, the insurance only guarantees your interest and principal; it won't shield you against interest rate or market risk.

Some higher-coupon munis are also "pre-refunded," meaning that, for esoteric reasons, they are effectively backed by U.S. Treasuries. When a muni is pre-refunded by an issuer, its credit quality and price rise.

## Liquidity Risk

In general, bonds aren't nearly as liquid as stocks because investors tend to buy and hold bonds rather than trade them. While there is always a ready market for super-safe Treasuries, the markets for other bonds, especially munis and junk bonds, can be highly illiquid. If you are forced to unload a thinly-traded bond, you will probably get a low price.

## Market Risk

As with most other investments, bonds follow the laws of supply and demand. The more popular or less plentiful a bond, the higher the price it commands in the market. During economic meltdowns in Asia and Russia, for example, the price of safe-haven U.S. Treasuries rose dramatically.



You can't eliminate these risks altogether. Now that you understand them, you may be able to reduce their impact by some of the methods described in the next section of this lesson.

## How to Buy Bonds

You are probably interested in knowing more about how to purchase bonds. Here are the main ways:

### Directly from the Federal Government

U.S. Treasuries are sold by the federal government at regularly scheduled auctions. You can buy them through a bank or broker for a fee, but why pay for something you can get for nothing? The easiest and cheapest way to participate in this market is to buy them directly from the Treasury. You can check out the Treasury Direct program on the Web or by calling 011 800-722-2678. You also can sell bonds you already own before maturity through the Treasury's newer Sell Direct program.

### Through a Broker

With the exception of Treasuries, buying individual bonds isn't for the faint of heart. Most new bonds are issued through an investment bank, or "underwriter," rather than directly to the public. The issuer swallows the sales commission, so you get the same price big investors pay.

That's why, when buying individual bonds, you should buy new issues directly from the underwriter whenever possible – since you're getting them at wholesale.

Older bonds are another matter. They are traded through brokers on the "secondary market," usually over the counter rather than on an exchange, such as the New York Stock Exchange. Here, transaction costs can be much higher than with stocks because spreads – the difference between what a dealer paid for a bond and what he'll sell it for – tend to be wider.

You will seldom know what spread you paid, unfortunately, because the markup is set by the dealer and built into the price of the bond. There is no fixed commission schedule. One ray of sunshine: In early 2002 the Bond Market Association began posting some muni bond prices on its Web site. Alas, the prices include dealer markups because dealers protested listing commissions separately.

If you do plan to invest in individual bonds, you should probably have enough money to invest – say \$25,000 to \$50,000 at a minimum – to achieve some degree of diversification, as we'll explain below. (If you have less, consider bond funds, also described below.)

Exactly how you invest depends largely on your objective:

If your objective is to achieve capital gains, concentrate on long-term issues.

Reason: as noted in "Sizing up risks," the longer the term of a bond, the more pronounced are its price swings when interest rates move. That works to your advantage if interest rates fall. Your long-term bonds – especially zero-coupon bonds – will suddenly be worth a lot more. Of course, it works to your distinct disadvantage if interest rates rise; your portfolio drops in value. This kind of bond investing is essentially a bet that interest rates will fall, and it's subject to all the same risks – including that of substantial losses – as any other market-timing strategy.

If your objective is a steady, secure stream of income, adopt a more conservative approach. Stick to shorter terms. Bonds with maturities of one to 10 years are sufficient for most long-term investors.

They yield more than shorter-term bonds, and are less volatile than longer-term issues.

Spread your money around. Invest in a variety of bonds with different maturities, either by buying a bond fund or buying a half-dozen or more individual bonds.

Build a ladder portfolio. Each rung of your ladder consists of a different maturity bond, from one year right on up to 10 years. When the one-year bond matures, you reinvest the money in a new, 10-year issue. In this way, you always have more money to reinvest every year, and you are somewhat protected from interest rate shifts because you have locked in a range of yields.

## Through a Mutual Fund

It can make sense to buy individual bonds if you own a lot of them and hold them to maturity, but most people are better off buying bonds through mutual funds. The biggest reason is diversification. Because bonds are sold in large units, you might only be able to purchase one or a handful of bonds on your own, but as a bond fund holder you'll own stakes in dozens, perhaps hundreds, of bonds.

You will also get the benefit of professional research and money management. Another advantage: Dividends are paid monthly, versus only semiannually for individual bonds, and can be reinvested automatically. Lastly, bond funds are more liquid than individual bond issues.

The biggest drawback to bond funds - and it's a whopper - is that they don't have a fixed maturity, so that neither your principal nor your income is guaranteed. Fund managers are constantly buying and selling bonds in their portfolios to maximize their interest income and capital gains. That means your interest payments will vary, as will the fund's share price.

For this reason, don't choose a fund based only on its yield. Look at its total return, which combines the income the fund paid out with any change in the value of the fund's shares. Also, look for a fund with low expenses.

Because bond funds with similar investment objectives tend to hold similar types of securities, which perform similarly, there are only two ways a fund manager can goose the yield: cut expenses or take on more risk. If a fund's yield is more than 1 percentage point higher than the average for its peers and the difference can't be explained by lower fees, the manager is probably not to be trusted.

## Bonds in the UAE

Bonds issued by the Emirate of Dubai can be purchased on the Dubai Financial Market, see <http://www.dfm.ae>. For more information about bonds in the United Arab Emirates see the National Bonds website [http://www.nationalbonds.ae/Default\\_en\\_gb.aspx](http://www.nationalbonds.ae/Default_en_gb.aspx). A National Bond is a Shari'a Compliant saving certificate (mudaraba certificate). These saving certificates represent the pool of funds received from the Bond Holders and which are held by and invested and managed on their behalf by National Bonds Corporation PJSC, as the Mudareb, in accordance with the Islamic Shari'a Law.

A National Bond represents an undivided share in the Mudaraba Assets and also represents an entitlement to a share of the Distributable Profits generated by the Mudaraba Assets. And where is this money used? Your money is used to fund a project or several projects, which upon completion starts making its own revenue and returns your money along with a profit.

Say, for instance, you buy a bond with an AED 1,000 face value, a 5% profit and a 10-year maturity. You would collect profit payments totaling AED 50 in each of those 10 years. When the decade is up, you would get back your AED 1,000 and walk away with an impressive profit of AED 500.

