Introduction to Bonds

by Sophia

WHAT'S COVERED

In this lesson, you will explore the characteristics of a bond and how it differs from a stock. You will also learn how bonds can be a potential solution as you use your problem solving skills to invest. Specifically, this lesson will cover:

1. Overview of Bonds

1a. Advantages of Bonds

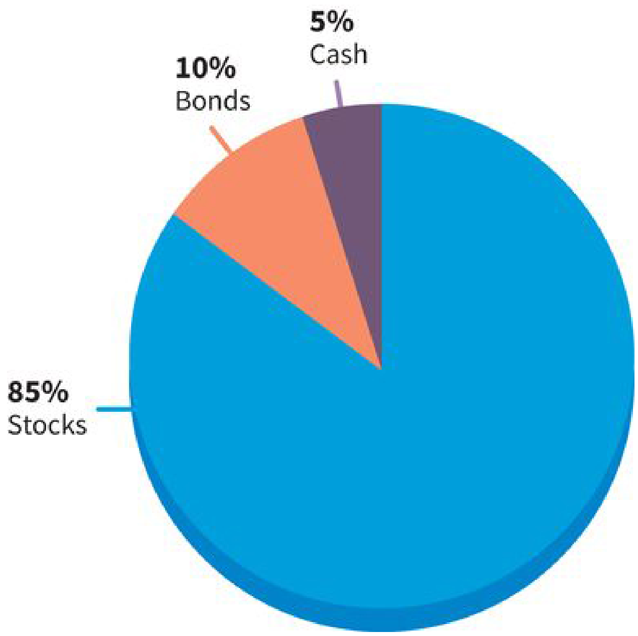
Rather than buying ownership in a company by purchasing stock, some investors choose to lend money to firms and governments by purchasing bonds.

Bonds represent contractual loans to corporations and governments. Bonds appeal to investors (and companies) for three main reasons:

1. Bonds provide investors with a low-risk fixed income in the form of interest payments.
2. Bonds include a tax incentive for the companies that issue bonds; as a result, the interest a company pays to bondholders (which is how investors make money) is tax-deductible for the company, whereas dividends paid to shareholders are not.
3. Bonds help investors diversify a portfolio. **Diversification** means to spread your investments across different types of assets as a way to manage financial risk.

You can create diversification by developing a basic asset allocation strategy. **Asset allocation** is an approach in which you include different investments into one portfolio.

- When you include assets that have different expected returns and different risk characteristics (the assets move up and down in value under different market conditions), you can protect yourself against significant financial losses.
- By spreading your investment money across more than one asset category, you can reduce risk (uncertainty and volatility) and improve your overall investment returns.
- A typical asset allocation strategy for a novice investor, as shown in the pie chart below, is to hold 85% of his or her assets in stocks, 10% in bonds, and 5% in highly liquid assets such as cash.



BIG IDEA

The asset allocation that works best for you at any given point in your lifetime financial journey will depend largely on your time horizon and your ability to tolerate risk.

TERMS TO KNOW

Bond

Represents a contractual loan to corporations and governments.

Diversification

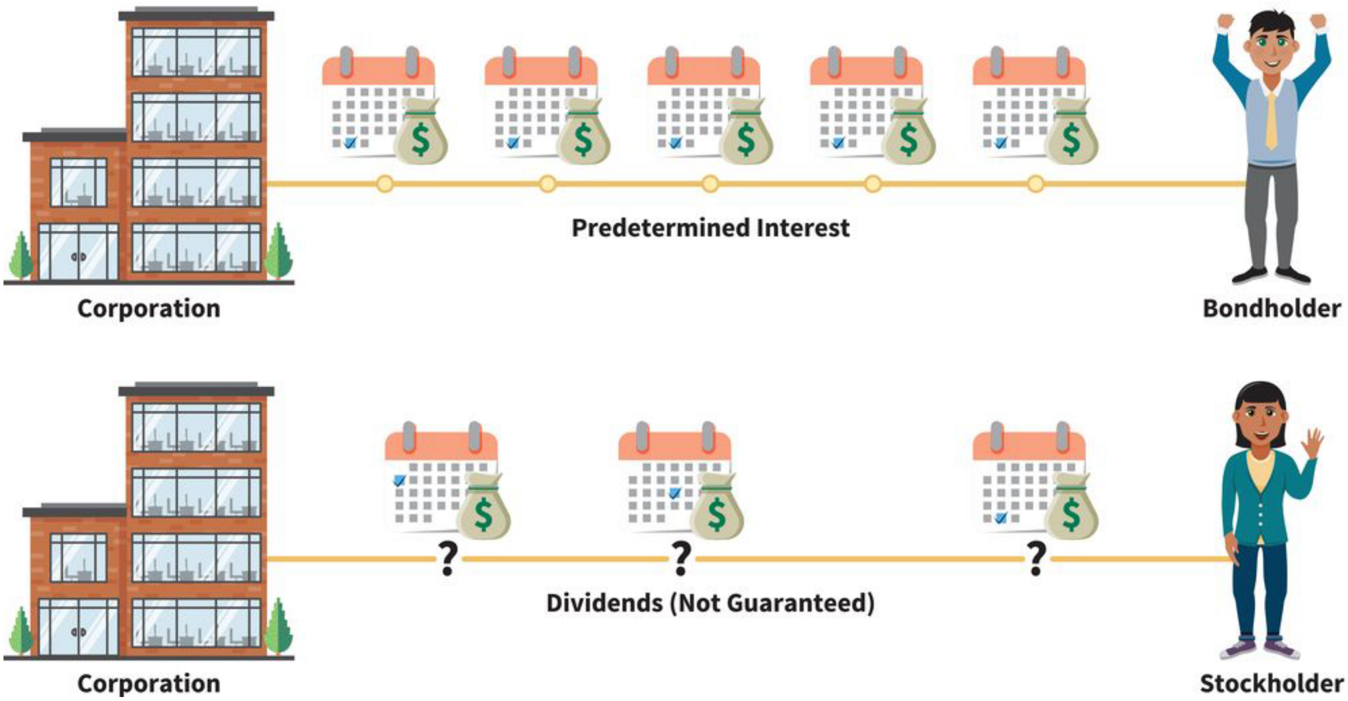
To spread your investments across different types of assets as a way to manage financial risk.

Asset Allocation

An approach in which you include different investments into one portfolio.

1b. Bond Features

When you buy a bond, you are purchasing a legal contract for a series of predetermined future payments. As shown in the following illustration, bondholders receive these payments in the form of interest. Stockholders, on the other hand, have no guarantees. Stockholders are entitled to dividends only if, and when, a firm's board of directors decides to make a payment.



For a bondholder, future payments, which come in the form of interest, are determined by the following bond features.

- The **face value** (or par value) of the bond: the amount of money that the bond issuer (the borrowing corporation or government) will pay to the bondholder (the investor lending the money) on the maturity date. Typical par values are $1,000 or $100.
- The **maturity date** of the bond: the length of the loan contract, which can be days, months, years, or several decades into the future. Just like a stock, you can sell a bond at any time before it matures. Remember, though, that if you sell a bond before it matures, then you will receive the fair market value of the bond (the price that you can sell the bond to another investor), not the face value, which most likely will be different than your initial investment.
- The **coupon rate** of the bond: the contractual interest rate that the bond issuer has agreed to pay the bondholder (see Hint). Coupon rates can be fixed or variable over the life of the bond.

HINT

Coupon rates are also referred to as *contract rates*.

- The **coupon payment** for the bond: the dollar amount of interest that the bond issuer will pay the bondholder. Coupon payments generally occur twice per year, but they may be more or less frequent.

TERMS TO KNOW

Face Value

The amount of money a bond issuer (the borrowing corporation or government) will pay to the bondholder (the investor lending the money) on the maturity date.

Maturity Date
The length of the loan contract for a bond, which could be a few months, years, or several decades into the future.

Coupon Rate
The contractual interest rate that the bond issuer has agreed to pay the bondholder.

Coupon Payment
The dollar amount of interest that the bond issuer will pay the bondholder.

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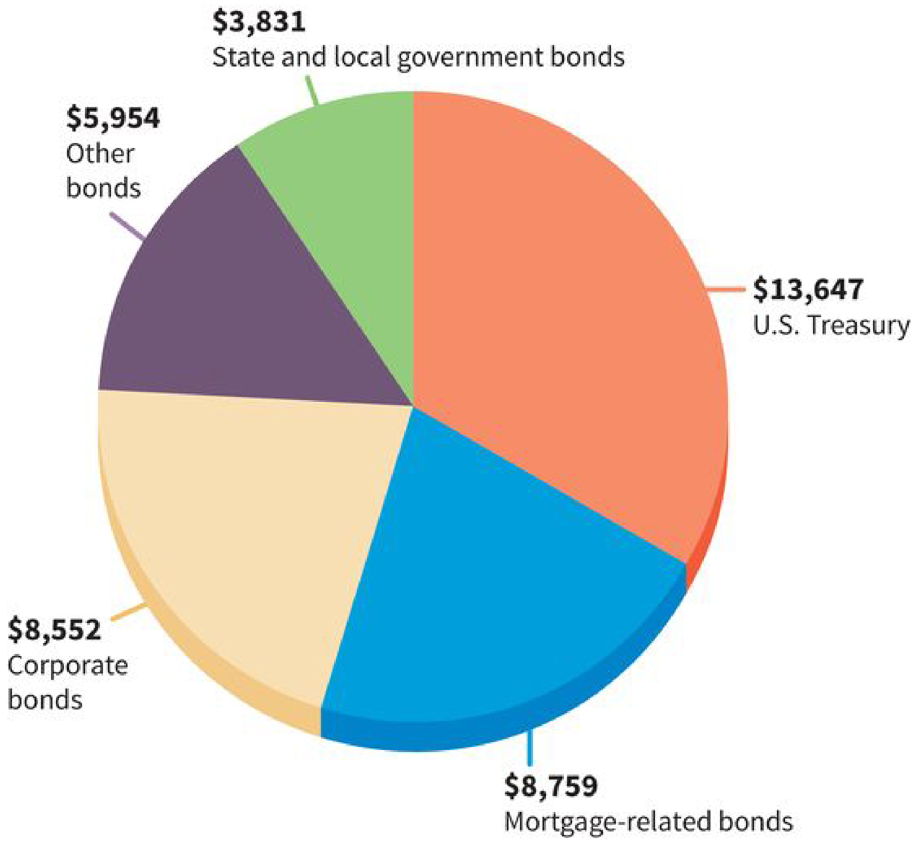
2. Types of Bonds

As an investor, you can purchase corporate bonds, U.S. federal government bonds, foreign government bonds, or even state and local government bonds. The value of the global bond market is approximately $100 trillion. The size of the U.S. bond market is approximately $40 trillion. The following pie chart shows the composition of the U.S. bond market.

DID YOU KNOW

The global bond market is much larger than the global stock market.



Source: Data adapted from The Securities Industry and Financial Markets Association, "Bond Markets & Prices," http://www.investinginbonds.com/marketataglance.asp?catid=31.

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3. Investing in Bonds

Although bonds are less risky than stocks, bonds are not risk-free investments. Knowing the risks and understanding how bonds are valued will help you to make wiser investments.

3a. Bond Risks and Rating Agencies

Have you ever loaned money to a friend who failed to pay you back? The same can happen when you purchase a bond. The bond issuer may not pay you back because it goes bankrupt or becomes insolvent. The risk that a company or government may not be able to repay a bond is called default risk. To help investors make better decisions about default risk, several independent businesses have been formed, called *rating agencies*.

A rating agency analyzes corporations and governments regarding their ability to repay debts. Two well-known rating agencies in the United States are Standard & Poor's and Moody's. These rating companies evaluate companies and governments as follows:

- Those that are deemed to have the highest probability of repaying their debts are rated as "AAA" (Standard & Poor's scale) or "Aaa" (Moody's scale).
- Those with low probabilities of repaying their debts are rated as "C."
- Those that are unable to repay their debts or interest payments are rated as "D" for default.

A company's credit rating can change from year to year.

However, a larger looming risk faces anyone who buys bonds: inflation risk (or purchasing power risk). There are few fixed rules when it comes to investing, but in the case of bonds, there is one absolute rule. Because most bonds pay a fixed coupon rate over time, *any* increase in prices in the general economy – inflation – will *erode* the purchasing power of the interest earned. It is important, therefore, to make sure that the interest received matches your investment need plus a bit more to cover current and expected inflation.

HINT

The U.S. government sells inflation-protected bonds to help investors account for inflation risk.

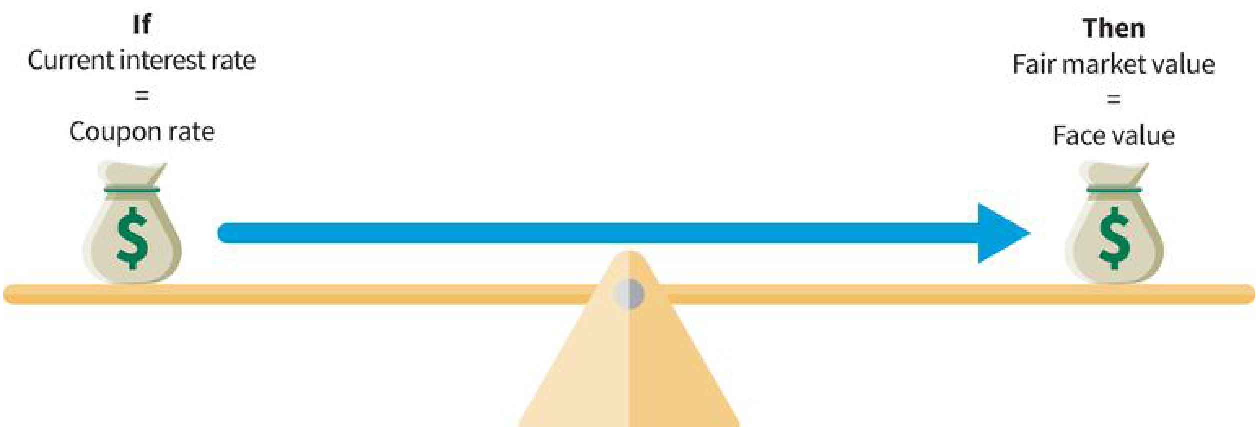
3b. Bond Values

If you don't want to hold a bond until its maturity date, you may be able to sell it to another investor. The factors that will affect how much you will receive for the bond in the secondary market include current interest rates, the bond's coupon rate, and the bond's fair market value. The current market interest rates change over time based on economic conditions; however, the coupon (or contract) rate for existing bonds does not change.

KEY CONCEPT

Changing interest rates in the economy relative to the coupon (or contract) rate of the bond lead to price fluctuations in the fair market value of the bond.

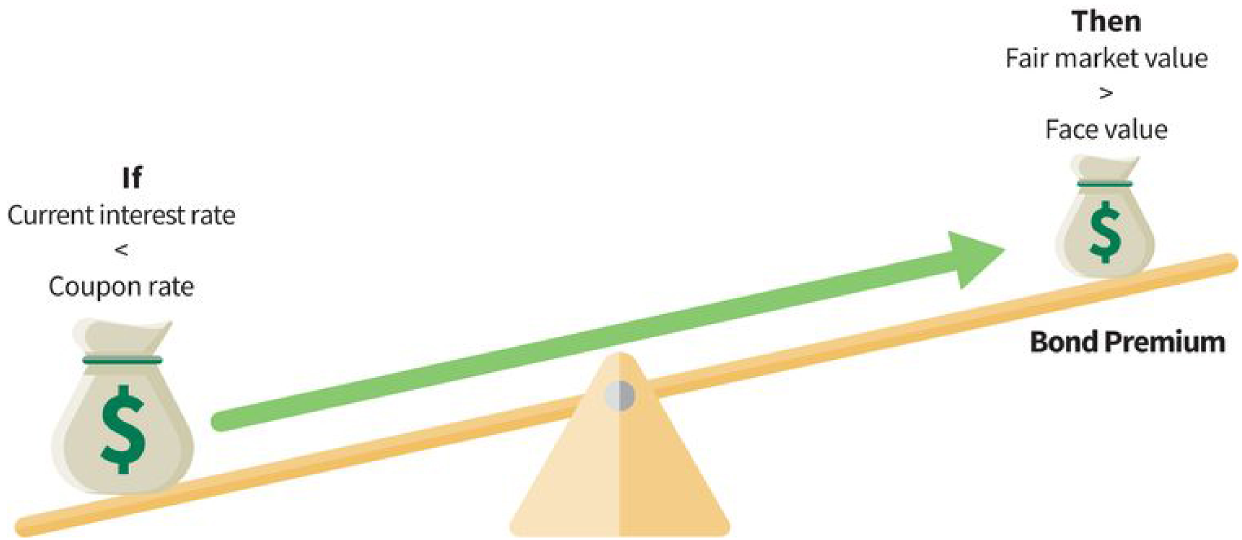
The illustration below shows the typical relationship between the current interest rate and the coupon rate, as well as the fair market value of a bond and its face value.



- Generally, at the time of original issuance, the coupon rate will be close to the current interest rate.
- As discussed, as time progresses from the original date of issue, it is likely that interest rates will change based on economic conditions. However, the coupon rate will generally not change over the life of the bond because the payment is part of the contract.
- Here is an important rule: *There is an inverse relationship between current interest rates and the fair market value of bonds.* Thus, if current interest rates fall and are less than the coupon rate, then the fair market value of the bond will increase to an amount greater than the face value of the bond. This is illustrated below.

KEY CONCEPT

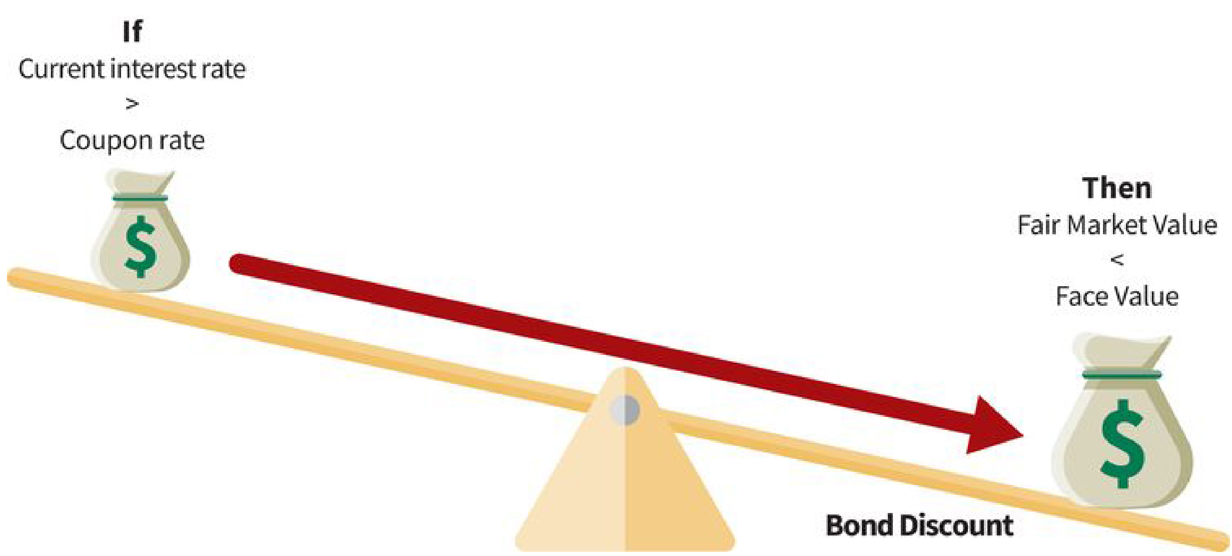
An inverse relationship means that the two factors move in opposite directions.



In this scenario, other investors are willing to pay you more for your bond because the coupon rate for the bond is higher than what investors can receive if they were to purchase a new bond at the lower current interest rate. As other investors pay you more than the face value for your bond, the **effective interest rate** that they will earn decreases because the coupon payment remains the same, regardless of what is paid for the bond.

The following illustration shows the opposite scenario, when current interest rates are higher than the coupon rate of the bond. In this situation:

- Investors can earn a higher interest received rate by purchasing new bonds.
- Because the coupon payments are fixed, investors will pay less for your bond as a way to increase the rate of return from owning your bond.
- Thus, the fair market value of your bond will decrease until the rate of return earned by an investor who purchases the bond is approximately equal to the rate of return that the investor could earn by purchasing a new bond at face value with a coupon rate equal to the current interest rate.



WATCH

Some people prefer to convert bonds into cash before the bond reaches maturity, especially during major life events. In the video below, a student describes how she leveraged a bond to fund part of her education. See how she put her problem solving skills to work to make a future investment in herself.

Other factors, besides changes in interest rates, can influence the fair market value of a bond. For example, changes in a bond issuer's credit rating will significantly affect a bond's value. As a credit rating declines, the fair market value will decrease. If things get bad enough, a bond can be labeled a junk bond. A **junk bond** is one with a rating lower than BBB, which is an indication that the firm or government may have trouble making interest payments in the future. Junk bonds typically sell for less than higher-rated bonds.

TERMS TO KNOW

Effective Interest Rate
The amount of interest actually earned on an investment.

Junk Bond
A bond with a rating lower than BBB, which is an indication that the firm or government may have trouble making interest payments in the future; typically sell for less than higher-rated bonds.

SUMMARY

In this lesson, you looked at an **overview of bonds** and their **advantages**. You considered how they can help you solve financial problems. Bonds offer a low-risk fixed income that can diversify your investment portfolio. There are several **types of bonds** to choose from, including U.S. Treasury bonds, corporate bonds, mortgage-related bonds, and bonds from state and local governments. Although **investing in bonds** carries less **risk** than owning stocks, bonds are not risk-free. The good news is that **ratings agencies** are continuously analyzing corporations and governments to gauge their ability to repay debts. Should you sell a bond to another investor, the **bond value** is determined by the current interest rate, the bond's coupon rate, and the bond's fair market value.

REFERENCES

The Securities Industry and Financial Markets Association (SIFMA). "Bond Markets & Prices." *Investing in Bonds*. www.investinginbonds.com

Video Transcription

[MUSIC PLAYING] My name's Courtney, and I studied abroad a couple of years ago. And before I left, I was worried about having enough cash on hand when I was traveling. And one way that I got a little extra cash was to cash in savings bonds that my grandmother had given me throughout my childhood.

Before I cashed them in, I wanted to know how much they were actually worth. And a really easy way to do that was to just log in on treasurydirect.gov, and you can put in a little bit of information about the paper bonds that you have. And I was able to put in some basic information, just the types of bonds, the date of issue, and the serial number. And it'll tell you how much it's worth today.

So I took the bonds down to my local bank, and they were able to deposit them directly into my checking account. And the funds were available about two days. A lot of people have savings bonds that they get as gifts over the years, and it's a great way to get some extra cash before a big trip or another expense. So don't forget to check treasurydirect.gov, and see how much they're worth. Thanks, grandma.

[MUSIC PLAYING]

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