

Corporate and Municipal Debt Securities

INTRODUCTION

Many different types of entities issue bonds in an effort to raise working capital. Corporations and municipalities, along with the U.S. government and U.S. government agencies, all issue bonds in order to meet their capital needs. A bond represents a loan to the issuer in exchange for its promise to repay the face amount of the bond known as the principal amount at maturity. On most bonds, the investor receives semiannual interest payments during the bond's term. These semiannual interest payments, along with any capital appreciation or depreciation at maturity, represent the investor's return. A bondholder invests primarily for the interest income that will be generated during the bonds term.

CORPORATE BONDS

Corporations will issue bonds in an effort to raise working capital to build and expand their business. Corporate bondholders are not owners of the corporation; they are creditors of the company. Corporate debt financing is known as leverage financing because the company pays interest only on the loan until maturity. Bondholders do not have voting rights as long as the company pays the interest and principal payments in a timely fashion. If the company defaults, the bondholders may be able to use their position as creditors to gain a voice in the company's management. Bondholders will

always be paid before preferred and common stockholders in the event of liquidation. Interest income received by investors on corporate bonds is taxable at all levels, federal, state and local.

TYPES OF BOND ISSUANCE

BEARER BONDS

Bonds that are issued in coupon or bearer form do not record the owner's information with the issuer and the bond certificate does not have the legal owner's name printed on it. As a result, anyone who possesses the bond is entitled to receive the interest payments by clipping the coupons attached to the bond and depositing them in a bank or trust company for payment. Additionally, the bearer is entitled to receive the principal payment at the bond's maturity. Bearer bonds are no longer issued within the United States; however, they are still issued outside the country.

REGISTERED BONDS

Most bonds now are issued in registered form. Bonds that have been issued in registered form have the owner's name recorded on the books of the issuer and the buyer's name will appear on the bond certificate.

PRINCIPAL-ONLY REGISTRATION

Bonds that have been registered as to principal only have the owner's name printed on the bond certificate. The issuer knows who owns the bond and who is entitled to receive the principal payment at maturity. However, the bondholder will still be required to clip the coupons to receive the semiannual interest payments.

FULLY REGISTERED

Bonds that have been issued in fully registered form have the owner's name recorded for both the interest and principal payments. The owner is not required to clip coupons and the issuer will send out the interest payments directly to the holder on a semiannual basis. The issuer will also send the principal payment along with last semiannual interest payment directly to the owner at maturity. Most bonds in the United States are issued in fully registered form.

BOOK ENTRY/JOURNAL ENTRY

Bonds that have been issued in book entry or journal entry form have no physical certificate issued to the holder as evidence of ownership. The bonds are fully registered and the issuer knows who is entitled to receive the semiannual interest payments and the principal payment at maturity. The investor's only evidence of ownership is the trade confirmation, which is generated by the brokerage firm, when the purchase order has been executed.

BOND CERTIFICATE

If a bond certificate is issued, it must include:

- Name of issuer
- Principal amount
- Issuing date
- Maturity date
- Interest payment dates
- Place where interest is payable (paying agent)
- Type of bond
- Interest rate
- Call feature (if any or noncallable)
- Reference to the trust indenture

BOND PRICING

Once issued, corporate bonds trade in the secondary market between investors similar to the way equity securities do. The price of bonds in the secondary market depends on all of the following:

- Rating
- Interest rates
- Term
- Coupon rate
- Type of bond
- Issuer

- Supply and demand
- Other features, i.e., callable, convertible

Corporate bonds are always priced as a percentage of par and par value for all bonds is always \$1,000, unless otherwise stated.

PAR VALUE

Par value of a bond is equal to the amount that the investor has loaned to the issuer. The terms par value, face value, and principal amount are synonymous and are always equal to \$1,000. The principal amount is the amount that will be received by the investor at maturity, regardless of the price the investor paid for the bond. An investor who purchases a bond in the secondary market for \$1,000 is said to have paid par for the bond.

DISCOUNT

In the secondary market, many different factors affect the price of the bond. It is not at all unusual for an investor to purchase a bond at a price that is below the bond's par value. Anytime an investor buys a bond at a price that is below the par value, they are said to be buying the bond at a discount.

PREMIUM

Often market conditions will cause the price of existing bonds to rise and make it attractive for the investors to purchase a bond at a price that is greater than its par value. Anytime an investor buys a bond at a price that exceeds its par value, the investor is said to have paid a premium.

CORPORATE BOND PRICING

All corporate bonds are priced as a percentage of par into fractions of a percent. For example, a quote for a corporate bond reading 95 actually translates into:

$$95\% \times \$1,000 = \$950$$

A quote for a corporate bond of $97\frac{1}{4}$ translates into:

$$97.25\% \times \$1,000 = \$972.50$$

BOND YIELDS

A bond's yield is the investor's return for holding the bond. Many factors affect the yield that an investor will receive from a bond such as:

- Current interest rates
- Term of the bond
- Credit quality of the issuer
- Type of collateral
- Convertible or callable
- Purchase price

An investor who is considering investing in a bond needs to be familiar with the bond's nominal yield, current yield, and yield to maturity.

NOMINAL YIELD

A bond's nominal yield is the interest rate that is printed or "named" on the bond. The nominal yield is always stated as a percentage of par. It is fixed at the time of the bond's issuance and never changes. The nominal yield may also be called the coupon rate. For example, a corporate bond with a coupon rate of 8% will pay the holder \$80.00 per year in interest.

$$8\% \times \$1,000 = \$80. \text{ The nominal yield is } 8\%.$$

CURRENT YIELD

The current yield is a relationship between the annual interest generated by the bond and the bond's current market price. To find any investment's current yield, use the following formula:

$$\text{Annual income/current market price}$$

For example, let's take the same 8% corporate bond used in the previous example on nominal yield and see what its current yield would be if we paid \$1,100 for the bond.

$$\text{Annual income} = 8\% \times \$1,000 = \$80$$

$$\text{Current market price} = 110\% \times \$1,000 = \$1,100$$

$$\text{Current yield} = \$80/\$1,100 = 7.27\%$$

In this example, we have purchased the bond at a premium or a price that is higher than par and we see that the current yield on the bond is lower than the nominal yield.

Let's take a look at the current yield on the same bond if we were to purchase the bond at a discount or a price which is lower than par. Let's see what the current yield for the bond would be if we pay \$900 for the bond.

$$\text{Annual income} = 8\% \times \$1,000 = \$80$$

$$\text{Current market price} = 90\% \times \$1,000 = \$900$$

$$\text{Current yield} = \$80/\$900 = 8.89\%$$

In this example we see that the current yield is higher than the nominal yield. By showing examples calculating the current yield for the same bond purchased at both a premium and a discount, we have demonstrated the inverse relationship between prices and yields. That is to say, prices and yields on income-producing investments move in the opposite direction. As the price of an investment rises, the investment's yield falls. Conversely, as the price of the investment falls, the investment's yield will rise.

YIELD TO MATURITY

A bond's yield to maturity is the investor's total annualized return for investing in the bond. A bond's yield to maturity takes into consideration the annual income received by the investor along with any difference between the price the investor paid for the bond and the par value that will be received at maturity. It also assumes that the investor is reinvesting the semiannual interest payments at the same rate. The yield to maturity is the most important yield for an investor who purchases the bond.

YIELD TO MATURITY: PREMIUM BOND

The yield to maturity for a bond purchased at a premium will be the lowest of all the investor's yields. Although an investor may purchase a bond at a price that exceeds the par value of the bond, the issuer is only obligated to pay the bondholder the par value upon maturity. For example: An investor who purchases a bond at 110 or for \$1,100 will receive only \$1,000 at maturity and, therefore, will lose the difference of \$100. This loss is what causes the yield to maturity to be the lowest of the three yields for an investor who purchases a bond at a premium.

YIELD TO MATURITY: DISCOUNT BOND

The yield to maturity for a bond purchased at a discount will be the highest of all of the investor's yields. In this case, the investor has purchased the bond at a price that is less than the par value of the bond. In this example, even though the investor paid less than the par value for the bond, the issuer is still obligated to pay them the full par value of the bond at maturity or the full \$1,000. For example: An investor who purchases a bond at 90 or for \$900 will still be entitled to receive the full par amount of \$1,000 at maturity, therefore, gaining \$100. This gain is what causes the yield to maturity to be the highest of the three yields for an investor who purchases a bond at a discount.

CALCULATING THE YIELD TO MATURITY

When an investor purchases a bond in the secondary market at a discount, the discount must be accreted over the remaining life of the bond. The accretion of the discount will result in a higher yield to maturity. When an investor purchases a bond in the secondary market at a premium, the premium must be amortized over the remaining life of the bond. The amortization of the premium will result in a lower yield to maturity.

In order to calculate the bonds approximate yield to maturity, use the following formulas:

For a bond purchased at a discount use:

$$\frac{(\text{Annual interest} + \text{annualized discount})}{\frac{(\text{Price paid} + \text{PAR})}{2}}$$

The annualized discount is found by taking the total discount and dividing it by the number of years remaining until maturity. For example, let's assume an investor purchased a 10% bond at \$900 with 10 years until maturity. The bonds approximate yield to maturity would be found as follows:

$$\frac{\$100 + \$10}{\frac{\$900 + \$1,000}{2}}$$

In this case, the bond's approximate yield to maturity is 11.57%.

For a bond purchased at a premium use:

$$\frac{(\text{Annual interest} - \text{annualized premium})}{(\text{Price paid} + \text{PAR})} \times 2$$

The annualized premium is found by taking the total premium and dividing it by the number of years remaining until maturity. For example, let's assume an investor purchased a 10% bond at \$1,100 with 10 years until maturity.

The bond's approximate yield to maturity would be found as follows:

$$\frac{(\$100 - \$10)}{(\$1,100 + \$1,000)} \times 2$$

In this case, the bond's approximate yield to maturity is 8.57%.

CALCULATING THE YIELD TO CALL

In the event that the bond may be called in or redeemed by the issuer under a call feature, an investor may calculate the approximate yield to call by using the approximate number of years left until the bond may be called.

TAKENOTE!

The yield to call will always extend past the yield to maturity. The yield to call will always be the highest yield on a bond purchased at a discount and it will always be the lowest yield for a bond purchased at a premium.

REALIZED COMPOUND YIELD RETURNS

Portfolio managers can determine how changing interest rates will affect a bond's yield to maturity by calculating its realized compound yield. A bond's realized compound yield measures a bond's annual return based on the semi-annual compounding of coupon payments. The bond's realized compound yield will largely depend on the purchase price of the bond and the rate at which the interest payments are reinvested. Investors with longer holding periods will have higher total dollar and percentage returns.