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GUIDE ON BONDS



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October 2024

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What is a Bond?

A bond is essentially a loan from an investor to a borrower—typically a government, municipality, or corporation. In return, they agree to pay the investor interest regularly, and at a set future date, they'll return the initial investment.

Below are some key features of bonds:

- **Issuer:** Bonds are issued by entities like governments, municipalities and corporations.
- **Coupon Payments:** Bonds pay interest to investors. The interest rate, or coupon rate, is usually a percentage of the bond's face value. These are typically paid annually or semi-annually.
- **Maturity Date:** This is when you get your principal (initial investment) back. Bonds can have different lengths, from short-term to long-term.
- **Face Value (Par Value):** This is the amount the bondholder invests when the bond is issued and will receive from the issuer when the bond matures.

Here is a breakdown of the main types of bonds:

- **Government of Canada Bonds:** These include federal, provincial and municipal bonds. Government bonds are referred to as Treasury bonds for longer term and Treasury bills (T-bills) for short-term.
- **Corporate Bonds:** A corporate bond is a debt security issued by a corporation to raise capital. There are many types of corporate bonds depending on the company and the features of the bonds. Some include Investment-Grade Corporate Bonds, High-Yield Bonds, Callable Bonds, Convertible Bonds.
- **Foreign Bonds**: Issued by foreign governments or corporations.

Drivers of Bond Returns

Bond returns are influenced by several factors. Two key factors are term and credit risk.

- **Term (Maturity Length):** Typically, longer-term bonds offer higher returns because your money is locked up for a longer period of time which increases the risk of fluctuating interest rates, inflation, and worsening circumstances of the issuer over time. Investors demand compensation for this uncertainty. For example, a bond that matures in 10 years usually offers a higher interest rate than one maturing in 2 years, to make up for the extended commitment and potential risks of holding the bond for a longer period.
- **Credit Risk:** Credit risk refers to the likelihood that the bond issuer may default on its payments. Issuers with lower credit ratings are considered riskier, meaning there is a higher chance they could miss interest payments or fail to repay the principal at maturity. To attract investors, these issuers must offer higher coupon rates, compensating for the increased risk. For example, a corporate bond issued by a small or financially unstable company will generally pay a higher interest rate than a bond issued by a well-established, financially sound corporation or government.

By considering both the term and credit quality, you can align your bond investments with your risk tolerance and financial goals.

Components of Bond Returns

The investment return earned on bonds are made up of two components:

- **Interest Income**: The primary way bonds generate income is through regular interest (coupon) payments. For fixed-rate bonds, these payments remain consistent over time, providing a predictable income stream. For floating-rate bonds, the interest payments may vary, typically in response to changes in market interest rates.

- **Price Appreciation:** Current bond prices can fluctuate based on market conditions, especially interest rate changes. When interest rates fall, bond prices generally rise, as older bonds offering higher coupon rates become more valuable. Conversely, rising interest rates can push bond prices lower. If you sell a bond before it matures (or if you purchased a bond after it was issued), you may realize a capital gain or loss depending on the prevailing bond price.

Example of a Bond Investment

As discussed earlier, bonds are a type of loan you provide to a corporation or government. For example, imagine you decide to invest $12,000 in a corporate bond when it is issued by the company. This initial investment is known as the par value or face value of the bond. In return for lending your money, the company will pay you an annual interest rate of 3%, split into two payments each year. Therefore, every six months, you will receive $180 as part of the bond's coupon payments. The bond has a maturity of 6 years, meaning that at the end of this period, you will receive the original $12,000 investment back, along with the final interest payment. On the surface, this seems straightforward.

However, investing in bonds is rarely as straightforward in practice. Timing plays a key role. Companies and governments do not issue bonds each time they need a small sum of money like your $12,000. Instead, they issue bonds in large batches, raising significant capital all at once. As a result, when you are ready to invest, you may not be buying a newly issued bond. Instead, you will likely purchase it from another investor who originally bought it when the bond was first offered.

Why Bond Prices Fluctuate

One important rule to remember is that there is **an inverse relationship** between interest rates and bond prices. When interest rates rise, bond prices go down. Conversely, when interest rates fall, bond prices increase. This is referred to as interest rate risk.



Source: US Securities and Exchange Commission

Let's say a company issued a bond five years ago with a 3% interest rate. Five years later, interest rates have decreased, and the same company issues a new bond that will mature at the same time as the original one, but this new bond pays only 1.8%.

If you had the opportunity to purchase the older bond with a 3% coupon, you might prefer it over the newer bond paying 1.8%. However, the bond market adjusts for changes in interest rates. To account for the higher coupon rate on the older bond, its price increases in the market. So, while you would receive higher coupon payments, you would also have to pay more for the bond.

For example, the price of the older bond might now be $108 for every $100 of face value. This means that instead of paying $12,000 for a bond with a face value of $12,000, you would pay $12,960. This type of bond is known as a premium bond, and while you are paying more upfront, the higher interest payments over the bond's life will help compensate for the additional cost.

On the other hand, if interest rates had risen instead, the price of the bond would fall. In this case, a newly issued bond might offer a higher interest rate than the one you are considering. For example, the bond you are looking at may pay 3%, but a new bond in the market offers 4%.

Given the choice, you would likely prefer to invest in the bond with the higher interest rate. To attract buyers, the market adjusts by lowering the price of the 3% bond. Rather than paying $12,000 for a bond that pays a lower interest rate, you might only need to pay $11,400. This would be an example of a discount bond. While you receive lower interest payments over time, you benefit from a capital gain when the bond matures, and you receive the full $12,000 face value.

Whether bonds are sold at a premium or discount, the bond market is designed to balance the differences in interest rates. In most cases, the price of the bond will adjust to offer investors a similar yield to maturity. Therefore, for investors who are not concerned with taxes, such as those investing in RRSPs or TFSAs, there should be little difference between two bonds offering different coupon rates. The bond's price adjusts so that, over the life of the bond, the total return remains consistent across different interest rate environments.

For premium bonds (with higher coupon rates than current rates), you pay more upfront, but the higher interest payments balance this out. For discount bonds (with lower coupon rates), you pay less, but receive lower interest, so the lower purchase price compensates. This means that regardless of interest rate fluctuations, the bond market adjusts prices to offer investors similar total returns over the life of the bond.

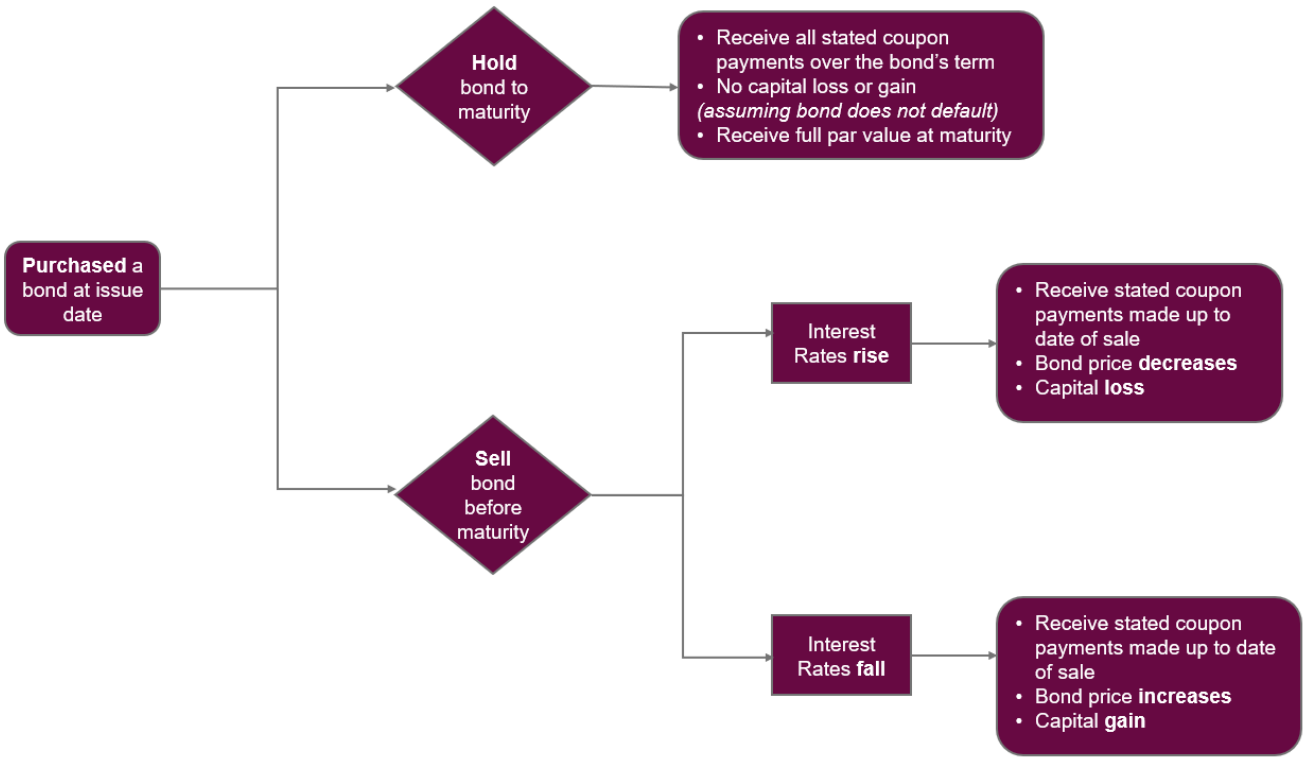
Understanding these dynamics can help you make more informed decisions when adding bonds to your portfolio, ensuring you are not just focused on the interest rate but also on how market conditions impact bond pricing.

How Bonds Might Incur Losses

While bonds normally entail lower risks than stocks, they are not immune to losses. As mentioned before, changes in interest rates lead to changes in bond prices. You will realize capital losses if you sell a bond before its maturity date when its price has fallen. Let's look at two scenarios.

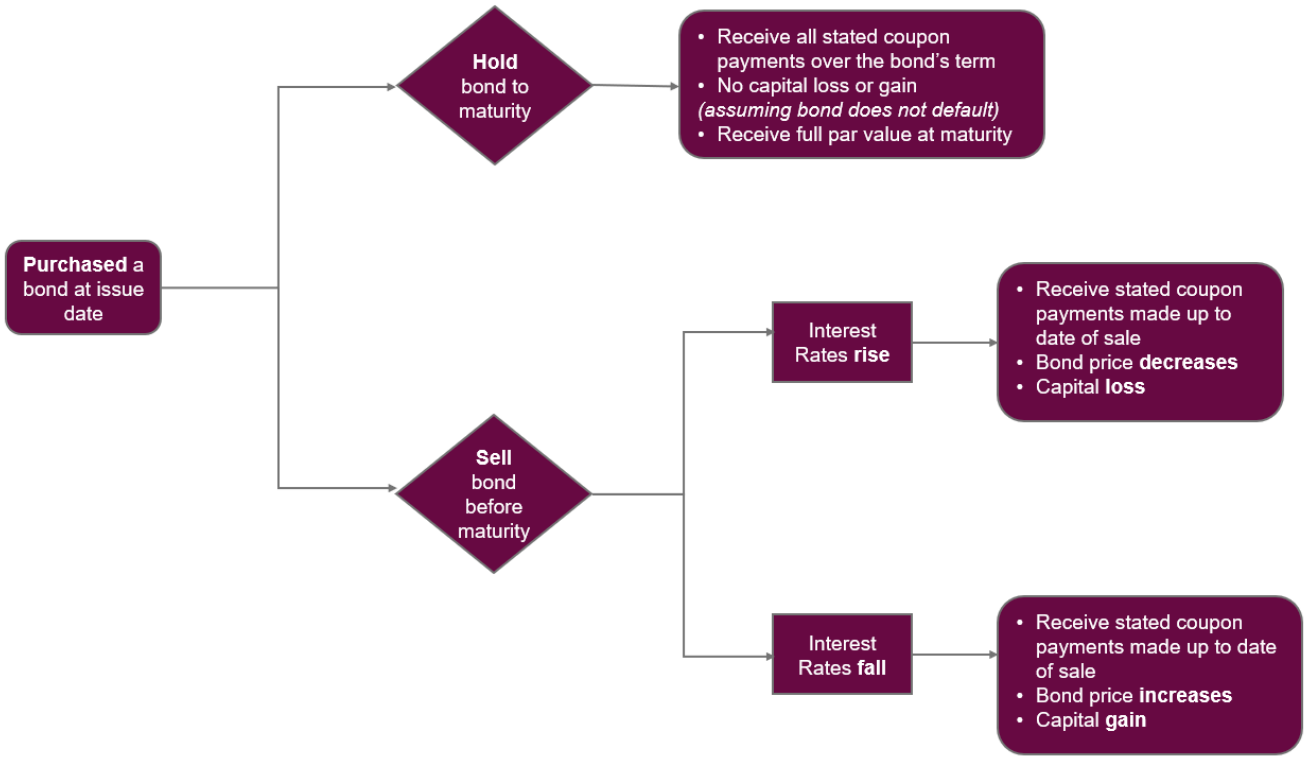
Bond Purchased at Issue Date

Suppose that you purchase a bond at its issue date. If interest rates rise after you purchase a bond, the value of your bond decreases because newer bonds with higher coupon rates become more attractive to investors. If you then decide to sell your bond in this environment, you may have to sell it for less than you paid, resulting in capital loss. However, if you hold the bond to maturity, you will still receive the full face value, regardless of market fluctuations, unless the issuer defaults. The flowchart below provides a summary.



Bond Purchased After Issue Date

Let's assume that you purchase a bond after its issue date and hold it to maturity. If you buy a premium bond (above face value), you receive higher interest payments over time, but at maturity, you incur a capital loss since the face value repaid is lower than your purchase price. Conversely, if you purchase a discount bond (below face value), you receive lower interest payments, but at maturity, you realize a capital gain as the face value repaid exceeds your purchase price. The flowchart below shows the two outcomes.



Other Risks Associated with Bonds

Beyond interest rate risk, bonds are subject to additional risks:

- **Credit Risk -** As touched upon before, this is the risk that the bond issuer is unable to make coupon payments or repay the principal at maturity. High yield bonds are bonds with lower credit ratings (BB, B, CCC, etc.) and carry a higher risk that the issuer may default on its payments. They usually compensate investors for the higher risk with higher coupon rates**.**

  On the other hand, Investment-Grade bonds (rated AAA, AA & BBB) have lower credit risk. While all investment-grade bonds are deemed relatively safe, there is a range within this category. For example, AAA-rated bonds (like government or large, stable corporate bonds) carry the lowest risk and offer lower returns, while BBB-rated bonds carry higher risk and therefore may offer slightly higher returns. However, even within the investment-grade space, the risk of default increases as you move down the rating scale.

- **Inflation risk -** If the bond's interest rate is lower than the inflation rate, the real value of interest payments decreases, reducing the overall real return. In other words, inflation will erode the purchasing power of the bond's interest and principal payments.

- **Liquidity risk -** This occurs when the investor cannot find a buyer when he/she wants to sell the bond, or the bond cannot be sold quickly because the bond is not traded frequently. The investor may therefore have to sell at a lower price than the bond is worth if there was no immediate need to sell. Some bonds are more liquid than others. For example, government bonds tend to be more liquid than municipal bonds.

Why Invest in Bonds?

Now that we know how bonds work and the main risks associated with them, let us explore why people invest in bonds. Bonds offer different risk attributes compared to stocks. They have a different purpose in your portfolio. Some of the main functions of bonds are:

- **Regular income -** Coupon payments offer a predictable income stream to investors. This can be particularly attractive to retirees
- **Capital Preservation -** Bonds that have a higher credit rating are considered to be safe investments. If held till maturity and the issuer does not default, the principal is typically repaid in full, and bonds therefore offer good protection against capital losses.
- **Prioritized in Bankruptcy -** If the issuer goes bankrupt, any leftover value in the company when its assets are liquidated will be paid out to bondholders before equity holders receive anything.
- **Diversification -** Bonds typically move inversely to stocks. In other words, when the stock markets are down, bonds often hold their value or even perform better. Thus, including bonds in a portfolio holding stocks can limit the volatility of a portfolio and allow investors to better withstand periods of market turbulence.

Bond Funds

Bond mutual funds and bond exchange-traded funds (ETFs) are collections of individual bonds pooled together into a single investment vehicle. Rather than buying a single bond, you are purchasing a share in a fund that holds a variety of bonds, managed by professionals. These funds might contain government bonds, corporate bonds, foreign bonds, or a mix. They may also hold a mix of bonds with different maturities and credit quality. ETFs, in particular, allow you to buy and sell shares in the fund throughout the day.

Just like individual bonds, bond funds earn a return through aggregating the interest payments and capital gains of all the individual bonds held within the fund.

Why Use Bond Funds?

- **Diversification:** Instead of holding a few individual bonds, bond funds and ETFs give you exposure to a broad portfolio. This spreads risk, as you're not reliant on the performance of just one issuer or sector. Hence the risks associated with individual bonds, like interest rate risk and credit risk can be reduced.
- **Liquidity & Exchange Trading:** Bond ETFs are traded on stock exchanges, meaning you can buy or sell them throughout the day like a stock. This offers greater liquidity compared to individual bonds, which may be harder to buy or sell without large transaction costs.

- **Professional Management:** Fund managers handle the bond selection, interest rate management, and reinvestment of matured bonds. They have the expertise and technology to carry out extensive research to manage the fund efficiently.

- **More frequent income:** Individual bonds pay semi-annual or annual coupons. Bond funds, on the other hand, normally pay monthly or quarterly dividends. The individual bonds within the fund pay coupons according to their terms and instead of paying out these coupons, bond funds pool the coupon payments and distribute them to shareholders as regular distributions.

How Bond Funds React to Interest Rate Changes

Similar to individual bonds, the value of a bond fund moves inversely to interest rates. When interest rates rise, the value of the bonds in the fund decreases, and vice versa. However, because bond funds are composed of many bonds, you're getting the average effect of rate changes.

Another key difference is that bond funds continuously adjust their portfolios: as old bonds mature, they are replaced with new bonds at the prevailing interest rates. This gradual adjustment helps smooth the impact of rising or falling interest rates over time, giving investors a way to maintain exposure to bonds even in fluctuating rate environments.

Conclusion

Individual bonds and bond funds offer a unique blend of regular income, capital preservation, and portfolio diversification. Understanding the dynamics of bond pricing, interest rate risk, and other factors is essential to making informed investment decisions. By considering both the benefits and the risks, investors can make bonds an effective part of a balanced portfolio.

If you have any questions or would like to chat with us, please contact us at daley@nobelia.com.

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