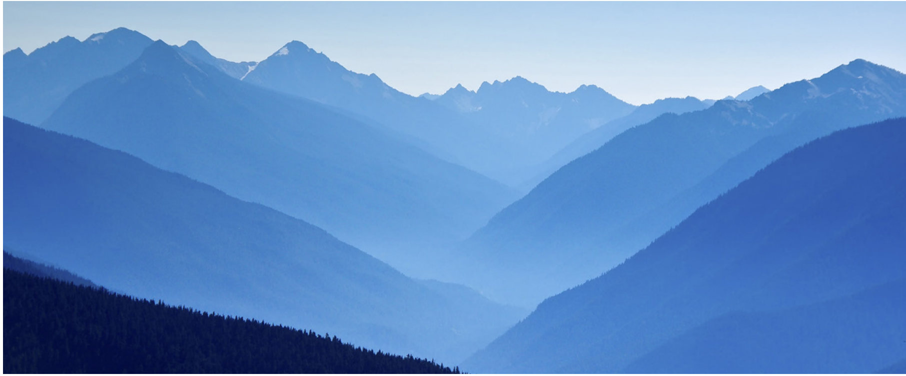

Wealth Management
Dominion Securities

An introduction to fixed-income securities

Fixed-income securities are core investments used in building a balanced portfolio. They offer a wide range of maturities, interest payment terms and credit quality characteristics, and are invaluable for conservative investors seeking stability and income, as well as those with a higher risk tolerance looking for growth opportunities. Here we look at some of the most common fixed-income securities, their key characteristics and how they can help to build income while protecting your portfolio's principal investment.

A balanced portfolio generally includes a combination of cash, equities and bonds to provide appropriate levels of income, safety, flexibility and opportunity.

Fixed-income securities are debt instruments issued by governments, corporations or other entities to finance and expand their operations. The purchase of a bond, Treasury Bill, Guaranteed Investment Certificate (GIC), mortgage, preferred share or any other fixed-income product represents a loan by the investor to the issuer. For investors, the primary concerns when choosing a fixed-income investment are the prospects for repayment, the rate of return and the term of the loan.

Fixed-income terminology

- **Par, discount and premium.** A bond trading at face value is said to be trading at par. All bond prices are quoted on an index with a base of 100. A bond trading below 100 is said to be trading at a discount, while a bond trading above par is trading at a premium.
- **Denomination.** The amount the bondholder will receive upon maturity of the fixed-income security, also known as its face value. The most commonly used denominations are $1,000 and $10,000, with larger amounts being used for institutional investors and smaller ones for individuals.
- **Term to maturity.** The remaining life of a bond is its term to maturity. For instance, if a bond was issued six years ago with a term of 10 years, it is currently referred to as a four-year bond as its term to maturity is four years.
- **Coupon.** The fixed rate of interest paid on the borrowed funds for the life of the bond, relative to its par value.
- **Yield.** The rate of return earned by investing in the bond, assuming the bond is held to maturity. Bond yields constantly adjust to changing market conditions.

Types of fixed-income securities

Bonds and debentures

A bond is secured by physical assets in a trust deed written into the fixed-income contract. If the issuing company defaults on its payments, the trust deed provision allows certain specified assets to be seized by bondholders and sold to recover their investment. A debenture is a fixed-income security that is not secured by any physical claim or lien on specific assets, and is backed only by the general credit of the issuer.

Bond prices move in the opposite direction of interest rates. The price of a bond is determined by the current rate of return – or yield – demanded by investors. In turn, the yield is determined by the general level of interest rates. So when interest rates go up, the market prices on existing bonds paying lower interest go down. As interest rates decline, the price of a bond rises. Other factors specific to a particular issuer or bond, such as liquidity, credit quality or term, also affect the yield.

The credit rating for a bond issuer, such as a government or business, is influenced by the issuer's overall creditworthiness; the higher the risk, the higher the interest payment.

Treasury Bills (T-Bills)

Treasury Bills are the shortest-term marketable debt instruments issued by the Federal government, ideal for clients seeking a short-term investment of 1–12 months. T-Bills, and most other money market instruments, are sold on a discount basis. For example, a T-Bill that is sold on February 25 to mature on August 6 with a yield of 4.73% would be sold at a price of 97.958 to mature at 100. The difference between the payment of 97.958 and the maturity value of 100 is the interest income.

Banker's acceptances (BAs)

Banker's acceptances are short-term promissory notes issued by a corporation, bearing the unconditional guarantee (acceptance) of a major chartered bank. They generally offer superior yields to T-Bills with higher quality and liquidity than most commercial paper issues.

Commercial paper

A commercial paper investment is an unsecured promissory note issued by a corporation or finance company. The credit quality will vary with the issuer. Also available is crown corporate paper, which is issued by federally owned crown corporations and offers yields slightly higher than Canada T-Bills, while providing high credit quality.

Guaranteed Investment Certificates (GICs)

A GIC is a note issued by a trust company with a fixed yield and term. Most GICs are insured by the Canada Deposit Insurance Corporation (CDIC) for interest and principal totaling up to $100,000 per issuer.

Mortgage-backed securities

Mortgage-backed securities combine the features of residential mortgages and Canadian government bonds. Investors receive monthly income consisting of a blend of principal and interest payments from a pool of mortgages. For example, on February 25, an investor could purchase a mortgage-backed security with a coupon of 5.625% maturing on June 1, 2016 at a price of 101.90 per 100 maturity value (5.27% yield). The monthly payments, for an investment of $100,000 would currently consist of $458.66 interest, and $122.40 principal.

Why invest in bonds?

- **Income.** Bonds typically pay semi-annual interest, and are contractually obligated to provide regular and predictable income.
- **Portfolio diversification.** A balanced portfolio generally includes a combination of cash, equities and bonds to provide appropriate levels of income, safety, flexibility and opportunity.
- **Capital appreciation.** Under certain circumstances, namely when interest rates are expected to fall, bonds can provide investors with an opportunity for capital gains.
- **Preservation of capital.** Although the day-to-day value of a bond will fluctuate according to market conditions, bonds ultimately mature at par (100). Therefore, an investor knows the exact amount to be received at maturity. However, if capital is required prior to maturity, interim fluctuations will be an important consideration.
- **Guarantee on full par value.** There is no maximum guarantee limit on bonds similar to the $100,000 limit on GICs. The total amount purchased will be guaranteed by the issuer. This applies to federal, provincial, corporate and municipal bonds.
- **Predictability.** Regular interest payments provide investors with predictability in their portfolios.
- **Liquidity**. If funds are needed before the maturity date, the bond can be sold through an investment dealer. The price received upon sale of the security will, of course, depend on the prevailing level of interest rates.

A credit rating is an opinion on the credit quality of a company or bonds issued by that company.

Strip coupons and residuals

Similar to a long-term T-Bill, these instruments are purchased at a discount and mature at par (100). For example, a Canada strip coupon maturing on March 15, 2003 with a yield of 5.31% would be priced at 77.07 to mature at 100. The difference between purchase price and 100, as with T-Bills, is treated as interest income.

In comparison with bonds, strip coupons eliminate reinvestment risk over the term of the investment by virtue of paying no cash flows until maturity. A second related effect is that the price of a strip coupon will fluctuate more than the price of a bond of similar term. Finally, strip coupons generally offer higher yields than bonds of similar term and credit quality. The combination of these features makes them the number one fixed-income choice for non-taxable accounts such as Registered Retirement Savings Plans (RRSPs).

Savings bonds

Savings bonds issued by the Canadian and various provincial governments typically pay a specified interest rate annually. The amount received for a savings bond will always be its face value if redeemed by the issuer, while the price received in the market for a conventional bond will depend on the level of interest rates at the time of sale. In addition, savings bonds are only eligible for purchase by residents of Canada or of the province of issue, and up to a maximum amount, whereas there are no similar restrictions on conventional bonds.

Pricing fixed-income investments

The price action of fixed income-securities depends upon the following:

- When interest rates rise, bond prices fall and vice versa. Therefore, bond prices and bond yields are inversely related.
- The prices of longer-term bonds are more volatile than those of shorter-term bonds.
- The prices of lower-coupon bonds are more volatile than those of high-coupon bonds.
- Special features account for special price considerations.
- Bond prices depend on the credit rating of the issuer. If a bond rating agency rates one company highly, and another poorly, the better-rated company will be able to issue debt at a lower cost. This means a higher price to investors who are paying for the security of a higher-quality company.

Understanding credit ratings

A credit rating is an opinion, provided by an independent third party like a credit-rating agency, that describes the credit quality of a company or the individual bonds issued by that company. It is a rating on a company's financial ability to pay its periodic interest payments (coupons) and repay investors the face value of the bonds when they mature.

Credit ratings are used by portfolio managers, pension funds and other investors to get a sense of the investments they are considering. It also helps them determine whether a bond would be suitable based on a portfolio's investment parameters. For instance, some portfolios only invest in investment-grade bonds (rated BBB or above), others only invest in AAA securities and some invest across the entire credit spectrum (see table at on next page).

Yield and duration explained

"Yield to maturity" is the return an investor would receive if a bond was held to maturity under certain conditions. If you were to buy a

A sample bond quotation

This quote indicates that a 10% coupon bond (10% interest annually) of XYZ Company that matures on July 1, 2025 could be bought for $99.75 and sold for $99.50 per $100 of par value.

Issue	Coupon	Maturity date	Bid	Ask
XYZ Company	10%	1 July/2025	99.50	99.75

bond today, you would receive a yield that takes into account the bond's current price, its par value (the amount you would receive at maturity), its regular coupon payments and its maturity date. For a bond currently yielding 2.5% and maturing in five years, you can anticipate a return of 2.5% each year until the bond matures, provided that the bond's coupons are reinvested at the same yield. During that time, if you decide to sell the bond before its maturity date, you would receive a price that reflects market conditions at that point in time. If yields have risen to 3.0%, the bond's price would fall to reflect that change.

Duration allows investors to see how sensitive a bond is to changes in interest rates. For instance, if a bond has a seven-year duration, it would either rise or fall in price 7% for every 1% change in rates, assuming that rates across the maturity spectrum rise to the same degree. The further away that bond is from its maturity date, the longer its duration and the greater the price change for any change in rates.

Yield to maturity and duration are fixed-income characteristics that should be considered together to understand the overall profile of a bond portfolio. For example, a bond with a long duration that may seem more sensitive to changes in interest rates will be offset by the yield to maturity of that portfolio in a rising rate environment – the higher the yield, the greater the offset.

Speak to your Investment Advisor to discuss fixed-income investments suitable for your portfolio and your long-term goals.

Credit ratings across rating agencies

Credit ratings can vary among rating agencies, who each use a unique methodology to establish a long-term rating. AAA is considered the highest rating, while D is lowest. A bond with a D rating is considered in default while AAA refers to a bond with the highest possible credit rating.

DBRS	Moody's	S&P	Credit quality
AAA	Aaa	AAA	
AA High	Aa1	AA+	Superior
AA	Aa2	AA	
AA Low	Aa3	AA-	
A High	A1	A+	
A	A2	A	Good
A Low	A3	A-	
BBB High	Baa1	BBB+	
BBB	Baa2	BBB	Adequate
BBB Low	Baa3	BBB-	
BB High	Ba1	BB+	
BB	Ba2	BB	Speculative
BB Low	Ba3	BB-	
B High	B1	B+	
B	B2	B	
B Low	B3	B-	Highly speculative
CCC	Caa1	CCC	
D	Ca	D	

Sources: RBC Dominion Securities, DBRS, Standard & Poor's, Moody's

The strategies, advice and technical content in this publication are provided for the general information only and benefit of our clients. This publication is not intended to provide specific financial, investment, tax, legal, accounting or other advice for you, and should not be relied upon in that regard. Readers should consult their own professional advisor when planning to implement a strategy to ensure that individual circumstances have been considered properly and it is based on the latest available information. RBC Dominion Securities Inc. is a member company of RBC Wealth Management, a business segment of Royal Bank of Canada. * Member–Canadian Investor Protection Fund. ® / ™ Trademark(s) of Royal Bank of Canada. Used under licence. © 2016 RBC Dominion Securities Inc. All rights reserved. 16_90083_031 (05/2016)