Chart of the Month

November 2021

As stated in the opening paragraph in the October Chart of the Month, "our client portfolios are invested exclusively in stocks and bonds. Stocks represent partial ownership (or equity) in a company. They offer the potential for dividend income and capital appreciation. Bonds are a loan to the issuer (governments, municipalities, and corporations) and provide a fixed rate of interest income and an obligation to repay the principal (or face value) at a stated maturity date."

Bonds are commonly referred to as fixed-income securities. When a bond is first issued, it is generally sold at par, which is the face value of the bond. The par value is the principal, which is paid back at the end of the bond's term, also known as its maturity.

Bonds typically pay interest semiannually (or twice per year). The amount of income is determined by the par value and the coupon. For example, a bondholder owning a $50,000 bond with a 5% coupon will earn $1,250 every six months or $2,500 annually. The yield-to-maturity (YTM) is the annualized rate of return based on the future coupon payments plus or minus any appreciation or depreciation if held until maturity. For bonds that are callable by the issuer, the yield-to-the-call (YTC) is the same calculation but to the call date rather than the maturity.

Accrued income is the amount of interest earned on a bond since the last semiannual payment date. When purchasing bonds in the secondary market, the buyer will pay accrued interest to the seller as part of the total purchase price. The buyer will then receive the full interest due for the entire six months on the next scheduled coupon date.

Duration is the time it takes to receive the present value of all future coupon and principal payments. On a zero-coupon bond, the duration equals the maturity because the bondholder receives the entire return on the due date. For bonds with coupons (which encompasses the vast majority of outstanding debt), the duration is shorter than the maturity due to the fact that a bondholder receives part of the return prior to the final due date.

The percentage change in a bond price equals the duration x the change in interest rates. As an illustration, if rates were to *rise* one percentage point, a five-year bond with a duration of, say, 4.5 years would *decline* by approximately 4.5%. Conversely, if rates were to *fall* one percentage point, that same bond would *increase* by 4.5%. In both cases, the bondholder will still earn the yield-to-maturity at the time of purchase and receive the full face value if held to maturity.

S&P and Moody's are the two largest credit rating agencies. They rate bonds based on the creditworthiness of the issuers. From highest to lowest, the S&P ratings are AAA, AA, A, BBB, BB, B, CCC, CC, C, and D. S&P also uses "+" and "-" within each letter grade. Similarly, Moody's range goes from Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2, Baa3, Ba1, Ba2, Ba3, etc. To equate Moody's to S&P, a "1" equals a "+" and a "3" equals a "-". Investment-grade ratings are considered to be BBB-/Baa3 and above. Non-investment-grade are BB+/Ba1 and below.

The United States is rated AA+ by S&P and Aaa by Moody's. S&P reduced its rating from AAA to AA+ in August 2011. The distinction between the two ratings is minimal ("extremely strong capacity to meet financial commitments" versus a "very strong capacity" to do so) and the downgrade did not have a meaningful impact on the market prices or yields of U.S. Treasury debt.

Meanwhile, Johnson & Johnson (JNJ) and Microsoft (MSFT) are both rated AAA, which means that the rating agencies view these corporations as having lower credit risk than the government. JNJ and MSFT have much better debt profiles than the country as a whole, but the U.S. has the advantage of avoiding default through taxation and printing money.

In the event of a bankruptcy and liquidation, bondholders have a higher claim on the assets than the shareholders. Secured creditors are paid back first, then unsecured holders of debt, followed by preferred shareholders and then common stockholders who are paid last and only after all the other creditors have been paid in full.

Lederer & Associates
Investment Counsel
5305 East 2nd Street, Suite 201, Long Beach, California 90803
Tel: (562) 434-5305 ▲ Fax: (562) 434-5306
www.lederer-associates.com