

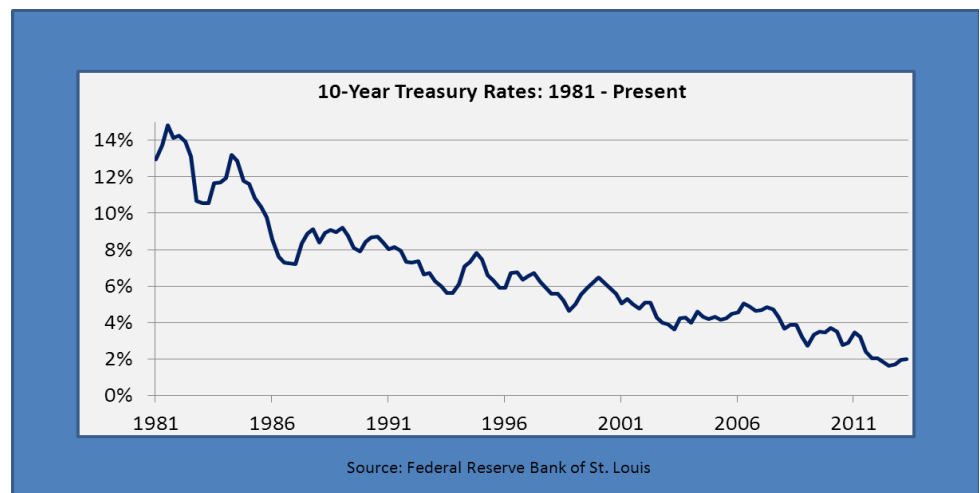
This Quarter's Highlights

- Common Risk Factors
- Bond Prices and Interest Rates
- Dividend-Paying Stocks
- Conclusion

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Be Careful What You Reach For

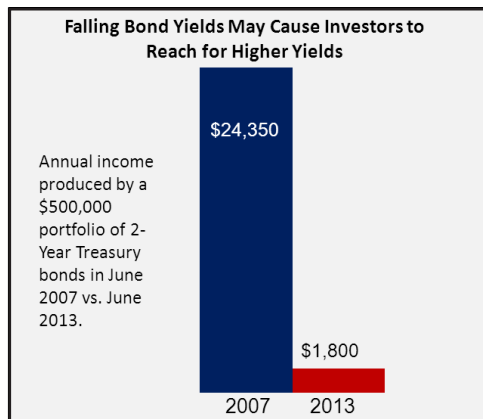
Fixed-income investors have watched interest rates go down ever since the early 1980s, when Fed Chairman Paul Volcker used aggressive monetary policy to tackle inflation. Retirees and savers rely heavily on interest-based securities to support them. As portfolio incomes have declined, many of these investors have felt the need to reach for yield. Chasing higher returns, however, always comes with additional risk. We will examine several risk factors associated with owning bonds and also explore the pros and cons of turning to stock dividends to replace lost yield.



First, a cursory review of bonds and interest rates may be constructive in the current context. Bonds are often quoted by their interest rate rather than their underlying price. Rates are typically based on a formula that uses the *risk-free* U.S. government rate (at a given level of maturity) and adds an extra bit — the “*spread*” — to compensate investors for any additional risk. Maturities ranging from one month to 30 years are used to form the *yield curve*, which offers bond investors a picture of interest rates across all maturity levels. The short-term Federal Funds rate, inflation expectations, and uncertainty around those expectations are the primary factors that impact the level and shape of the yield curve.

A standard interest-bearing bond typically pays the bond holder a fixed amount of interest twice a year up to the maturity date. At that point

the owner of the bond gets the principal back, along with the final interest payment. Since both the interest and maturity payments are known in advance, investors can calculate the rate of return they will receive as long as (a) the issuer does not default; (b) the bond is not “called away” (redeemed early by the lender); and (c) the security is held to maturity. The yield-to-maturity or yield-to-call can be used to figure the expected rates of return. Even though we may be able to calculate a bond’s return at the time of purchase, it is important for bondholders to recognize that the price of a bond will fluctuate between the time of purchase and maturity. These fluctuations will affect current portfolio values and performance.



Source: U.S. Department Of The Treasury

Common Risk Factors

Several common risk factors may affect prices of fixed-income securities. *Credit risk* is the chance the underlying issuer deteriorates financially and is unable to pay the interest and/or principal obligations. A corporate bond that is *not* “investment grade” will have a higher spread above the risk-free rate, compared to another bond that is investment grade. Consequently, the lower-rated bond will be priced with a higher coupon rate. Investors may be willing to go down the quality spectrum to increase yield; however, these securities are generally more sensitive to macroeconomic and company-specific downturns.

Perhaps the most constant threat to bonds is *inflation risk*. Since most coupon-bearing bond payments are fixed, they essentially have no defense against inflation. As the erosion of purchasing power increases, each future dollar of interest is worth less to the investor, and prices must decline to account for this.

Reinvestment risk occurs when interest rates decline and bond owners are forced to reinvest interest payments into lower-yielding securities.

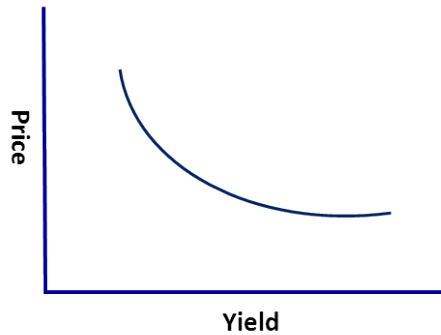
Lastly, bond investors must be aware of *interest rate risk*. This is closely related to inflation risk and refers to the fact that bond prices fall as market rates increase. We expand on this risk in more detail below. Interest rates remain near historically low levels, so a reversal in this multi-decade trend could pose a different threat to which bond investors have become accustomed.

Bond Prices and Interest Rates

Like any financial asset, bonds can be valued as the *present value* of expected future cash flows. Future interest payments, along with the lump-sum maturity payment, are discounted back to the present using some current rate of interest (i.e., the *discount rate*). The discount factor needs to be adjusted up or down as prevailing interest rates fluctuate. This is the “present” in our present-value calculation. If interest rates move higher, the discount rate follows suit. Even though the bond’s cash flows have not changed, a higher discount factor applied to these cash flows implies a lower present value, and the market adjusts the bond’s price accordingly. Put another way, let’s assume Coca Cola issues a five-year bond today at a rate of 2%. Fast forward two years into the future and assume rates have increased and Coca Cola now must issue new bonds at 3%. All other things being equal, most investors are going to favor the new bonds being priced at 3%. The market will need to compensate for the lack of demand on the 2% bonds by lowering the price so that the yield-

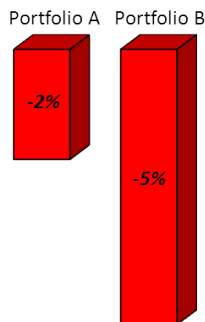
to-maturity is approximately equal to the 3%. For this reason, there is an inverse relationship between bond prices and interest rates.

Inverse Relationship Between Bond Prices and Rates



This inverse relationship serves as the basic premise behind interest rate risk for fixed coupon bonds. We can measure the potential price decline of a bond or bond portfolio by its *duration*, which is mostly a function of its time to maturity. The greater a bond's duration, the more sensitive it will be to interest rate movements. A general rule of thumb is that a bond's price will decrease/increase by a percentage amount equal to its duration, assuming a 1% increase/decrease in interest rates. As an example, suppose an investor held two bond portfolios: Portfolio A with a weighted average duration of two years; and Portfolio B with a duration of five years. If rates increased by 1%, the value of Portfolio A would decline by approximately 2% while Portfolio B would drop by 5%.

Price Decline From a 1% Rise in Rates



To further illustrate the potential for varying degrees of impact of higher rates on bond prices, we can refer to the second half of the 1950s. The 10-year Treasury yield on January 1, 1955, was 2.6%. Exactly five years later, the yield had risen to 4.7%. During this same time period, longer-maturity government bonds had negative annual total returns in four of the five years (Ibbotson). Intermediate Treasuries were also negatively impacted, but to a much lesser degree due to their shorter maturities.

U.S. Government Bond Total Returns: 1955 - 1959

Year	Long-Term Treasuries	Intermediate Treasuries
1955	-1.3%	-0.7%
1956	-5.6%	-0.4%
1957	7.5%	7.8%
1958	-6.1%	-1.3%
1959	-2.3%	-0.4%

Source: Madison Investment Advisors, Ibbotson.

Dividend-Paying Stocks

It is increasingly important to understand the different risks associated with coupon-bearing bonds, as investors look to squeeze the most out of them. Other investors, however, are turning to dividend-paying stocks to increase portfolio income. The idea of favoring securities that should increase income payments if rates move higher due to improving economic fundamentals and/or inflation expectations is appealing to many. Theoretically, the growth of stock dividends will better protect investors from the constant erosion of purchasing power due to price inflation.

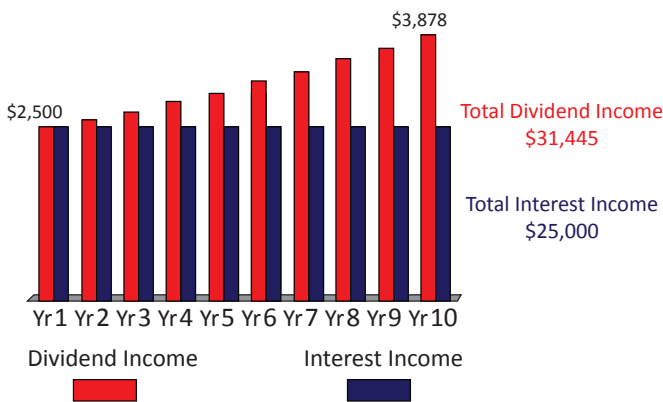
But investors need to remind themselves that stocks and bonds represent two distinct types of assets. High-quality stocks can offer healthy dividend yields relative to their bond counterparts, but stocks always come with a higher risk premium. Since a stock represents an ownership interest in a company's cash flows, shareholders participate directly in the expansion or contraction of the underlying business.

Owners of bonds, on the other hand, are creditors to a company and are owed only interest and principal payments, regardless of corporate performance. Also, bondholders are higher up on a company’s capital structure, meaning they have seniority in the event of a corporate liquidation. Thus, even though stock yields may exceed bond yields during a low-interest-rate environment, there is always going to be a greater risk of loss by investing in stocks.

is ample economic evidence supporting the notion that rates could stay depressed for some time to come. As such, investors who depend on portfolio income are best served by respecting the risk factors associated with multiple outcomes and maintaining a *balanced* approach.

Although certain risks for bonds may appear to be elevated, individuals whose investment objectives call for exposure to fixed income should not abandon bonds altogether. Bonds with low levels of duration risk and reasonable credit risk should still serve as effective shock absorbers for one’s overall portfolio. Evidence suggests the negative relationship between stocks and bonds remains strongly intact. During periods of stock market stress, investors seek the safer confines of fixed assets. The diversifying benefits of bonds help portfolios cushion the downside moves in equity values and, more important, allow more risk-averse investors to adhere to their long-term disciplines.

**Stock Dividends Offer Income Growth Potential:
\$100,000 Invested Over 10 Years**



The above illustration is based on a hypothetical 10 Year Treasury yield of 2.5%, a hypothetical dividend yield of 2.5% and an annual dividend growth rate of 5%. This chart is for illustrative purposes only and should not be interpreted as advice.

Conclusion

Persistently low interest rates have caused many fixed-income investors to look for alternative ways to increase yield. Chasing yield through maturity extension, going down the credit spectrum, or turning to stock dividends comes with added risk. Although current and past trends give us little indication of the future direction of interest rates, it is difficult to argue with the fact that rates have more room to move higher than they do lower. Furthermore, accommodative monetary policy by its very nature is inflationary and *could* lead to a new secular up-trend in rates. On the flip side, the Fed’s actions indicate they are more concerned with deflation in the short term, and there

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