WELLS FARGO ADVISORS

Fixed Income Strategy

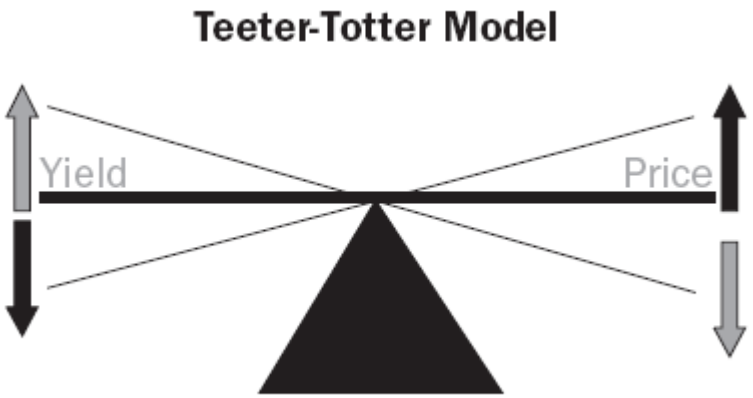
Advisory Services Group (ASG) Fixed Income Strategy

Understanding the Relationship of Bond Yields and Prices

While bonds as an asset class have been less volatile than stocks historically, the potential for price movement of a specific bond can be significant. In fact, interest rates are a key factor in determining the prices of bonds with bond prices falling when rates rise and prices increasing when rates fall.

Just why do bond prices and yields move in opposite directions? The answer is easier to understand than it may seem. When bonds are issued, they generally pay a fixed rate of interest. Yields, however, are constantly changing based on a variety of economic influences. In order to compare bonds issued in various rate environments, yields for bonds of comparable credit quality and remaining time to maturity are similar. So, if you sell the bond before it matures, the value of the bond will be affected by current market interest rates.

As an example, you purchase a 10-year, $1,000 bond with a coupon rate of 5%. This bond will pay you $50 a year and you will receive $1,000 at maturity. Now suppose yields rise to 6% over the next year. Issuers are now selling new bonds with 6% coupon rates (which pay $60 a year), so your 5% bond ($50 in annual coupon payments) is not the current market rate. The bond market discounts its price to less than $1,000 to make it as comparable as newer bonds being issued. The opposite is true when rates fall. If you bought a 7% bond and market rates fell to 6%, your 7% bond would look more attractive in that 6% environment and would trade at a premium price. The yield/price teeter-totter is a simple way to visualize the relationship between yield and price.

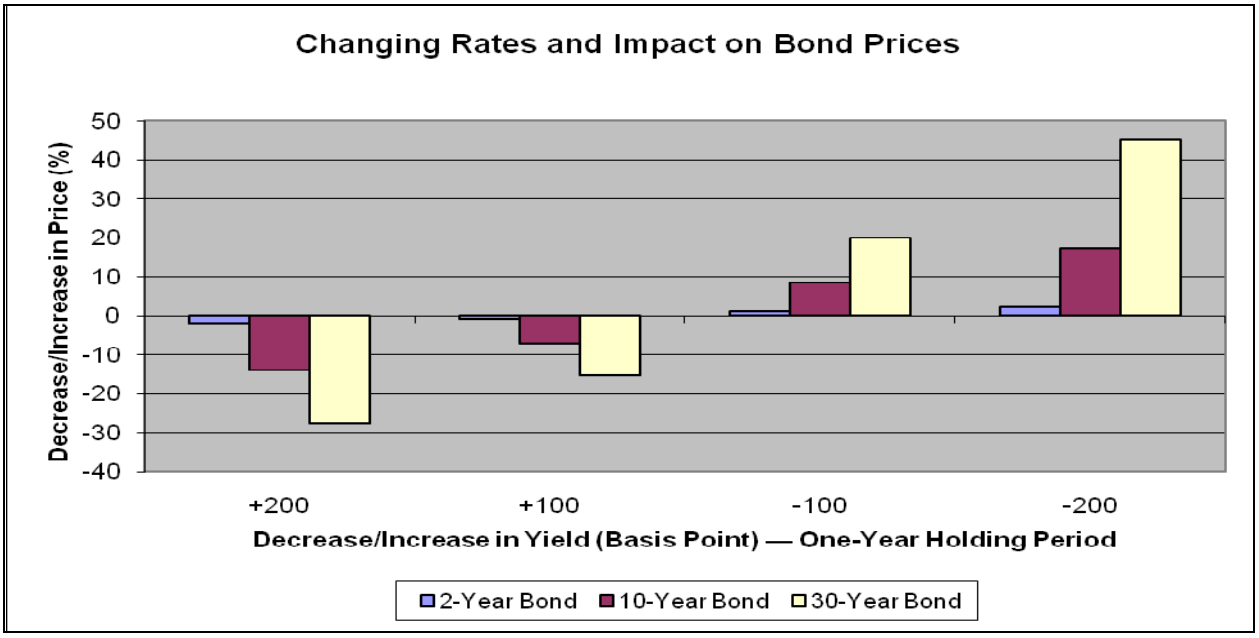


Of course, not all bonds are affected equally by changes in rates. The longer your bond's maturity, the more its price will fall when long-term rates rise and rise when they fall. When rates are climbing, bond investors usually prefer to recover their money quickly so they can reinvest at higher rates. Bonds that mature in the next few years tend to trade near par (face value) since they're closer to maturity, when the issuer is expected to pay par.

Coupon also plays a critical role. Consider the case of an investor who plows all of his or her money into long term zero coupon bonds when yields are at all-time lows. That investor will have to wait for as long as 30 years to receive any money to reinvest. By contrast, bonds that pay periodic interest payments at least give the investor some cash to reinvest at higher rates. If the bond pays a high coupon rate, so much the better. When rates rise, premium bonds – which offer bigger coupon rates – tend to perform better than bonds priced at par or at a discount.

The chart below titled "Changing Rates and Impact on Bond Prices" illustrates the effect of a 100- and 200-basis-point increase and decrease in interest rates on various maturities. A yield increase of 100 basis points –that is, 1% – in the next year could cause the value of a hypothetical 30-year bond to drop approximately 15.4%, while the 10-year bond's price would fall about 7.1%, and the two-year bond's price would drop approximately 1%.

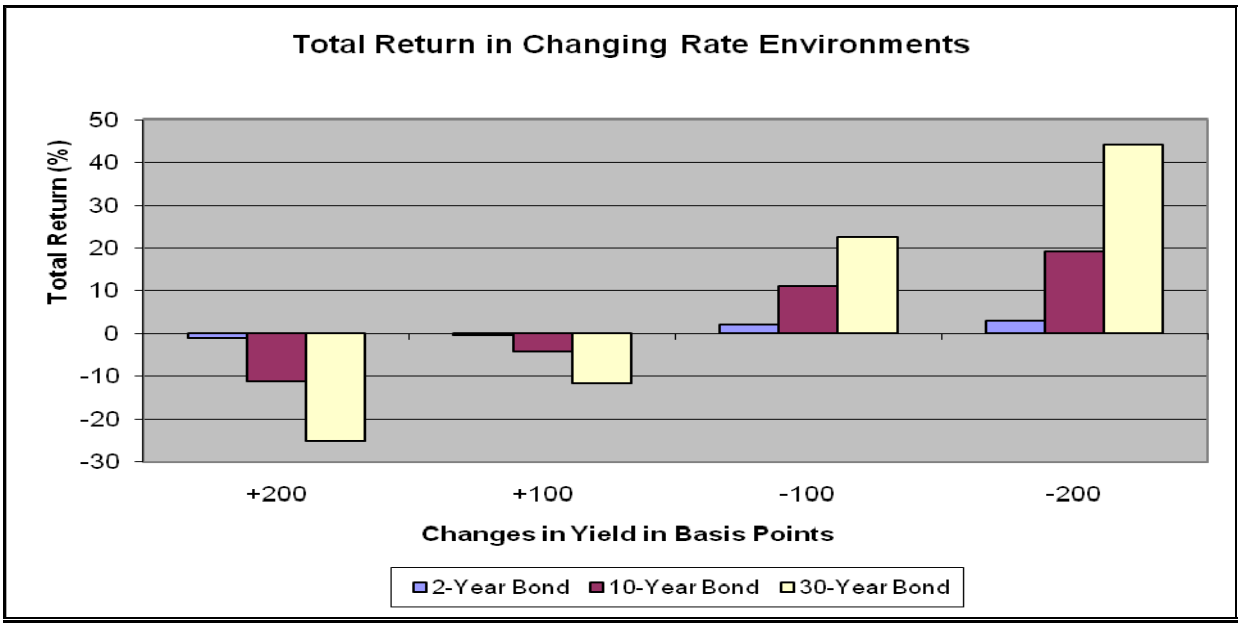
On the other hand, if yields fell by 100 basis points in the next year, the value of a hypothetical 30-year bond would increase 19.9%, while the 10-year bond's price would increase by 8.4%, and the two-year bond's price would increase about 1%.



Note: Illustration reflects U.S. Treasury securities as of April 30, 2009. Assumes one-year holding period. Assumes a parallel yield curve shift. A parallel shift in the yield curve occurs when the interest rate on all maturities increases or decreases by the same number of basis points. For example, if the 10-year Treasury Bill increases 200 basis points [2%] then the two- and 30-year will increase by the same 200 basis points. Past performance is no guarantee of future results. This example is for illustrative purposes only.
Source: Bloomberg

The price change does not tell the whole story, of course. Since most bonds also pay coupon income, to get a bond's total return, you should take its coupon payments into account, just as you would tally a stock's price and dividend when calculating its total return. Coupon payments soften the blow of falling prices. The higher the coupon, the greater the cushion against higher yields. For example, the chart on the next page titled "Total Return in Changing Rate Environments" illustrates that if rates increase by 100 basis points, the total return of a 10-year U.S. Treasury note over a one-year time period would be -4.3%, even though its price drops by 7.1%. One basis point is equivalent to 0.01% (1/100th of a percent) or 0.0001 in decimal form.

However, it is also important to explain the opposite — if prices increase and rates decrease by 100 basis points, the total return of a 10-year U.S. Treasury note over a one-year time period is 10.9%, even though its price increased 8.4%. If you already own the bond, you've locked in your interest rate, so you hope the price of the bond goes up. This way, you can cash out by selling your bond in the future.



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Source: Bloomberg

Important Information and Disclaimers

Past performance is no guarantee of future results.

One basis point is equivalent to 0.01% (1/100th of a percent) or 0.0001 in decimal form.
Bond prices fluctuate inversely to changes in interest-rates. Therefore, a general rise in interest rates can result in the decline of the value of your investment.
Yields and market value will fluctuate, so that your investment, if sold prior to maturity, may be worth more of less than its original cost.
Investments that are concentrated in a specific sector or industry may be subject to a higher degree of market risk than investments that are more diversified, however, diversification does not guarantee a profit or protect against loss.

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