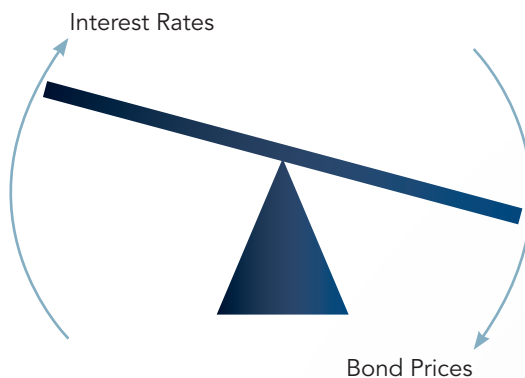




## The Impact of Market Interest Rate Movement on Municipal Bond Prices and Yields

Interest rate risk is one of the most fundamental factors to consider when investing in the fixed income market. Predicting interest rate movements is generally challenging. While interest rate movements present both opportunities and risks, understanding of the associated risks of interest rate movements may help in making a sound investment decision.

The risk associated with the movement of interest rates and that movement's impact on the price and yield of a bond is referred to as interest rate risk. The price and yield of a bond typically have an inverse relationship. In other words, as the price of a bond goes down, the yield, or income return on the investment, goes up, and vice versa. Thus, when interest rates rise, a bond's price or market value usually declines because an investor can earn a higher yield with another bond. Conversely, when interest rates fall, the bond's price usually rises.



In general, the longer the maturity of a bond, the greater the interest rate risk. If a bond is sold prior to its maturity in any interest rate environment, whether rates are high or low, the bond's price will likely be affected by the prevailing interest rates at the time of the sale. When interest rates

rise, investors attempting to sell a fixed rate bond may not receive the full par value. When interest rates fall, the same investors may receive more than the par value in a secondary market sale.

### CHANGE IN MARKET INTEREST RATES AND IMPACT ON BOND VALUE

	TODAY	IN TWO YEARS Interest Rates Increase by 1%	IN TWO YEARS Interest Rates Decrease by 1%
Market Interest Rate	3%	4%	2%
Coupon Rate	3%	3%	3%
Face Value	\$1,000	\$1,000	\$1,000
Maturity	10 Years	8 Years	8 Years
Yield to Maturity	3%	4%	2%
Price	\$1,000	\$932.67	\$1,073.25

In the case of a rise in interest rates, all else being equal, a new bond issue with similar characteristics coming to market would generally pay a higher coupon rate causing the price of an existing bond issue with lower coupon rate payments to decrease. As illustrated in the example above, an interest rate increase of one percent after

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two years from purchasing a new bond issued at par would cause that bond's price to decrease to \$932.67.

The decrease in the overall market value of the bond given an increase in interest rates is only relevant if an investor decides to sell the investment before it matures. If the bond is held until maturity, the investor will still receive the initial par amount invested, assuming the issuer does not default on its debt obligations. To determine whether to hold a bond to maturity, an investor should consider that, when the market value of a bond decreases, the periodic coupon payments for that bond will be below market value for similar bonds.

The effect of rising market interest rates may vary on bonds of different maturities. Long-term bonds likely will fall in market value more than short-term bonds. Only owning longer-term bonds could result in a larger decline in market value when compared to owning both short- and long-term bonds. This may not be a concern for the investor that intends to hold the

bonds until they mature. Also, purchasing bonds with varying maturities may mitigate potential negative impacts of a rise in market interest rates.

The inverse is also true. An overall decrease in market interest rates likely would make an investment in a new bond issue with similar characteristics less desirable since the current coupon payments of existing bond issue would be higher. The example above illustrates the scenario of an interest decrease of one percent, causing the price of the existing bond issue to increase to \$1,073.25.

An informed investor should consider the risks of market interest rate movements when purchasing or selling municipal bonds. Consult with your financial advisor and/or tax advisor to better understand all the implications of a changing market environment and its impact on your portfolio.



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