



## Market Analysis, Research & Education

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# Perspective on the Potential Downside for Bonds

*History shows weaker returns—not disaster—in rising rate climate*

By Dirk Hofschire, CFA

A recent MARE article (see *Bonds: Lower Yields, Lower Expectations*) explored the yield history of U.S. investment-grade bonds, concluding that with today's interest rates well below historical averages, the outlook for fixed-income returns may be more challenging than what investors have grown accustomed to over the past 30 years—even if interest rates do not rise going forward.<sup>1</sup> Without making any predictions of the future direction of interest rates, this article will use historical data to put into context the impact that a prolonged, dramatic increase in interest rates might have on bond returns. [Editor's note: *Intermediate-term Treasury bonds were used to illustrate historical bond performance because they offered little or no credit risk, thus providing a primary focus on the impact of interest rate movements.*]

### Bad year in a long-term bull market: 1994-95

Many investors with some history under their belts remember 1994-95 as the most abrupt rise in interest

rates they have experienced. The Federal Reserve surprised the market with a series of rate hikes in 1994, and the 12-month period ending in October 1994 was the worst year ever for high-quality bonds, with total returns for intermediate-term Treasuries falling 5.6%. However, the 1994-'95 rising-rate episode occurred during the middle of a three-decade decline in interest rates, whereby intermediate-term Treasury yields fell from more than 16% to less than 3% today. As a result, the pain was short-lived, and investors with longer time horizons who stuck with bonds were rewarded with above-average returns during the subsequent years.

### The mother of all bear markets: 1941-1981

A much longer-lasting and more harmful period for bond investors was the 40-year term from 1941 to 1981. During that stretch, interest rates on intermediate-term Treasury bonds rose from just 0.5% to more than 16%, providing a sustained headwind for bond prices. Not surprisingly, bond returns suffered, with the average annual return for Treasury bonds just 3.3% from 1941 to 1981—well below the 5.3% average since 1926.

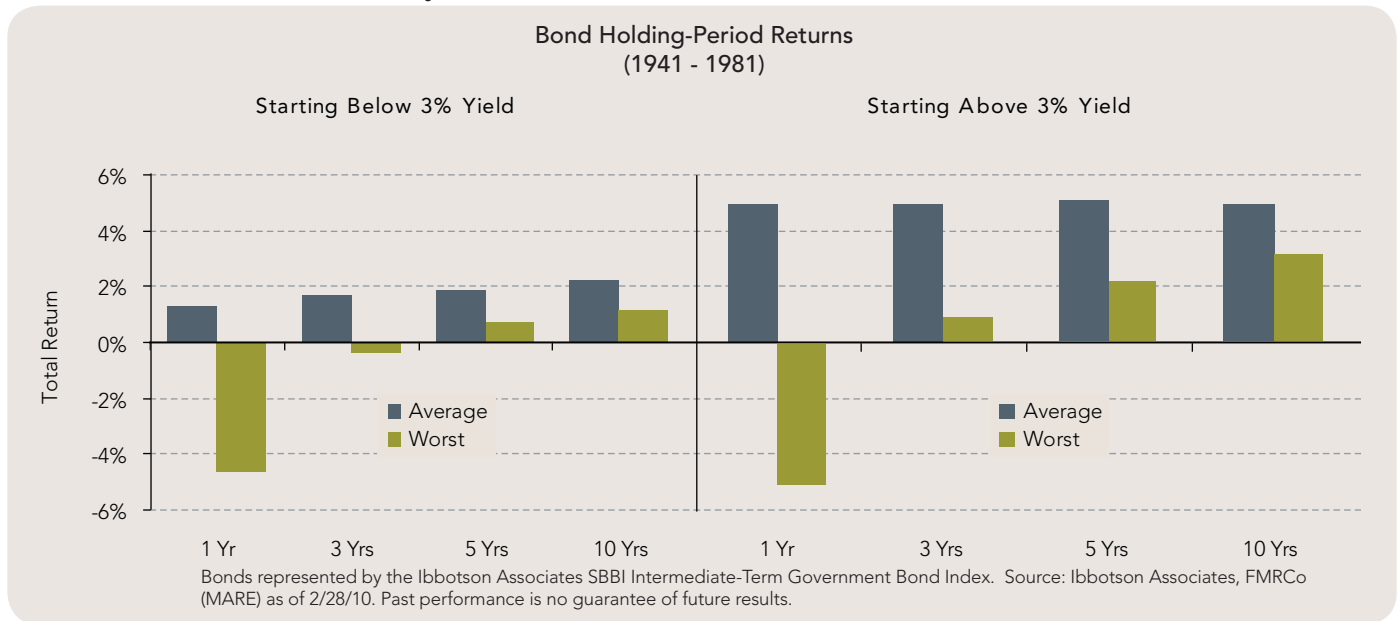
The real damage, however, occurred to investors during the earlier part of this four-decade-long bear market for bonds, when rates started rising from historically low yields. When a bondholder's investing time horizon began at a low yield below 3%, the average annualized returns for the holding period ranged from only 1.3% to 2.2% for the subsequent 1-, 3-, 5- and 10-year holding periods—far below the historical average (see Exhibit 1, page 2). Because today's intermediate-term Treasury bond yields are low (below 3%), a prolonged period of dramatically higher interest rates also would likely result in

## KEY TAKEAWAYS

- The four-decade bear market in bonds from 1941-1981 provides some perspective on how bond returns can be negatively influenced by a dramatic, sustained rise in interest rates.
- An analysis of this 40-year period shows that when very low absolute bond yields were followed by rising interest rates, investors experienced well-below-average returns.
- However, even during that unprecedented period of rising rates, the frequency and magnitude of negative returns was far lower than that for stocks, suggesting an allocation to bonds still reduced the volatility of an investment portfolio.

## EXHIBIT 1:

The starting level of a bond's yield has been an important determinant of future returns. When bond yields began a period of rising rates at an initial low level of less than 3%, investors experienced a below-average historical return over various time horizons. Investor fared better when initial bond yields were above 3%.



below-average historical returns for bonds in the near-to-medium term. In contrast, when the investing time horizon historically started at an initial yield above 3%, the average returns for most holding periods (1-, 3-, 5- and 10-year terms) were roughly 5%—not much below the category's long-term average.

### Low absolute yield offers little shield

This historical data reinforces a simple fact: The starting yield at the beginning of the investment horizon makes a critical difference to subsequent bond performance. The reason is that the income gains from higher yields provide more protection to

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offset price losses when interest rates rise. As rates rose steadily from 1941-1981, the average yield for the period climbed and eventually produced average annual income gains of 4.4% despite beginning at a yield of less than 1%. This income provided bonds

with positive nominal returns, even during this prolonged period of dramatic increases in interest rates.

### Bond losses still relatively mild, rare

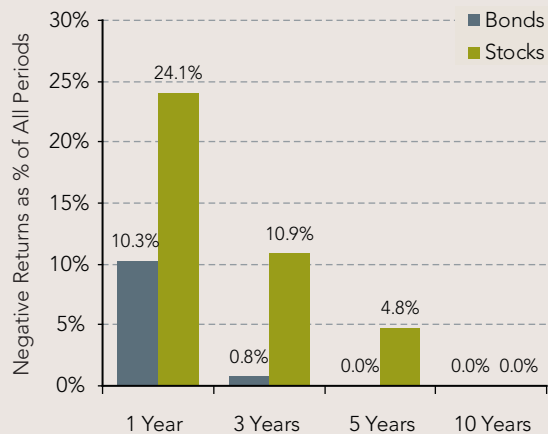
Despite the meager absolute returns to bond investors during 1941-1981, it is important to put into context the possible impact that a potential sustained rise in interest rates may have on bond returns. While a rising rate environment was indeed a headwind for high-quality bonds, it did not change their basic attribute of being a steadier and less volatile asset class than stocks.

### Frequency of losses

For example, during this difficult bond-investing period from 1941-1981, the probability of making a one-year investment in Treasury bonds and suffering a negative total return was only about 10%—a one-in-ten chance that an investor with a one-year time horizon would have actually lost money (see Exhibit 2, page 3). In contrast, during the same period stocks suffered one-year declines nearly one-fourth (24.1%) of the time. For longer-term time horizons, the odds of losing money in Treasury bonds declined dramatically. Fewer than 1% of the three-year holding periods during the 1941-1981 bond bear market resulted in outright losses for bond investors, while there were no 5- or 10-year periods when investors would have lost money. Meanwhile, stock investors

**EXHIBIT 2:** Even in an extended period of sustained and dramatic rises in interest rates (1941-1981), losing money in Treasury bonds was much less likely than in stocks, with that probability falling to near zero for longer time horizons.

**Percent of Holding Periods with Negative Returns (1941 - 1981)**



Bonds represented by the Ibbotson Associates SBBI Intermediate-Term Government Bond Index and stocks represented by the S&P 500 Index. Source: Ibbotson Associates, FMRCo (MARE) as of 2/28/10. Past performance is no guarantee of future results.

suffered declines on a three-year basis roughly 10% of the time, and nearly 5% of the time experienced declines over five-year time horizons. As a result, even during a period of sustained and dramatic rises in interest rates, losing money in Treasury bonds was much less likely than in stocks, with that probability falling to near zero for longer time horizons.

**Magnitude of losses**

Similarly, the magnitude of bond losses, even during the 1941-1981 period of dramatically rising interest rates, was much lower for bonds than for stocks. The worst one-year holding period for Treasury bonds during the 40-year bond bear market resulted in a loss of 5.1%, compared to the worst year for stocks that resulted in a decline of 38.9% (see Exhibit 3, right). Bonds barely lost money (-0.4%) during the worst three-year investing period from 1941-1981, while stocks lost 10.6% per year during their worst three-year results. Bonds posted positive returns during their worst five-year holding period, while stocks suffered near-10%-per-year annualized losses. While bond performance was definitely sub-par during 1941-1981, the probability and magnitude of losses was still much lower than stocks, meaning bonds were much less volatile assets than stocks even during this period of dramatically rising interest rates.

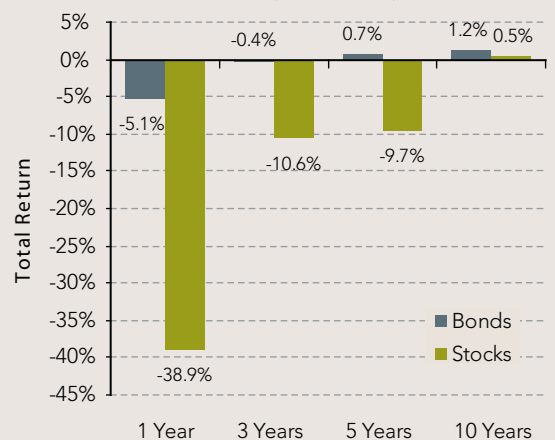
**Investment implications**

Investors have reason to worry about future prospects for bond returns—history shows that current low yields may be expected to result in below-average performance, especially if interest rates rise. Investors particularly concerned about the possibility of rising rates may want to diversify their fixed-income portfolios into less interest-rate sensitive sectors (see MARE article, *Bond Investing: Managing Interest Rate & Other Risks*). However, the great bond bear market of 1941-1981 also offers some more comforting lessons as well. High-quality bonds are much less volatile instruments than stocks, and they do not lose that attribute during periods of rising rates. Even during a prolonged period of rate increases, owning bonds lowered the volatility and improved the risk-adjusted returns of an overall investment portfolio. As a result, investors may not look with much excitement at the near-term outlook for bond returns, but that doesn't mean they should over-react by shunning bonds altogether. ■

**EXHIBIT 3:**

Although Treasury bonds underperformed their long-term average return during a period of sustained interest rate increases (1941-1981), the magnitude of losses during the worst periods was significantly lower than stocks.

**Worst Holding Periods (1941 - 1981)**



Bonds represented by the Ibbotson Associates SBBI Intermediate-Term Government Bond Index and stocks represented by the S&P 500 Index. Source: Ibbotson Associates, FMRCo (MARE) as of 2/28/10. Past performance is no guarantee of future results.

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Investment decisions should be based on an individual's own goals, time horizon, and tolerance for risk. Investing includes risk, including the risk of loss.

In general the bond market is volatile and bonds entail interest rate risk (as interest rates rise bond prices usually fall and vice versa). This effect is usually pronounced for longer-term securities. Bonds also entail the risk of issuer default, issuer credit risk and inflation risk. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

**Past performance is no guarantee of future results.**

[i] All bond references in this article are represented by the Ibbotson Associates (IA) SBBI Intermediate-Term Government Index. One-bond portfolios are used to construct the intermediate-term bond index. The bond chosen each year is the shortest non-callable bond with a maturity between five and six years, and it is held for the calendar year. U.S. government-issued Treasury bonds were chosen because they experienced no defaults and were generally presumed to offer little credit risk, which provides a focused illustration of the impact of interest rate movements. The IA SBBI IT Government Index was chosen because it has a longer history and is very similar in maturity to the Barclays Capital® U.S. Treasury Index, which represents a broad mix of Treasury bonds of various maturities of one year or greater. Source: Ibbotson Associates, FMRCo (MARE) as of 12/31/09.

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