SEGAL ADVISORS

Research Note

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Whither Bond Yields?

Bond yields are disappearing. This is a concern for investors because yield provides the majority of the long-term total return for a fixed-income investment.[1] At approximately 2 percent, the yield on the 10-Year U.S. Treasury Note is at the lowest level on record since an accord between the Federal Reserve Bank and the U.S. Treasury removed the cap on government bond interest rates in 1951.[2] Moreover, the yield on most high-quality bonds is now below the current rate of inflation. Negative real interest rates (the yield on bonds net of inflation) means the interest income is not sufficient to offset the erosion of purchasing power from inflation. It is tantamount to sacrificing a portion of principal at redemption in return for safety.[3] Investors need to consider the portfolio implications, given the Federal Reserve monetary policy, which includes an intent to maintain short-term rates near zero until the middle of 2013.[4]

This *Research Note* addresses means to measure the potential for loss in the fixed-income segment of an investment portfolio. It also discusses potential portfolio adjustments.

Outlook for Bond Returns

The graph charts the beginning yield and 10-year forward return for the Barclays Aggregate Bond Index. The Barclays Index is a widely followed benchmark for core fixed-income in vestments (*i.e.*, highly liquid diversified investment-grade bonds). It includes government bonds, corporate bonds and structured fixed-income securities, such as mortgage-backed securities. For most portfolios, core fixed-income investments constitute the stable income-producing asset class. The graph shows that the 10-year forward return is closely aligned with the beginning yield. The correlation among the figures is 0.89.[5] Therefore, the Barclays Aggregate Bond Index current yield of 2.3 percent is also a good estimate for 10-year expected return for a core fixed-income portfolio. Intuitively, this makes sense, as yield is generally the majority of return for a bond.

[1] Yield is the interest rate paid on a bond. It represents the coupon, or dividend, divided by the price of the bond. Because the coupon rate is fixed, a change in yield causes a change in price.

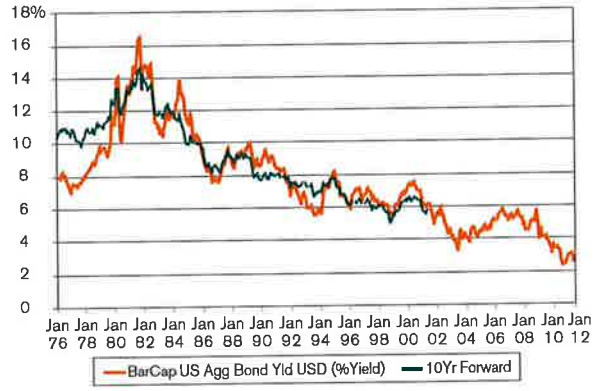
[2] For a discussion of historical interest rates, see the "alphaville" section of the *Financial Times* website (http://ftalphaville.ft.com/blog/2011/08/18/657036/treasuries-lehman-fied/) and the following report from the Federal Reserve Bank of Richmond: http://www.richmondfed.org/publications/research/special_reports/treasury_fed_accord/background/

[3] For more information on negative real interest rates, see the text box, "Negative Real Interest Rates: Shifting Debt Burden from Borrower to Lender," on page 3 of Segal Advisors' July 2011 *Segal Advisory*: http://www.segaladvisors.com/publications/july11segaladvisory.pdf

[4] This was announced in the August 9 statement of the Federal Reserve's Federal Open Market Committee: http://www.federalreserve.gov/newsevents/press/monetary/20110809a.htm

[5] That is a high correlation because a correlation of 1.0 between two numbers means that they move in perfect tandem.

Barclays Aggregate Bond Index: Beginning Yield and 10-Year Forward Return



Notes: January 1976 is the start date for this index. The line in the graph for 10-year forward return ends at June 2001 because that was the most recent starting point for calculating a 10-year annualized return for rolling 10-year periods ending June 2011.

Source: Barclays (data on monthly yield) and Segal Advisors (calculations for annualized 10-year return based on monthly return data from Ibbotson Associates).

Interest-Rate Risk or Credit Risk

There are two primary means to add yield in a fixed-income portfolio: take on higher credit risk, or take on higher interest-rate risk. Bonds with higher credit risk have a higher chance of loss through default, or failure to repay the debt. At the extreme end of the credit spectrum, a bond with a speculative credit rating has a higher risk of default than does a U.S. Treasury bond, and therefore pays a materially higher yield to the investor.

Interest-rate risk on a bond is referred to as duration. Duration measures the percentage change in price for a 1 percentage-point (*i.e.*, 100-basis-point) change in interest rates. Table 1 shows an example of how the total investment return for a bond matching the Barclays Aggregate Bond

Table 1: An Example of the One-Year Total Investment Return for a Bond

What is the total investment return for a bond yielding 2.3 percent and interest rate sensitivity (duration) of 5?

	Interest Income	Change in Price	Total Return*
Yield Unchanged	2.3%	0.0%	2.3%
Yield Falls to 1.3%	2.3%	5.0%	7.3%
Yield Rises to 3.3%	2.3%	–5.0%	–2.7%
Yield Rises to 4.3%	2.3%	–10.0%	–7.7%

* Total return equals interest income plus the change in price.

Source: Segal Advisors