The Term Premium: Past and Present

January 29, 2013

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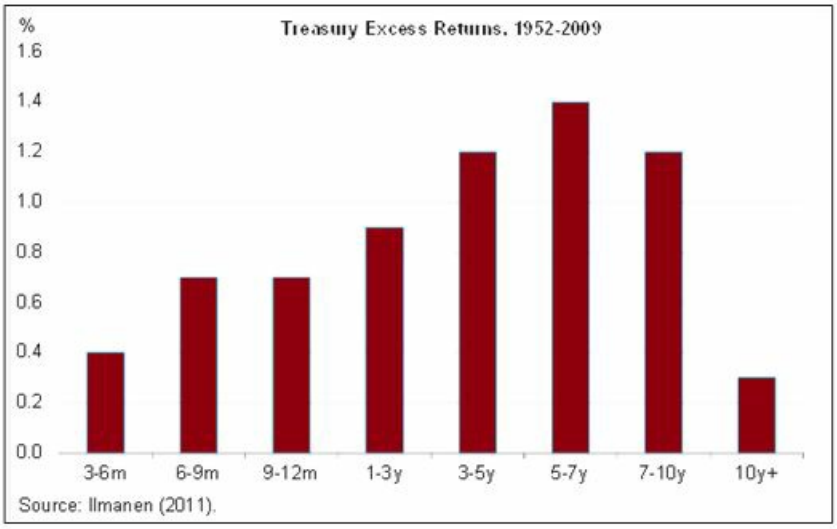
Of the many possible explanations for the historically low level of government bond yields, near-zero central bank policy rates should be at the top of the list. However, government bond yields also appear low for reasons beyond central bank policy rates. In particular, today's low rate environment also reflects a depressed "term premium," or the compensation investors receive for taking duration risk.

The term premium is closely related to the more familiar concept of the equity risk premium. Equities are a relatively risky asset class, with high volatility and a high correlation with the business cycle, i.e., they tend to perform poorly in recessions. Historically, investors have been rewarded for this additional risk in equities. The excess return of U.S. stocks over Treasury bills—a measure of the ex post equity risk premium—was around 5% over the last 100 years. The equity risk premium was similarly large for other developed market economies.



Unlike the equity risk premium, however, economic theory is ambiguous as to whether the term premium should be positive or negative. Although longer-term bonds are more volatile for any given change in yields, this does not necessarily mean they are less desirable for investors. Modern asset pricing theory tells us that we should care about both a security's volatility as well as its correlation with other assets classes and the state of the economy. A security that outperforms during economic downturns can provide diversification benefits and might carry a negative "premium" in the market.

At times long-term government bonds have this insurance-like aspect—they pay off when other asset values are declining. In 2008, investment grade corporate bonds lost 4.9%, emerging market debt 14.8%, and high-yield corporates 26.2%. In contrast, the Barclays U.S. Treasury Index gained 13.7%. This negative correlation is useful in a portfolio, and that will affect the market value of the term premium. Because theory offers no clear answers, the appropriate level of the bond risk premium is ultimately an empirical question. We measure the term premium in two ways: (1) using historical excess return data, which gives an "after the fact" estimate of the term premium; and (2) with surveys, which can provide forward-looking estimates.

Calculating historical excess returns is straightforward, but estimates often vary because of different sample periods and the specific securities considered. Ilmanen (2011), for example, reports Treasury excess returns over bills of 0.3% to 1.4% from 1952-2009, with the highest excess returns at the 5- to 7-year point on the yield curve (see chart on previous page). For a generic "long-term" security (e.g. with 10 years or slightly more remaining maturity), these results suggest a bond risk premium of around 1% or a bit less. *Dimson, Marsh and Staunton (2002) find similar results across a large group of countries. For the United States, the authors report an ex-post bond risk premium of 0.7% for 1900-2000. This is slightly above the mean for all countries in their sample of 0.5%. The results range from as high as 2.4% (for France) to as low

as -1.7% (for Germany), but most estimates fall between zero and 1%.

For forward-looking estimates of the term premium, we rely on survey-based data (there are many other options but this is our preferred approach). In brief, and without getting into the technical details, we use surveys to project short-term interest rates into the future. We can then infer how much the level of longer-term rates reflects short-rate expectations and how much is due to term premium. The figure below shows our forward-looking measure of the 10-year term premium for the U.S. Positive values indicate a higher term premium and more compensation for the additional duration risk in 10-year Treasuries compared to bills. We build similar measures for all of the largest G10 economies. Across these countries from 1998 through 2007 (i.e. the low inflation era but before the latest recession), the term premium averaged 0.7%. The U.S. term premium was generally higher than this in the early 1990s, likely reflecting higher inflation expectations and inflation uncertain. The term premium was relatively low during the 2005-2007 “conundrum” period, and has been negative since Q4 2011.

Both approaches to measuring the term premium yield roughly the same result: over long periods of time it has averaged about 0.5%-0.7%, which we think can be used as a rough estimate of its equilibrium. By our calculations, the U.S. term premium today is -0.2%, or 0.7%-0.9% below equilibrium. In other words, the bond market is currently offering relatively little compensation for duration risk compared to history. When and how this might unwind is one of the main puzzles facing investors today.

Disclosure