Editor's Corner:

Inflation-Indexed Bonds: The Optimal Discount Rate?

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On Thursday, May 16, 1996, the *Wall Street Journal* broke a story on "Treasury Plans to Sell Inflation-Indexed Bonds" (page C1), followed by a flurry of stories in the WSJ and other publications.[1] The WSJ story went on to indicate that the specific price index to be used, the range of maturity dates, and type of bond payments have not been determined. The story cited Federal Reserve Board Chairman Alan Greenspan, as a public advocate of these bonds, saying that "a timely and accurate reading on inflation expectations could aid considerably in economic forecasting." It also quoted Alan Blinder, former Fed Vice Chairman, as saying that such bonds "would make monetary policy a lot easier" because they would be a precise indicator for inflation. Thus, the motive for the Treasury Department's intended issuance of these bonds in the future has to do with accurate measurement of inflation for purposes of public policy. In the process, however, the Treasury may be providing a financial instrument that forensic economists may regard as very appealing for purposes of discount rate assessment.

An inflation indexed bond is a bond whose payments are not fixed in nominal terms, but instead the payments will be defined in real purchasing power. If tied to the Consumer Price Index, for example, payments would be defined in terms of specific values of the CPI so that the interest on the bonds would be free of inflation risk.[2] Both the Courts in the United States and forensic economists have agreed that a discount rate for loss assessment in litigation should be free of default risk, but have argued over whether inflation risk should be reduced to zero. Advocates of zero inflation risk have generally advocated use of the three month Treasury Bill rate, while other economists have argued that portfolios of mixed term securities, such as Treasury Notes and Bonds are appropriate, even though such portfolios contain some degree of inflation risk. Depending on the types of bonds issued, inflation-indexed bonds issued by the Treasury department could allow for the construction of mixed term bond portfolios that were devoid of both default and

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[1] May 17, 1996: "Treasury Takes a Bet on Inflation Bonds" (A2), and "Will Investors Buy 'Inflation-Indexed' Bonds?" (C1) in the *Wall Street Journal*; "U.S. Plans Bonds That Give Savers Inflation Guard" (A1), and "The Bonds: Some Issues Not Settled by the Treasury" (C1) in the *New York Times*; "Feds have indexed bonds in the works" (B1) and "How inflation-adjusted T-bonds would work" in *USA Today*; and, "Should You Buy Uncle Sam's Spiffy New Bonds?," *Newsweek*, June 3, 1996, p. 55.

[2] Technically, this statement depends on an assumption that prices in the particular market basket of goods and services purchased by a tort award recipient are reasonably approximated by prices in the market basket being measured by the price index used for the inflation-adjusted bonds. If prices for the specific goods and services purchased by the tort award recipient increased faster than other goods in the CPI, for example, the award recipient could still suffer a purchasing power loss if the yearly payments were indexed to the CPI

inflation risk. If so, arguments for using rates on either three month Treasury Bills or mixed term portfolios on non-inflation-indexed bonds rate would be weakened, though arguments could still be made by advocates of mixed term portfolios for use of existing instruments because of other types of risk considerations.[3]

One key question will be how much different the yield would be on long term inflation-indexed bonds from three month Treasury Bills. Financial theory would predict a differential that stems from the variance in the real interest rate over time. Portfolios of three month Treasury Bills, being renegotiated every three months, maintain their cash redeemable value throughout the period of projected loss. Portfolios of mixed term inflation-indexed bonds would have a current value determined by the size of the real interest rate. As a result, the current capital value of the portfolio would be free to fluctuate and would fluctuate over the loss period. For that reason, holders of inflation-indexed bonds would have to be compensated with a premium for accepting greater capital value variance over the loss period than would be the case with a portfolio of three month treasury bills. From the standpoint of a loss projection, both portfolios could guarantee projected payments in real purchasing power. The difference is only that the sale value of the inflation-indexed bond portfolio would vary more during the loss period.

What has yet to be determined is the *size* of the difference between longer term inflation-indexed bonds and the three month Treasury Bill rate. On that issue, time will have to tell, but this issue is something every forensic economist will need to be prepared to discuss as this development begins to take place.

[3] One of the arguments put forth by some, but not all, advocates of discount rates derived from mixed term portfolios is that the stream of future payments being discounted was not completely safe in terms of either risk of loss or inflation risk. This would suggest utilizing a portfolio approach that had degrees of inflation risk that was comparable to the inflation risk associated with the future stream of payments being replaced. If so, reducing inflation risk to zero would reduce the inflation risk comparability between the lost stream of payments and the payments generated by the loss replacement mixed-term portfolio of bonds