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5 Percent for 30 Years?

Investor expectations of future price inflation are the major determinant of long-term interest rates. It should be clear from the extreme swings in interest rates and price inflation during recent decades that investor expectations can be wrong.

As of this writing, the price of the U.S. Treasury 5 1/2 percent bond that was issued last August and is due in August 2028, was 108, or $80 more per $1,000 than its holders will receive 30 years from now. Amortization of this premium over the remaining life of the issue provides a yield to maturity of 4.98 percent. This month (October), the interest rate on long-term obligations of the U.S. Treasury decreased to less than 5 percent for the first time since 1967.

The current rate is the lowest on a 30-year bond since the Treasury resumed issuing debt securities of that maturity in 1977. Although 5 percent may seem extraordinarily low in the light of recent experience, it remains above the level of 4 percent or less that prevailed when the U.S. dollar was redeemable for a fixed amount of gold, and investors could expect long-term stability of the purchasing power of the dollar.

Historical Experience

Chart 1 shows three series for the yield on long-term Treasuries since 1925. The most recent series (1977 to date) is the yield to maturity at market prices on the most recently issued 30-year bond (nowadays, the Treasury sells two or three such issues annually).

For many years prior to 1977 the Treasury did not issue 30-year bonds, and the series plotted for those years was for the yield on the longest maturity issues outstanding at the time. We have plotted the Board of Governors series for the years 1925-72, and in the intervening years we have plotted a similar series, from the Federal Reserve Bank of St. Louis, that excluded so-called "flower bonds" — issues that could be tendered at par to the IRS in payment of estate taxes, which tended to trade at levels providing lower yields than comparable issues without that feature.

It may be noted that these three series are not strictly comparable. Flower bonds were issued well before 1972 (when the St. Louis Fed's series begins). More significantly, for much of the 1950s, 60s, and 70s, the Treasury did not borrow for longer than 10 years. This was largely due to the influence of Wright Patman, a populist Congressman from Texas who served from 1929 through 1976, who adamantly opposed long-term borrowing at interest rates in excess of 4 percent or so. As a result, the long-term yield series was often based on the market prices of relatively few issues with maturities of well under 30 years.

In addition, from the onset of World War II until the Fed-Treasury "accord" of 1951, the Federal Reserve was committed to support the market for Treasury issues, with direct intervention if necessary, to help finance Federal deficit spending. This kept bond yields artificially low.

The Long Bond Bear Market and the Bull

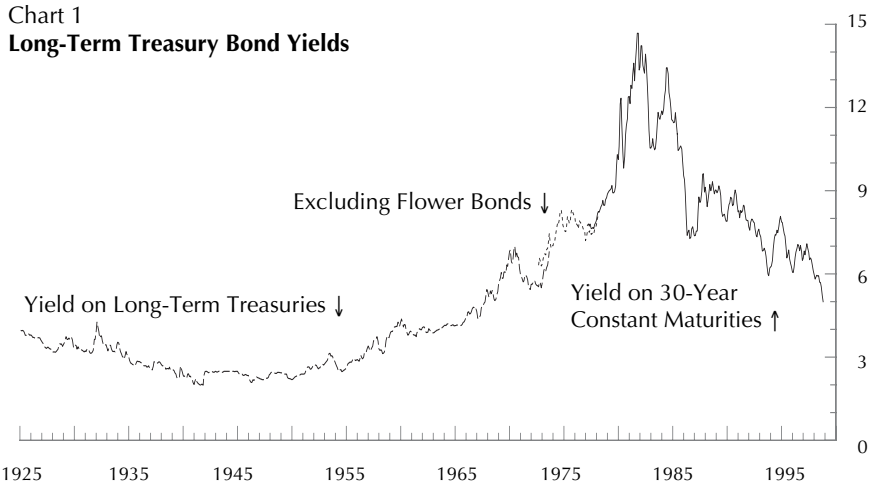
As it happened, the Fed-Treasury "accord" marked the beginning of a three-decade long "bear market" in bonds. From less than 3 percent in 1951, long-term Treasury bond yields rose irregularly. The usual explanation for this was that investors, who had long believed that the dollar was "as good as gold," became increasingly disillusioned and more willing to believe that politicians and monetary officials were intent on driving the dollar toward worthlessness.

As is evidenced by interest rates on 30-year Treasury bonds, this process accelerated after 1971, when the dollar lost its last link to gold. By 1981, confidence in the future of the dollar had reached a low ebb. In November of that year, the treasury auctioned 30-year bonds with a 14 percent coupon, and had to accept bids below par, to provide a yield to maturity of more than 14 percent.

Treasury bonds are generally deemed to be "risk free" in the sense that there is no risk of default, inasmuch as the Treasury can always print dollars to pay interest and principal. Given a presumed long-term risk free interest rate of 4 percent or less, the November 1981 auction suggests that investors then expected "double digit" price inflation (price increases in excess of 10 percent per year) to continue unabated during the period 1981-2011.

In retrospect, this is quite astonishing—price inflation abated after 1981 and it has averaged only about 3.5 percent per year through 1998. But it is no more astonishing than bond buyers' willingness to purchase bonds yielding less than 4 per-

Chart 1
Long-Term Treasury Bond Yields



Source: *Board of Governers, FRB St. Louis*. Data are monthly through 10/16/98.

cent in 1960. By that time, after the run on the London gold pool and President Eisenhower's executive order prohibiting U.S. citizens from owning gold abroad (to name just two contemporary developments), it was evident that the determination of our politicians and central bankers to continue inflating was boundless. Prior to 1968 or so, investors in long-term Treasuries lost more in purchasing power than they received in interest. If the investor was taxed on nominal interest income, only those who bought after 1979 or so have received any real return.

But it has been the bull market in bonds of the 1980s and 1990s that has perhaps been the most surprising of all. Bond holders have been pleasantly surprised, as lower rates have caused their holdings to trade higher and higher (the 14s of 2018 were recently quoted at over 160!), as price inflation abated far below apparent expectations.

Rep. Patman did not live long enough to see the full folly of not "locking in" rates of 5 or 6 percent. The chagrin of Treasury officials who sold 30-year issues (typically not callable until shortly before maturity) at rates in excess of 10 percent, is unreported. Both practices meant that the Treasury has paid more in interest than it would have if Patman's limit had been higher and been retained after his death. This is, however, only one of innumerable instances in which government officials have not acted wisely.

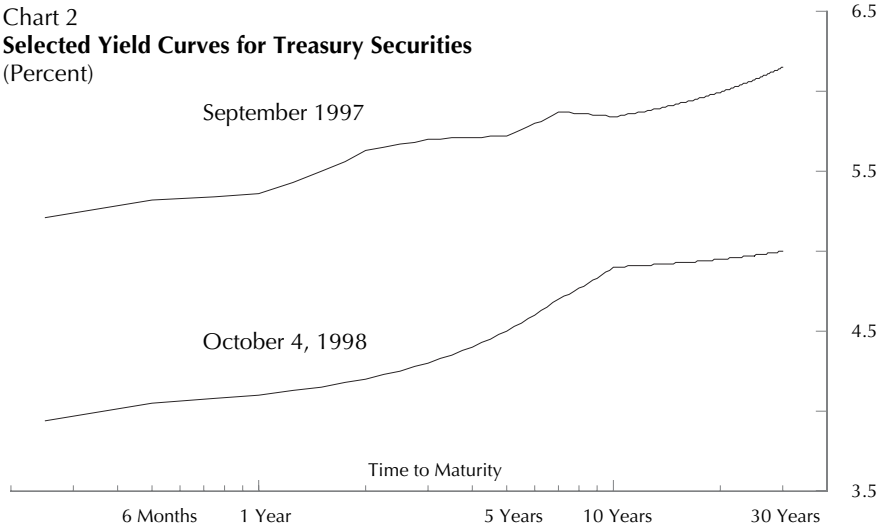
Speculation

Although the markets for obligations of the U.S. Treasury are arguably among the largest and most liquid in the world, it is easy to exaggerate their importance. Only about $500 billion of the $3.5 trillion or so of the marketable Treasury obligations held outside the Federal Reserve carry maturities of more than 10 years. Trading in the longest maturities is especially heavy—based on recent turnover, it has been estimated that the average holding period for, say, the 5 1/2s of 2028, is about *two weeks.* In other words, the dominant players in this market are not long-term investors assessing the likelihood of receiving a positive real rate of return for many years in the future, but rather traders attempting to anticipate what their peers will do in the very near future.

It has been reported that hedge fund managers and other heavy-duty speculators have "fled to quality" in the wake of the recent market debacles around the globe. Compared to other currencies, the dollar has become regarded as a "safe haven."

Those who have been late to come to this particular fad, or who had attempted to "arbitrage" U.S. long rates against a long position in other securities, may now be subject to something resembling a "short squeeze" on their long bond positions. If this is the situation, long rates might even decrease further.

Chart 2
Selected Yield Curves for Treasury Securities
(Percent)



Source: *Treasury Department, Wall Street Journal.*

Speculative fluctuations aside, long-term interest rates *do* reflect investor expectations. Sometimes the long rate is said to be determined by the expected average of short term rates plus a premium for uncertainty, but short-term rates seldom lag behind the rate of price inflation for any extended period. Thus, it is clear that investor expectations of future price inflation are the major determinant of long-term interest rates. It should be equally clear from the extreme swings in interest rates and price inflation during recent decades that investor expectations can be wrong.

In any event, the decrease of long-term Treasury bond rates, which has persisted for many years and, recently, has occurred all across the maturity spectrum (see Chart 2), does suggest that investors now expect price inflation to remain at low levels for a considerable time. A prolonged era of low or non-existent price inflation (some analysts believe that rates of plus or minus 2 percent per year are within the error range of measurements of the consumer price level), could be the background for a prolonged period of prosperity.

It would also be unprecedented for a purely fiat currency.

For price inflation to remain low, future officials will have to be as capable, or lucky, as Alan Greenspan. They also will have to cope with an increasingly ill-defined dollar (as payment mechanisms and instantly spendable balances proliferate) as well as possible "shocks" that will renew the clamor to inflate. ❑

BUSINESS-CYCLE CONDITIONS

The concern raised last month by the indeterminacy of the trends of nine leading indicators was somewhat relieved this month as the moving averages of seven of those series increased. Although the two interest-rate cuts since the last business-cycle update may strengthen some leading series in the near term, the outlook remains subject to rapid change.

Two of the twelve primary leading indicators attained new highs this month: *M2 money supply* and the *ratio of manufacturing and trade sales to inventories* (M2 money supply and all other dollar-denominated series are reported in constant dollars). M2 money supply has increased since 1995 at an average annual rate of 5.4 percent. The growth rate in the manufacturing and trade sales to inventories ratio has slowed over recent years, but still remains positive. Both are appraised as clearly expanding.

The 1.6 percent increase in *new housing permits* was deemed sufficient to warrant upgrading that series, which was indeterminate last month, to probably expanding. The sixth straight month of increases in the *3-month percent change in consumer debt* warranted upgrading its appraisal as well. It, too, is now probably expanding. There are no new data this month for *initial claims for state unemployment insurance* (inverted), which