

A Farewell To Bonds

Now that 30-year Treasury bonds are about to go the way of the dodo – the reference here being to the extinct bird and not the traders – the Chicago Board of Trade's futures contract on Treasury bonds will have some serious trouble. We in the futures industry should pause and reflect on the bond contract's long and successful history and examine whether shorter maturity contracts such as the ten-year note will pick up the slack for traders.

First, let us now praise Richard Sandor, the father of the bond contract. Sandor designed the conversion factor mechanism for transforming all eligible bonds to the pricing basis of first an 8%, and then starting with the March 2000 contract, a 6% bond. This allowed a single futures contract to function as a price discovery mechanism during periods of great interest rate volatility in the 1970s and 1980's. The contract's complex pricing and delivery mechanisms were hardly a deterrent to fixed income traders, and Treasury bond futures quickly became the CBOT's flagship contract.

Second, let's not bury the long bond too deeply. Longer-dated Treasuries have come and gone from the American scene before, and nothing is to say the government will not return to budget deficits in the future. No one knows how deep or prolonged the current economic slowdown will be as it is arriving in the New Economy. We understand layoffs in automobiles and construction far better than we do in personal computers and telecommunications. The political consensus for tax cuts surely will turn into a bidding war, and this, combined with various spending increases, is likely to lead us back to deficit spending before we know what hit us. You heard it here first.

We may miss the long bond while it's gone for a number of reasons. One is the most basic for traders, and that is bond price volatility increases with duration, which is mostly a function of maturity. Minor changes in inflationary expectations can and do produce significant changes in bond futures at a lower cost and greater leverage than available elsewhere. A second reason is the need for a capital market line for the many corporate bonds, agency securities, and swaps whose duration is greater than ten years. A third is the perceived greater correlation between long bond rates and equities; stocks, after all, have unbounded duration equivalent to the life expectancy of the corporation.

Since the Treasury does not owe bond traders a high-leverage plaything, nor does it have an obligation to provide a capital market line, we cannot quantify how much the market will miss the long bond along these dimensions. We can, however, measure how well interest rates of various maturities serve as indicators for other financial markets, particularly equities and the trade value of the dollar.

We should expect interest rates and equity prices to be negatively correlated on both a long-term and a daily return basis. A correlation matrix for past eight years, nearly 2,100 trading days, confirms this relationship. The interest rate measures used are yield indices.

Correlation Matrix: February 1993 - February 2001

	S&P 500	NASDAQ	Dollar Index	Five year	Ten year	Thirty year
S&P 500	1.000					
NASDAQ	0.976	1.000				
Dollar Index	0.760	0.768	1.000			
Five year	-0.190	-0.101	-0.224	1.000		
Ten year	-0.479	-0.387	-0.404	0.939	1.000	
Thirty year	-0.709	-0.640	-0.572	0.779	0.942	1.000

The only surprise here for many is the negative relationship between interest rates and the trade-weighted dollar index, but even this is readily explicable. Much of U.S. trade is with countries whose currencies are

pegged to the dollar, such as Taiwan and South Korea, to countries whose interest rates tend to mirror those of the U.S., such as Canada, or to Japan, whose interest rate policy has been, ahem, unique. Had we used U.S. interest rates against the Deutsche mark or British pound, the outcome would have been different.

If we recompile the data into a correlation matrix of daily returns – far more in tune with the life of a trader – we see a critical change in the NASDAQ column.

Correlation Matrix of Daily Returns: February 1993 - February 2001

	S&P 500	NASDAQ	Dollar Index	Five year	Ten year	Thirty year
S&P 500	1.000					
NASDAQ	0.800	1.000				
Dollar Index	0.162	0.138	1.000			
Five year	-0.071	0.060	0.007	1.000		
Ten year	-0.102	0.032	-0.024	0.964	1.000	
Thirty year	-0.142	-0.013	-0.076	0.879	0.938	1.000

Over the past eight years, the daily returns on the NASDAQ have been correlated slightly positively with five- and ten-year interest rates, and only slightly negatively with thirty-year rates. Once again, this may not be as counterintuitive as it may appear. The NASDAQ boom over most of this period occurred in spite of higher interest rates; profit growth rates, quite simply, were high enough to offset any interest rate changes.

This leads us to conclude with a simple policy commentary on the Fed's present drive to lower interest rates. Much of our recent economic growth was linked to the technology sector, with the NASDAQ both as the source of funds and as a barometer of future prospects. The daily correlation with interest rates of all capital market maturities has been close to zero over the past eight years. Why should we now expect a strongly negative relationship between the NASDAQ and interest rates to emerge now?

The trading implication of the slower growth / lower interest rate environment favors being long Old Economy and value shares at the expense of New Economy and growth shares. It also favors owning the long end of the Treasury curve, but that's a trade we're increasingly going to have to construct for ourselves in the derivatives markets. Nothing bad ever happens there, right?