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No-Load Mutual Fund Selections & Timing Newsletter

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## **SECULAR BULL and BEAR MARKETS in Bonds (Interest Rates)**

April, 2013

### **Introduction**

Bonds are debt instruments. They are one of three asset classes (stocks/equities, bonds, and cash), to which I will comment later. Bonds may also be known as fixed-income securities, IOUs, or loans. They are used in a variety of ways to fund different operations, ranging from meeting day to day expenses to making long-term investments by individuals, companies, and governments. Bonds may be backed by underlying assets (secured) or by a promise to repay (unsecured). The holder of the bond is the creditor, the lender, who has loaned money to the issuer. The issuer is the borrower, the debtor. Bonds are usually first issued at par value, which is 100% of the face value. This is the amount that is borrowed and must be repaid. Like stocks, bonds will trade in the secondary market at different prices from their par values. The bond's face value is normally measured in increments of \$1,000.

There are all sorts of bonds issued by numerous borrowers, ranging from the very safest to the very riskiest and from the shortest to the longest duration. The interest the issuer pays to the lender relative to the market at the time of issuance usually reflects the risk of default and duration. The higher the risk of default by the issuer means the greater the interest rate paid by the issuer. The lower the risk of default means the lower the interest rate. Normally the longer the term to maturity, the higher the interest rate is. Typically the issuer pays interest to the lender every six months until the bond matures. At maturity, assuming no bankruptcy of the borrower, the bonds mature at par value. Basically the debtor borrows the money from the lender, pays the lender interest, and then pays back the full amount borrowed at maturity.

When talking about bonds, we need to be clear about the relationship between prices and yields (interest rates); they move inversely. When yields fall, bond prices go up. When yields rise, prices go down. The reason for this is the value of cash flows (the interest paid) will change relative to newly issued bonds and the old bond. The interest rate of the bond is normally fixed over its term, but the bond market changes. For example, if an old bond yields 10% of par maturing in 25 years and has been outstanding for two years and if new 25 year bonds are issued to yield 11%, then the price for the old bond must go down in price in order to be competitive

with the higher yields of new bond. In this example, the price will fall roughly 10%. A new buyer of the old already issued bond would then also receive roughly 11%. In this case, if one had to sell the bond prior to maturity, they would incur a loss. If they held to maturity, however, they would receive back their original principal. Conversely, if one bought a bond with a 10% coupon at par and interest rates subsequently fell, then the bond price would go up; its cash flow, its yield, is worth more to the current market. At maturity though, it too will return to par value.

Bonds have a number of risks between the dates of issuance and payback. The primary one is default. If the issuer goes bankrupt, the holder may or may not get back the full original principal amount invested. He may only receive back a portion and it may take longer to receive than the stated maturity date. In the pecking order of payback in the event of a default, bonds as debt rank higher than stocks as ownership equity. Another risk is the change in current interest rates. As mentioned, if rates rise, then bond prices fall. Again though, if one holds to maturity, then one gets back their principal.

Both of these risk reasons function as a sort of trade-off when buying a bond fund. With one investment in the bond fund, you could be lowering your risk of default by diversifying amongst hundreds of issuers. But, the trade-off is because the bond fund itself has no par value, you are never assured of receiving back your principle. That is the trade off, immediate diversification today but no assurance of a future par value.

In addition to the risk of default, this fluctuation in a bond's value is also associated with its quality and time to maturity. Usually the shorter the time to maturity, the less the interest rate is. And usually the greater the quality of issuer, the less the interest rate is. In periods of easy money and normal economic expansion, interest rates are in what is called a positive yield curve where short-term bonds pay less than intermediate-term bonds which also pay less than long-term bonds. In periods of tight money, when economic expansion is too hot or inflation is heating up, short-term bonds will pay more than long-term bonds. This is known as an inverted yield curve.

Lastly, as you will see below, the bond market is no different than the stock market in that prices move in both secular (5-30 year) cycles and cyclical (1-4 year) cycles. With this information, we won't make the easy mistake of thinking things will never change.

## Strategy

What does this material mean for an investor? Typically, investors use bonds both to make money on their money, but also as a way to hedge some of the stock market's volatility during bear periods. For example, in a typical bear stock market, equities may easily lose more than 25% of their value. A portfolio invested only in stocks would thus lose one fourth of its value. This is unacceptable to many, so many institutions use a 65% stock and 35% bond allocation (and with a tiny amount allocated to cash). In a recession induced stock bear market where earnings are declining, there are times when interest rates will then begin to also decline. Bond prices will move inversely, which in this case, prices would move up. This bond increase may offset the loss in the stock portion. Further details of this common strategy are beyond the scope of this paper, but I would ask the question whether this strategy will work as well in the future as

it has historically, when rates are so near to zero? How much of an offset to a stock loss of 25% could a decline from interest rates help, given they are already so low? The answer may suggest to some to actually use cash as an asset class to hedge.

Getting back to this Report, as I already mentioned, I want to focus a bit on what to watch out for if you are a bond fund investor. We know if interest rates go up, bond prices will fall. At maturity, however, an individual bond will return to par value, which is usually 100. This assumes no default by the issuer. For a bond fund investor, however, the key point is that there is no par value in a bond fund per se, so an investor is never assured of receiving their principle back. While the bond fund holds individual bonds that mature at par, the fund itself does not have a par value. Its value is simply the values of all the bonds it holds on that particular day less accrued expenses.

This fact about a fund's nonexistent par value usually does not impact the investor in a secular bond bull market because rates are falling and bond prices are rising. The risk is there, but it is not apparent to everyone. In a period of expected interest rate increases, however, the bond fund's bonds will decrease in value. Because of bond fund cash flows from new fund buyers and fund sellers, the fund may be forced to sell those depreciated bonds, rather than having the ability to wait until their maturity. Thus the fund may be forced to sell a holding at a steep loss, which is passed on to the fund holder. So, in a bond bear market, rather than buy bond funds, one should instead strongly consider purchasing individual bonds.

This bond bear market guidance assumes a couple of things. One it assumes an investor has a large enough portfolio to properly diversify amongst different issuers in order to offset potential default risk. One may use rating companies like Moody's or Standard and Poors to help them assess risk. One may use only the most highly rated issuers with ratings of AA or AAA, though keep in mind that we have all learned the rating companies do not always get it accurate or timely. Two it assumes that costs of trading bonds are not prohibitive; costs that include spreads between bid and ask and commissions. Plus there is the investor's personal cost to research, monitor, and trade bonds. Three it assumes one can accurately forecast expected interest rate changes.

Another strategy to use when buying individual bonds, investors may also use bond laddering. This strategy buys individual bonds or CDs that mature as rungs of a ladder over a period of time. For example, if one has \$100,000, an investor might buy 10 issues of \$10,000 each ranging in maturity from one to 10 years; those years are the rungs. When the nearest bond matures, one rolls it out to a new 10 year bond, extending the ladder. Or one can buy 10 CDs that mature each month and roll them out as they mature. If interest rates rise, and one needs liquidity, the shorter-term bonds, which are less sensitive to rate changes, may be sold.

In sum, in a secular bond bull market where yields are falling and prices are rising, the easiest approach is to buy a bond fund. There is built-in diversification. There is also daily professional management. Costs of ownership may be less. In a bond bear market where yields are rising and prices are falling, the best approach may be to buy individual bonds.

## History

Even though less ink and time have been spent analyzing bonds, the history of the bond market is not dissimilar to the history of the stock market. It moves in very broad wide ranging trends that may last for years and years. Since 1900 in fact, there have been two secular bull markets in bonds and two secular bear markets in bonds. These very long-term trends that have ranged from 5 to thirty five years are shown on the chart below.

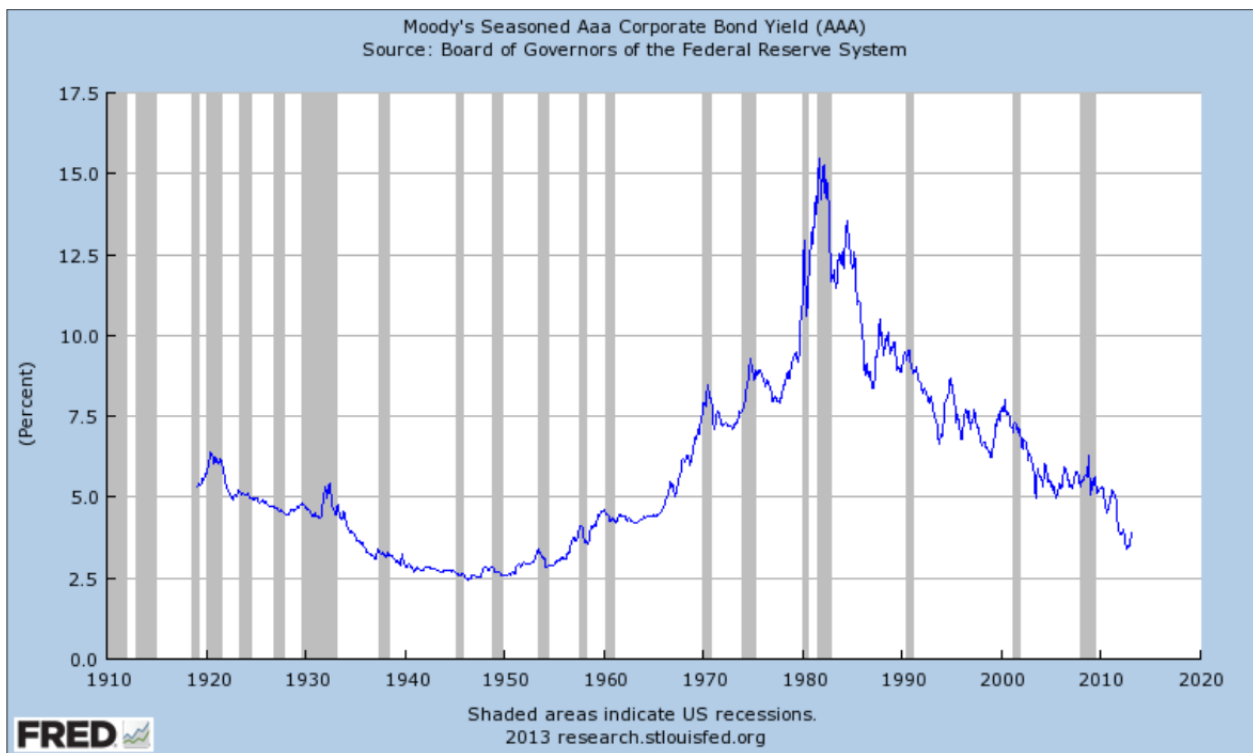


The first secular bond bear market lasted from January 1900 through June 1920 (marked in blue bear above). Interest rates then dropped, entering a secular bond bull market (marked in red). Rates dropped from 6.4% to 2.5% over the next 26 years from July 1920 to August 1946. Rates then began another secular bear market, where rates rose from less than 3% to more than 15% over some 35 years from September 1946 to September 1981 (marked in blue again). Since that peak, rates have dropped again in the current secular bond market from October 1981 through the present (marked in red again). In total over the last 100 years, there have been two secular bull markets and two secular bear markets in bonds. Over the next 100 years no doubt there will be a few more secular bull and bear markets in bonds.

## Timing Factors

The relationship between interest rates and other factors are much more interesting than what might otherwise be obvious. The obvious connection, for example, between recessions and interest rates is anything, but clear, except on a cyclical basis of one to five years. This is shown on the next chart that shows the relationship between interest rates and recession periods. While it is true that interest rates generally decline during recessions, what is less obvious is how interest rates might behave subsequent to recessions. That movement depends more on their secular trend than it does on the economy generally. In other words, other factors influence the direction of interest rates more than recessions and recoveries.

As you can see on the next chart with the grayed portion showing recessionary periods, in the secular bear market for yields (where rates rise and prices fall), while yields fell during recessions, they subsequently rose above recession levels. In secular bull markets (yields fall and prices rise), yields also fell during recessions and then fell below pre-recession levels. Basically, this factor is the way to determine whether bond yields are in a secular bull or bear market. As of the recession of 2008, yields have continued to fall below their pre-recession levels. (The period prior to 1919 is not shown for Moody's Aaa Corporate Bond Yields below, but the secular trend on interest rates is clear enough; they had been rising during those marked recession periods.)



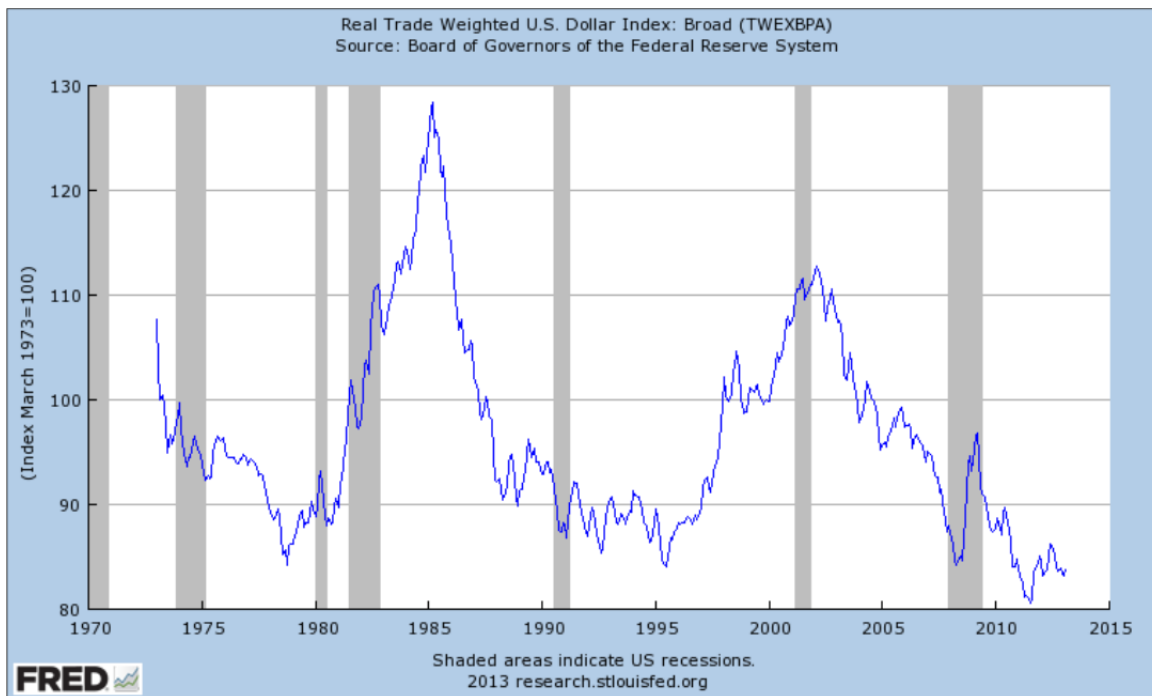
So, as the chart above shows, in secular bond bear markets (rates rising), yields went above prerecession levels. In secular bond bull markets (rates falling), yields went below prerecession levels. The two key turns were after the recession near 1949 (rates rose above prerecession levels) and in reverse after the recession in 1982 (rates fell below prerecession levels). For the current time, unless we enter another recession to give us a lower starting yield, the level to

watch is around 5.5% set back in 2008. (As of the date of this report, the risk of a recession is very low.)

The following charts are a further attempt to find a secular correlation between interest rates and various other factors besides the economy.

The first thing I looked at was inflation as measured by the CPI (consumer price index). There was no correlation between the two series. Except for the depression years of the 1930s, rising prices have been the norm, regardless of the interest rate direction. This was not helpful. The chart is not shown.

The next thing I looked at was the value of the US dollar compared to other currencies. As you can see, this is much more helpful in forecasting rate trends. The peak value of the dollar corresponds to the peak interest rate yield back near 1984. There was, however, a dollar rally from 1995 through 2003, even though interest rates continued to decline, but this may be more of a 'safe haven' factor than a more permanent fundamental reason. The same uncoupling happened in the financial crisis of 2007 and 2008 where rates fell, but the dollar value went up. Since then, the relentless loss of a dollar's purchasing power has been dropping along with the falling interest rate yield.

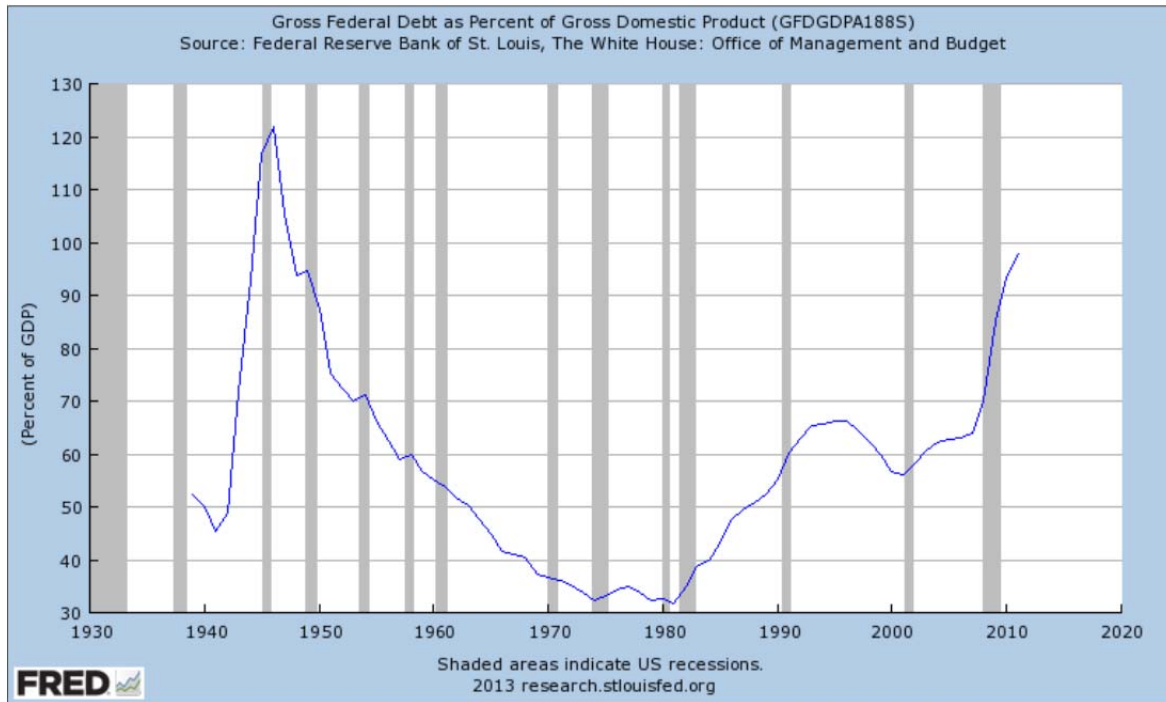


The chart points out the relationship between the value of the dollar and interest rates (chart above on previous page). They generally move closely with each other. So, an analysis of the direction of interest rates should include a review of the value of the US dollar relative to other currencies. As the chart above indicates, currently the US is "on sale" or is "cheap" relative to other currencies, dating back to 1973. We aren't paying much interest to hold the dollar, as debt.

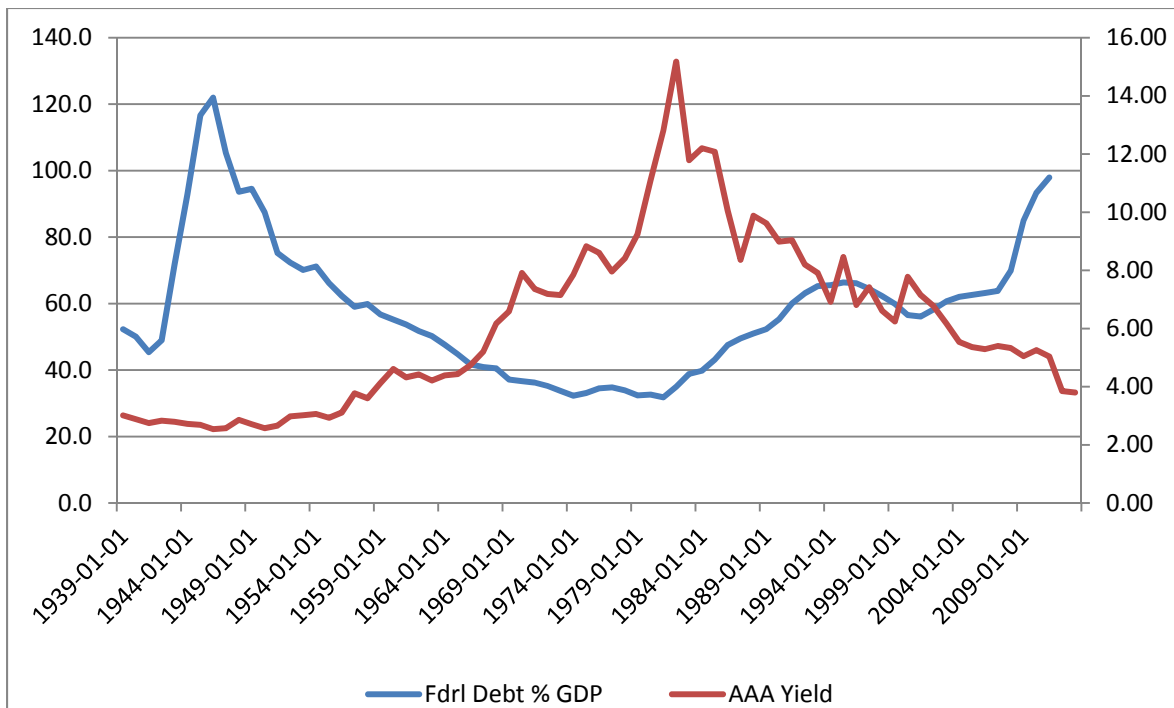
This brings me to what I find is the most interesting correlation, which is between Federal Debt and interest rates. Although the Federal Reserve is independent of political influence, it may not be that independent. In fact, as they say, it is subject to the US Congress' oversight. So,

lowering the Federal Government's cost of borrowing is, perhaps, in their best interest. Is it on purpose or just an anomaly? You may be the judge.

The following chart shows the Federal debt as a percentage of Gross Domestic Product (GDP).



And this chart below will provide a better visual picture of the inverse relationship between interest rates and gross Federal debt as a percent of Gross Domestic Production (GDP).



The take away from this chart is the obvious inverse long-term relationship between Federal debt as a percentage of GDP and interest rates. As mentioned, the Fed is independent of Congress, but it also functions within the government's approval process. So, if this relationship continues to hold in the future, we really shouldn't expect the secular trend of interest rates to change from down to up until the Federal Government begins to reduce its debt as a percentage of GDP. When might this happen? As we look at this, keep in mind that GDP is reported with a lag of more than three months to current interest rates.

The Congressional Budget Office (CBO) in a report dated 8/22/12 was projecting a possible reduction in Federal Debt as a percentage of GDP beginning in 2014-15 and declining steadily, though slowly, thereafter. They also provided an alternative scenario, however, of continued rising debt as a percentage of GDP. The two scenarios depend on a number of factors, like GDP, tax revenues, spending, entitlement programs, and policy changes (or lack thereto). So in the years ahead, assuming that the economy continues to grow, that tax revenues rise, that government spending declines, we might expect a secular interest rate trend change from down to up to have begun already by 2015.

Although it is beyond the scope of this paper, I want to lastly mention that within secular bull and bear markets, there are cyclical (1-5 years) bull and bear bond markets. These shorter-term trends may also impact the decision making process.

## **Conclusion**

As we saw, interest rates and bond prices move in secular trends that last decades. When rates fall, bond prices climb. When rates rise, prices fall. The strategy to use when buying bonds, therefore, should be different in secular bull and bear markets. In a secular bond bull market, for most investors, the use of bond funds should be emphasized. In a secular bond bear market, individual bonds should be considered. How does one know the difference between the two secular trends?

Certainly a visual inspection of a long-term chart will help. On a more fundamental basis, these secular movements that last decades appear to be unrelated to the economy, to Gross Domestic Product (GDP) or inflation. The two main factors identified to use when forecasting the long-term trend of interest rates are the relationships between rates and Federal Government debt as a percentage of GDP and the value of the US dollar. These appear to be more coincident, rather than predictive, but are valuable nonetheless.

On a cyclical basis, ranging from one to five years, other technical tools, such as moving averages, and fundamental indicators, such as the yield curve, may be employed to help determine interest rate direction.

For the present time (April 2013), we know that Federal Debt as a percentage of GDP is forecasted to continue to rise for another year or so, but it is projected to potentially begin to decline thereafter in the next few years. This forecast, of course, should be monitored carefully and updated regularly. If debt as a percentage of GDP does indeed begin to decline, this means on a secular basis that interest rates should reverse course from down to up. A confirmation of this would be when rates rise above their prerecession levels. It would thus mean the 30 year secular bull market in bonds has come to an end.