The Bond Uncertainty Principle

By John Mauldin

One of today’s trickiest investment questions revolves around interest rates and bond investing. We are in an economic environment in history like no other, so we have few direct parallels from which to draw wisdom. Should we keep our bond investments short-term and suffer pathetic yields, or move out the interest rate curve, getting more income but subjecting ourselves to the possible ravages of inflation should it rear its ugly head? Yet, even as there may be no direct historic repetitions, there are perhaps some rhymes which can yield some insight.

Today we look at some very interesting charts and tables on bond yields from good friend Ed Easterling of Crestmont Research. Ed may be a familiar name to long time readers, as we have visited his research on past occasions. His latest work is on the historic yield of bond ladders, which may sound dull. But if you are concerned with maximizing your bond portfolio income, it can be very interesting. (You can see his work on interest rates at www.crestmontresearch.com.)

A bond ladder has to do with the average duration of a portfolio of bonds. If you have a 7 year bond ladder, that means you have some cash, some 2 year notes as well as some 5, 7, 10 and perhaps 15 year bonds, up and down the “ladder” which averages 7 years. Some bonds are always coming due and being rolled over into longer term bonds.

Let’s start with some basics. First, interest rates were not particularly associated or correlated with inflation until the 60’s. I can go into a number of possible reasons for this, but for now let’s accept this as a given. Thus, we are going to focus on interest rate yields since 1965.

The average annual total return for a 5 year bond ladder since 1965 has been 7.4%, with a best year of 15.5% and a worst year of 3.2%. The average annual total return for a 20 year bond ladder was 7.5% with a best year of 21% and a worst year of -1.9%.

Total return includes interest and the increase/decrease in the value of the bond. Remember, bond values increase as interest rates drop and decrease as interest rates rise. Thus, much of the high returns from bonds in the past 20 years have been the result of interest rates falling. In the 70’s as interest rates rose, bonds struggled to maintain their value, but high rates compensated somewhat for the risk. We do not now have high rates, but there is still risk.

Let’s look at some of the principles in making a decision as to whether to purchase a five year bond or stay in cash. First, I am assuming you buy the bond and hold...
to maturity. Roughly, and forgetting the effects of compounding, if you bought a 5 year treasury today, you would get 3% interest or 15% over 5 years. 6 month t-bills or cash are paying a little less than 1%. You think rates are going up in two years. How much would rates have to go up to pay you the same total return for a five year ladder portfolio?

If 3 year rates doubled from today’s 2.18% to 4.36%, then you would be ever so slightly ahead to have bought the five year bond.

But what about a ten year bond that currently pays 4%? If you hold cash for two years, and then buy an 8 year bond, where would rates have to go for you to come out ahead? Today, an 8 year bond is yielding roughly 3.8%. Rates would only have to rise 1% for you to be ahead by holding cash and buying the 8 year bond in two years. A 2% rise in rates really makes buying the ten year bond a losing trade for the next decade. And heaven forbid you should have to sell that bond in the meantime and take a loss of principal.

Thus, the direction of interest rates and question of whether inflation will return is of prime importance to bond investors.

Looking at Ed’s table, you can look at annual returns in the 70’s, a period of rising interest rates. For any five year period, you were significantly better off in terms of total return in having a 5 year rolling ladder rather than a 20 year rolling ladder. A 5 year ladder was even slightly better for all 5 year periods than a 7 year ladder. Investors were rewarded for being cautious.

Rising interest rates and inflation are murder for bond portfolios.

**Gentlemen, Start Your Assumptions**

Will inflation rise to 2-3% or stay in the benign area of 1.5%? What if inflation rise to 4-5% or more? What if inflation drops into deflation? Not possible, you say? I can make plausible cases for both a significant rise in inflation and a drop into deflation. It is time to head out onto the racetrack of future scenarios. Gentlemen, start your assumptions. And you better choose wisely, as being wrong could cost you big time.

To begin with, let’s visit Japan and their attempt to keep the yen from rising against the dollar. Richard Duncan, author of The Dollar Crisis recently wrote:

“The most aggressive experiment in monetary policy ever conducted is now under way. Japan is printing yen in order to buy dollars in such extraordinary amounts that global interest rates are being held at much lower levels than would have prevailed otherwise. In essence, the Bank of Japan is carrying out the unorthodox monetary policy that the US Federal Reserve intimated it was considering in mid-2003. In other words, the BoJ is creating money and buying US Treasury bonds, which is helping to drive down US interest rates and underwrite US economic growth - and, by extension, global growth.
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“It is inconceivable that economic policymakers in Tokyo and Washington do not understand the impact that this unprecedented act of money creation is having on global interest rates and economic output. The amounts involved are staggering. Since the beginning of 2003, monetary authorities in Japan have created Y27,000 billion with which they have acquired approximately $250 billion - that amount is equivalent to more than 4 per cent of Japan's gross domestic product. It also represents $2,000 for every person in Japan. In fact, it would amount to $40 per person if divided among the entire population of the world. Most importantly, it is also enough to finance almost half of America's $520bn budget deficit this year.

“The amount of new yen that Japan ‘printed’ and converted into dollars during January 2004 alone was enough to finance 13 per cent of the annual US budget deficit. The investment of those dollars into dollar-denominated debt instruments clearly explains why the yield on the 10-year US Treasury bond fell last month in spite of the 10 per cent upward revision in the Bush administration's budget deficit projections.

“By accident or by design, Japan is carrying out the most audacious endeavour to conjure wealth out of nothing since John Law sold shares in the Mississippi Company in 1720. So far, the results have been impressive. Japan’s monetary alchemy has been the most important factor in allowing the US government to finance a $700bn deterioration in its budget over the past three years without pushing up US interest rates to levels that would pop the wealth-creating property bubble there.

“US tax cuts have fuelled domestic consumption. In turn, growing US consumption has shifted Asia's export-oriented economies into overdrive. China has played an important part in this process. With a trade surplus vis-à-vis the US of $125bn, equivalent to 9 per cent of its 2003 GDP, China has become a regional economic growth engine in its own right. China has used its large trade surpluses with the US to pay for its trade deficits with most of its Asian neighbors, including Japan. This recycling of China's US dollar export earnings explains the incredibly rapid ‘reflation’ now under way across Asia. Even Japan's moribund economy has begun to show signs of export-oriented growth.

“These developments highlight a fundamental question that has been debated over centuries: can governments create money and make the population richer without setting in motion a chain of events that ultimately ends in monetary chaos? We may be about to find out as Japan tests the hypothesis on an unprecedented and global scale. If this experiment in unorthodox monetary policy succeeds, then we have arrived at a new international monetary paradigm. Governments will have discovered how to finance limitless deficits through the creation of paper money, and we all can look forward to an age of great prosperity. If it fails - as have all past attempts to create wealth from thin air - then the world may not be able to avoid a severe and protracted economic slump as the extraordinary imbalances in the global economy (caused by the explosion of fiat money in recent years) begin to unwind.”
For Duncan, this process is inherently inflationary, as fiat money loses its value. But this is not the only force alive in the world.

**The Over-Supply Meets Falling Demand Curve**

We are going to look at one more somewhat lengthy but important quote from Doug Greenig of Greenwich Capital Markets. Remember your Economics 101? The old supply and demand curves, which show us that price is a function of supply and demand? The point at which supply meets demand is the current price. If demand increases, the entire demand curve moves and prices rise. If supply increases, then in theory prices go down. Now, don’t let the economic jargon of the first paragraph slow you down if you are not familiar with supply demand curves. What Greenig is trying to show us is that inflation is not knocking at our door. At the end of this, we will draw some conclusions, I promise.

“The dynamics of the aggregate supply and demand curves tell the economic story concisely. The supply curve is shifting to the right from productivity gains and access to a larger, better capitalized global labor pool. This means that output will be rising and prices will be falling, with a thud or perhaps a splat. The shift of production to low-wage countries means, further, that the aggregate demand curve (in high-wage countries) is shifting to the left. This mitigates the output gain and causes even lower prices. The growth picture is uncertain, but the inflation picture is not: disinflation, even deflation, is the order of the day. Despite the Fed’s efforts to stimulate demand, private sector wage and salary disbursements are actually down 1% in real terms since 2001. Inflation continues to fall. The Fed has thus been hard-pressed to avoid outright deflation.

“Disinflation has not been limited to the U.S. Rather, a long-term disinflationary trend has been observed all over the world, as the logic of my argument applies quite generally. An interesting paper by economists at the Bank of Japan evaluates several competing hypotheses for this global phenomenon:

1) a cyclical demand shock
2) a productivity shock (i.e. information technology)
3) a supply shock caused by increased capacity in emerging economies (e.g. China)
4) the soaring genius of Alan Greenspan, which has driven inflation, vermin-like, from the face of the earth

“A vector auto-regression model is estimated, and the authors conclude that the supply shock is the dominant factor cutting inflation in the U.S., and elsewhere. They also note that Japan’s more serious deflation has been exacerbated by the various rigidities and inefficiencies in that economy.

“It is instructive to focus on two economies - the largest in one case, and the most energetic in the other. The U.S. consumes, and China produces, while an inflexible exchange rate promotes a persistent trade imbalance. Not only does China have very low wages, and some 300 million unemployed people, but the currency is undervalued. Thus,
Chinese products remain extraordinarily cheap, and China garners enormous dollar reserves, which are used to purchase USD bonds and fancy bottles of VSOP Cognac (which are displayed like religious idols in many middle-class homes.) The effect is to keep interest rates ‘artificially’ low. Meanwhile, the Fed must fight tepid demand (as jobs are exported, or lost to the IT’d [information technology and the internet] away) with the main tool at its disposal: the Federal Funds rate. In the U.S., a disinflationary supply shock is thus accompanied therefore by extremely low interest rates. In China, meanwhile, there is an investment and an asset bubble --- which is a major force for global growth.

“One should not assume that this is a pessimistic perspective, just a disinflationary one. Global living standards are on the rise, Americans get to consume, larva-like (http://www.kyoto.zaq.ne.jp/dkaty602/museum/112.html), beyond their collective means, and a deluge of cheap goods enhances purchasing power everywhere. The trends I have discussed remain intact, and we are surely in an early inning of the supply shock, and of the disinflationary pressure. In the U.S., wages will be softer and jobs scarcer than a cyclical analysis would predict.

“The odds favor a continuation of monetary accommodation by the Fed as far as the eye can see. Given this macro backdrop, traders and investors, like the characters of an Ang Lee movie, would be well advised to come to grips with monotony. Trading in anticipation of an exciting change in rates or spreads will be counterproductive: the market may be volatile over a narrow range, but the conditions for a big shift (viz. inflation, or even massive job growth) just aren’t going to materialize. If the economy couldn't produce inflation in the boom times of the late 90's, how will it do so now? When the market figures this out, rates are liable to go lower, and spreads tighter.”

I agree with much of what Doug says, but it is not that simple. Remember Duncan’s point that Japan and China are financing our debt? It should be noted that they have serious help from the rest of Asia, as each country seeks to keep a competitive currency with each other and low enough to attract buyers from the US. The world is financing our government deficit.

But what if China decides to float their currency against a basket of the currencies of their Asian trading partners? That might mean they could all allow their currencies to slowly rise against the dollar, which would mean they would need to buy fewer dollars and US bonds. Who would finance our government debt?

It will be financed, but the question is by whom and at what interest rate levels? It could happen by rates going higher, even in an era of low inflation. Of course, significantly higher rates will put a damper on the economy and housing, which could lead to a recession. Recessions are deflationary. The Fed would be forced to fight deflation by buying more government debt and trying to create some inflation. This would hold rates down as they would try to spur another recovery. At least, until they actually create inflation.
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Or the Fed could just start buying government debt outright, keeping rates low. How long could this go on before inflation sets in? Probably longer than we think, given the disinflationary pressures in the world. But it should/will end in inflation and higher rates. The hope at the Fed would be that it will be mild (2-3%) and be accompanied by robust growth and a sustainable economic expansion.

As long as the rest of the world continues to finance our debt, we can continue on the same current path. There is no indication that this will change in the immediate future. But each month, we get closer to the day when we will have to carry the burden of our debt within our borders, either by reducing the deficit or buying our own bonds. Neither is without economic cost.

I do not think the Fed will be able to raise rates significantly between now and the next recession. Thus, they will not be able to lower rates all that much to combat that recession and the deflation that will accompany it. That means they will follow the path Fed Governor Ben Bernanke laid out in his speech last year: they will move out the yield curve, buying longer maturity bonds and pulling long term rates down.

The Possibilities for Bonds

Let’s look at the possible scenarios for bonds:

1. Larry Kudlow is right and everything works. The economy kicks in, we have a sustainable economic expansion and jobs start coming back. Greenspan retires a national hero. That means rates will rise naturally. Believe me; I fervently hope this is the scenario, even as I have my doubts about it. But rising rates are not good for bond values.

2. Foreign buying of our debt slows down and interest rates rise in response. Not good for the value of bonds.

3. The Fed becomes the buyer of last resort in the case of #2, holding rates down for a period of time. This is ultimately inflationary and not good for bond values over the long run.

4. The economic recovery does not produce jobs, rates and inflation remain low and eventually we come to a recession. (Remember, there is always another recession, just as there is always recovery. It is the business cycle, and it is not pessimistic to recognize the reality of the business cycle.) A recession in today’s environment would throw us into deflation. The Fed has said they will not allow deflation, and I believe them. They do have the keys to the room where the printing press is located. Thus, in the short term bond values would rise, but in the longer term inflation will come back. Again, not good for bonds.

I discount the possibility of deflation or high inflation, as the Fed can influence both and will. The hope at the Fed and in the government is that with the right policies, they can move the economy along without causing too much inflation or allowing
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deflation and avoiding recessions. Given the imbalances in the current system of the twin deficits, massive debt, global labor arbitrage, etc. you would not be considered unreasonable to have a few doubts as to whether they can pull it off, given the utter lack of historical precedent of any success with such issues in the past, at least without some economic pain.

Eventually, either through the course of nature or the need for the Fed to fight a recession and deflation, rates will rise and inflation will come back. When they eventually have to fight the inflation they create, I tend to think we end up in stagflation.

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A good friend (somewhat older than me) recently wrote and cynically asked me where he could get the long term stock market average I wrote about in a recent letter: about 7% which is GDP plus inflation plus dividends. The answer is that although I think returns for index funds the next ten years will be flat, with some serious bear markets in that time period, over the really long term I think 7% is quite probable.

But to get that long term, we need to go through multiple cycles and a few Kondratieff Waves. I feel quite confident in that 7% forecast for the year 2073. His problem is simply to live long enough to be able to enjoy the appreciation in his Roth IRA.

And that is the same principal with bond investing. Current uncertainty, plus the likelihood that rates will eventually rise, lead me to a more cautious stance in the near term for bonds.

If you are starting today, I would hold my bond ladders to 5 years or somewhat less, depending upon your circumstances. If your current bond portfolio is of longer duration, do NOT sell. Simply slowly rebalance downward as bonds mature. Also, I would have an uneven ladder, or one without the lower rungs, if you will. Unless you expect to need cash, I would avoid the 1 and 2 year bonds entirely, as I do not think rates are going to rise enough in the next two years to offset the loss in current income.

At some point, you are not going to want to buy traditional bond mutual funds. You are going to want to hold the actual bonds themselves. Remember, bond funds benefited greatly from a falling interest rate environment. Much of the yield of the last 20 years has been capital gains from rising bond values. The opposite will happen in a rising rate environment. That 4% yield on a 10 or 20 year bond can get wiped out in a 1% rise of rates. In a bond fund, that hit is immediate.

In theory, it is the same for your portfolio, as the value of your portfolio will fall as well. However, if you hold the bond to maturity, you will get your principal back. In a fund, you do not “get back” the principal. It is gone the day it is marked to market.
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The only scenario in which you should own longer maturity bonds is a deflationary one. As noted above, that is not my long-term bet.

Valentine’s at Home

I look on my schedule and do not see a trip for the next month or so. That is a very good thing, as I need to catch up on a lot of details and projects, as well as a planned move to a new office next month. But I do see trips to New York, La Jolla, Atlanta, the Virgin Islands, Las Vegas, St. Louis, Chicago, Ireland and London, Halifax, Houston, San Antonio plus a few other sundry sites on the tap for this year, and I am sure we will need to add a few more as time goes on.

All that is before we even plan for a little book promotion. While trips can be tiring, the good news is that I get to meet old and new friends, which makes it fun. I will be speaking at a number of conferences, and will give you more details in a few weeks.

Tomorrow is Valentine’s Day, and we will be celebrating at the Mauldin house. Word to the wise, guys: last year, the internet service I used failed to deliver the flowers. Thankfully, I had an email receipt which gave proof that I had indeed remembered. This year I am personally bringing them home with me tonight.

Thanks for all the very kind words and responses I have been getting of late. It does make the effort somehow seem more fun to know that there are readers who really enjoy my meanderings. Have a great weekend.

Your looking forward to his bride’s face,

John Mauldin