Educate U

Bonding With Your Portfolio

How bonds impact your overall return

I've recently had a few conversations regarding bonds. Bonds are always recommended in anyone's portfolio as a way to reduce volatility and to have "safer, more stable" investments. If you have owned bonds in the past few years, you have also benefited with capital appreciation. In fact, the three year return for the BarCap US Aggregate index fund has returned over 8% per year (as of Sept, 2011). It hasn't had a down year for the past 10 years.

There are many factors that impact the price of a bond. In fact, there are many different issuers of bonds. Some of the different types of issuers are: US Treasury, Corporate, Asset-Backed, Municipal, Treasury Inflation Protected (TIPs), and international. Each of these types have their own set of returns. Mortgage backed bonds did not fair well during the housing meltdown. TIPS have performed quite well recently, returning over 10% since the beginning of the year (as of Sept, 2011).

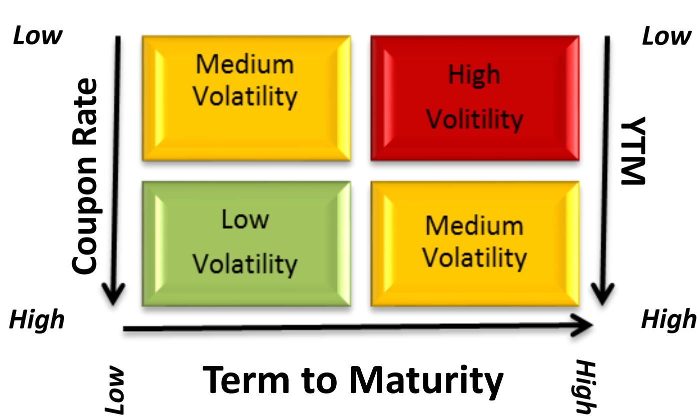
Bonds also have their own set of risks. Some of these risks can be diversified away (owning 50 different bonds reduces the risk that all of them will default at the same time). But owning 50 different bonds can be difficult to achieve, unless you own a mutual fund or an exchange traded fund. Some of the different types of bond risks are:

- *Default Risk:* This risk is where the issuer does not pay the interest and/or principal when due. This almost always involves bankruptcy. Prior to actual default the bond price most likely would be negatively influenced by credit risk. Default risk is much lower for investment grade bonds, but not impossible.
- *Credit Risk:* This risk is where the market value will decline due to a deterioration in the financial stability of the issuer. It usually results in a downgrade in the credit rating. The higher the level of credit risk, the higher the default risk.
- *Event Risk:* A variation of credit risk, this is when an event impacts the value of the specific bond, or it may be an event that impacts all bond prices. When a high profile issuer defaults on their loans, it usually impacts the market as a whole.
- *Interest Rate Risk:* When interest rates rise, bond prices fall (and vise-versa). This risk can be ignored if the bond is held to maturity, but will still impact the principal amount if you need to liquidate prior to maturity.
- *Liquidity Risk:* The risk represented by the fact that some bonds are not actively traded and it may be hard to find a buyer. This may result in a delay selling, or a reduced price. Since there are many more bonds than stocks, the market is simply not as efficient, unless you are trading treasuries.
- *Call Risk:* Most bonds have "call provisions," which state when an issuer has the option to pre-pay the bond. Called bonds are always paid at par or par plus a small premium. Calls occur more frequently during falling interest rate environments. During the 1980s, bonds were issued with coupons in the double digits. As rates fell, the companies simply called the bonds from the holders and re-issued new bonds at a lower rate.
- *Inflation Risk:* Increasing inflation reduces the present value of the future income stream represented by the bond, reducing the bond's market value. Inflation is similar to interest rate risk, since interest rates are inflation are highly correlated. As inflation increases, so do rates.

We are currently at historical lows as far as interest rates. Anyone who has checked their savings accounts can attest to this. I recall early on in my career (back in the 1980s, when interest rates were much higher), I was selling tax sheltered annuities to public school teachers. Rates were going for around 8.5% at that time, with a guaranteed floor rate of 4%. I recall telling a few folks that I doubt that we would ever see interest rates go down to 4%. Now, 4% would be wonderful to receive.

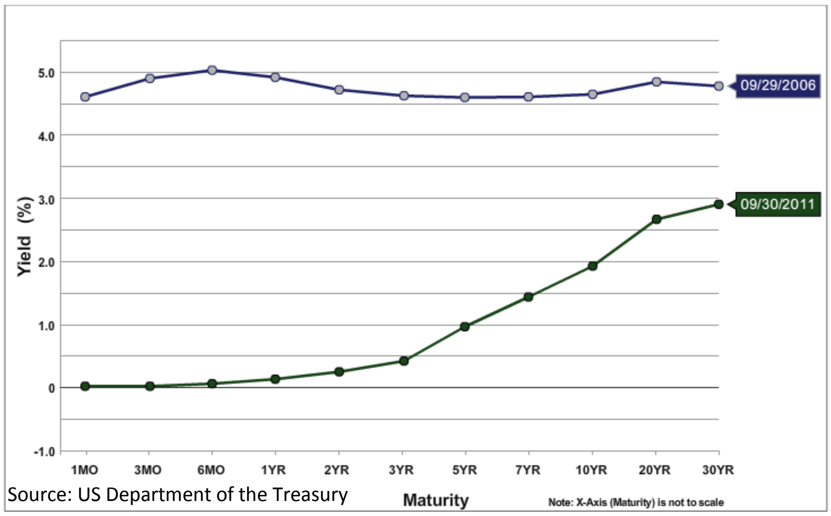
With these low interest rates, danger lurks. Sure, if we fall into another recession, there is always safety in bonds. Rates probably won’t go up, and as long as there are not massive defaults, bonds are a safe bet. But if history has taught us anything, it has taught us that time will change. Rates will eventually rise once again. That is great for those who have CDs that will come due as rates rise. But, if you are holding bonds, especially bond funds, with longer maturities, you are putting your principal at more risk than you think.

To measure interest rate risk, analysts use a tool called duration. Duration, in its simple to form, is the average weighted time until you receive your fixed cash inflows. The higher the coupon, the lower the duration. In other words, if you hold a zero coupon bond (like an EE savings bond), the duration is equal to the maturity of the bond, since you only receive the payment at maturity. However, if you receive semi-annual interest from a corporate bond, you are receiving cash flow. Therefore, the duration would be lower. Another type of duration (called modified duration) also measures price sensitivity of a bond. So, using this measure, we can see how rising (or falling) interest rates impact the price of a bond, and your fund. When looking at the details of many bond funds, you will often see duration as part of the detailed description. Here is a quick guide to how duration impacts bonds.



The following chart shows us the yield curve (the yield of treasury securities plotted against their current maturity) of today, as well as the curve as it was 5 years ago.

Yield Curve — End of 3rd Qtr. 2006 & 2011



Source: US Department of the Treasury

Here is a Hypothetical illustration. It should only be used as a guide to understanding the impact of rising rates.

Bond funds generally do not hold bonds to maturity. So, if you buy a bond fund today, the bonds within that fund will change over time. Over a course of 15 years, the same bonds that were held today would not be there. New bonds would take their place.

Let's say that you own a bond fund, with the average duration of 15. Without taking into other risk factors (such as credit or default risk), if interest rates would rise back to the same place they were 5 years ago — about 2%, the value of the fund would decrease by approximately 30%. This is a simplistic example, but shows the impact of the change in interest rate to bond prices.

Note, if you hold a bond to maturity, it would eventually pay the par price. In other words, if you bought a 15 year bond for $1000 yielding 2%, and interest rates rose 2%, the bond may decrease to $700, but will eventually rise to $1000 when it matures.

Conclusion

For many investors, holding bond funds, especially those that are longer term, have their own risks. Holding bonds in a portfolio has its place. But also remember that as interest rates rise, bonds will lose value, and your "safe" securities will not look that safe after all. You need to actively manage your fixed income strategy and understand the risks, options, and opportunities of bonds. The "flight to safety" may be appropriate now, but not necessarily for *The Long Run*.