Bonds

A Long-Term View

By Kevin Chambers

In an environment of slow global growth, the United States is an island of good news. Most of the economic indicators have been positive. This spurred media members and financial analysts to predict the Fed to raise interest rates sooner rather than later. Although the May jobs numbers have tempered this talk substantially, this is still a good time to discuss the role of bonds in retirement and endowment portfolios, and their outlook going forward.

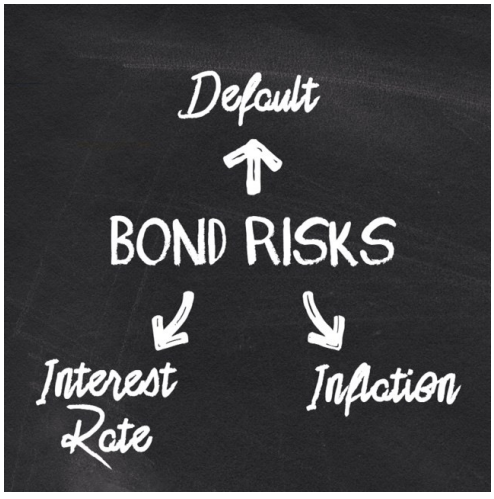
What are bonds?

Bonds are a type of IOU. They are the public debts of governments and companies. Governments and big corporations do not go to banks when they need to borrow millions or billions of dollars, they issue bonds that can be purchased by any investor.

Most bonds are issued for $1,000 and have an agreement to pay interest for a set number of years. After the set number of years expire, the bond is mature and the investor receives the face value, or principal $1,000 back. The longer the maturity, the longer time a bond has to be exposed to risk. The three main risks that face bonds are default risk, interest rate risk, and inflation risk.

Default risk

Of the three main risk factors facing bond investors, default risk is the easiest to understand. Default risk is essentially the risk that the company or government will not pay back the bond par value. For large entities, like GE or the US government, this risk is almost zero. However, for emerging market governments or smaller companies in volatile industries that risk is much higher. For example, Argentina famously defaulted on most of the sovereign debt in 2001 leaving many investors out to dry. Only a small percentage of investors received all of their money back.



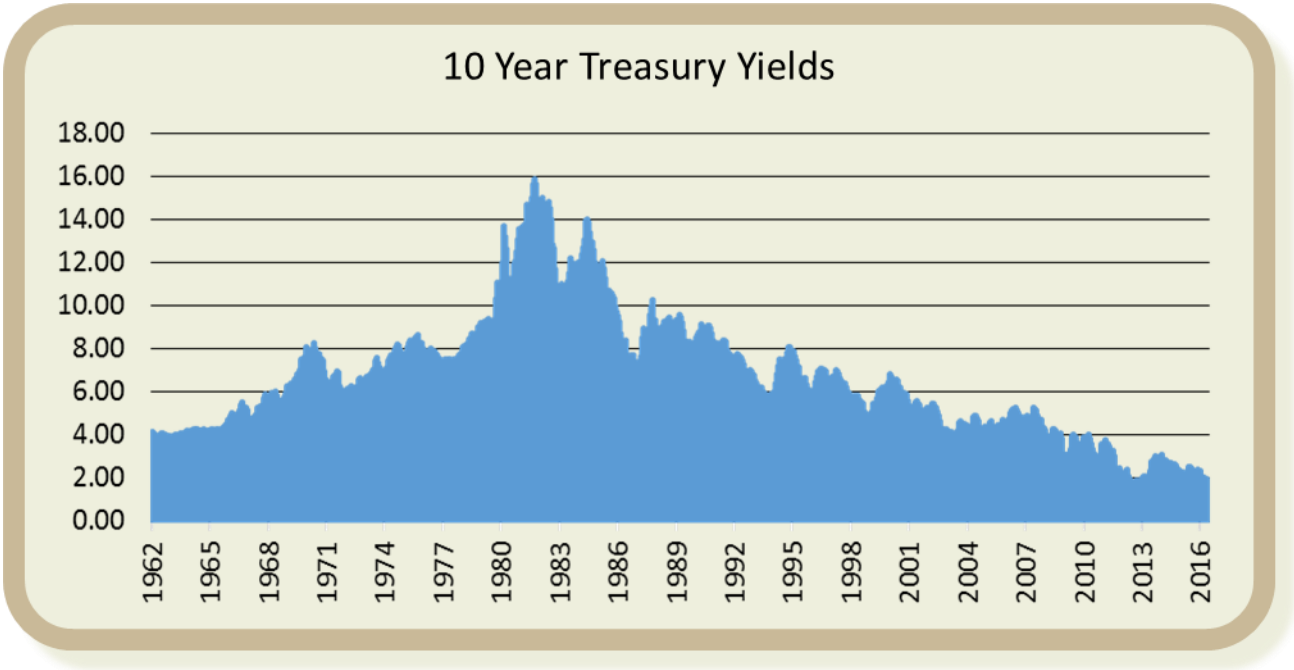
Interest Rate Risk

After the 2008 crisis, the Federal Reserve made interest rates essentially zero. The lowering of interest rates is a powerful tool for the Federal Reserve to combat recessions. While low-interest rates hurt savers looking for income, keeping interest low helps borrowers get inexpensive loans. It stimulates spending, and the hope is that it gets more money circulating in the economy, making everyone better off.

What if interest rates go negative?

In January 2016, Japan moved their interest rates below zero. A negative interest rate can stimulate increased exports.

Read more here



Source: US Treasury Department

The trend of interest rates affects the price of bonds. Bond prices and interest rates have an inverse relationship. If an investor is looking to own a bond, they can either purchase one on the open market or get a new issue bond. If an investor can get a new issue bond with a higher interest rate, the bonds with lower interest rates are going to be less valuable. If an investor holds a bond that has an interest rate that is much higher than the current bonds being issued, that bond is going to be very valuable. Therefore, as interest rates increase, current bond prices fall.

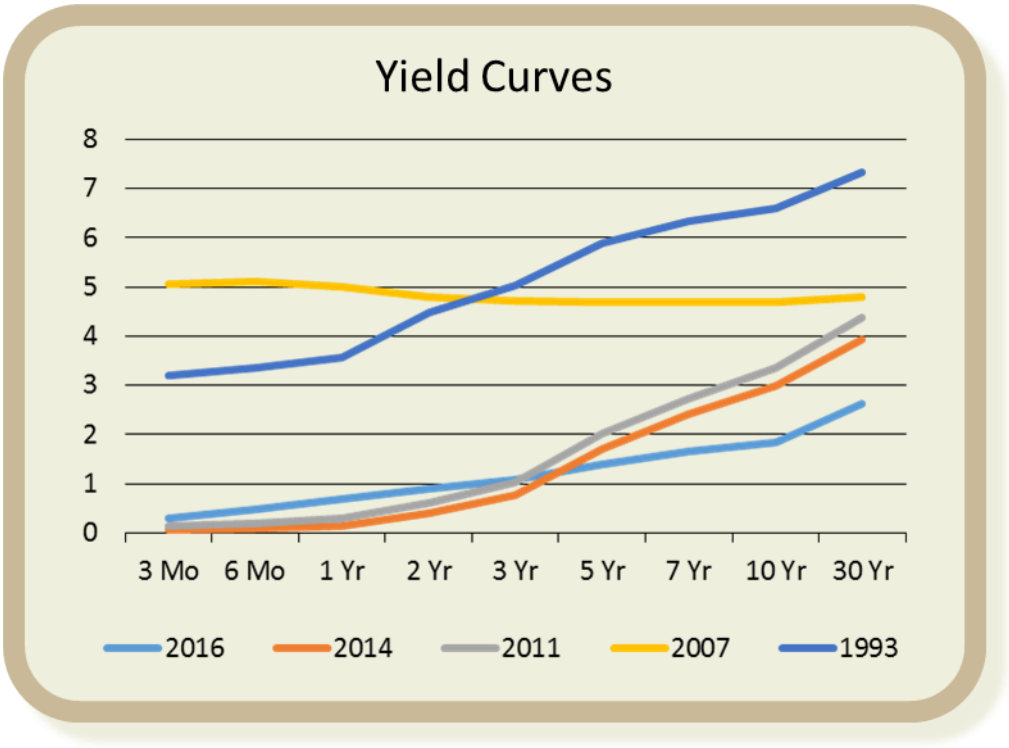
This is the essence of interest rate risk for bonds. If you buy a 10-year bond at 2% at par value ($1,000), you are assuming the risk that interest rates might increase in those 10 years. If interest rates increase to 5%, you won't be able to sell the 2% for $1,000, you could only sell it at a discounted price. Through raising interest rate environments, investors tend to buy shorter-term bonds because the risk is mitigated.

Inflation Risk

The third risk associated with bond investing is inflation. Inflation is the rise in the aggregate price of goods and services across the United States. As inflation rises, it diminishes the purchasing power each dollar can buy. When an investor owns a bond, they expect a stream of future payments from the bond issuer in the form of interest payments. The interest rate determines the amount each year the investor will receive from the issuer. When the bond matures, the investor receives the principal amount or the face value of the bond.

Bond holders are concerned with inflation because as prices go up, the relative value of their interest payments and principal paid at maturity goes down. Inflation rates are assumed in the determination of the yield of a bond. Bonds with longer maturities usually demand higher yields to compensate for the risk that inflation will decrease the purchasing power of the bond's future payouts. Therefore, higher inflation expectations will demand higher yielding bonds.

The relationship of interest rates that are demanded by the market across different bond maturities is referred to as the yield curve. Currently, the yield curve is showing that investors will accept an interest rate of 0.70% to own a 1-year government treasury bond versus 2.63% to own a 30-year bond. Since the last recession, the yield curve has been flattening, indicating that investors are not predicting a lot of inflation in the future. Over time, the yield curve has changed to reflect inflation predictions and interest rate environments.

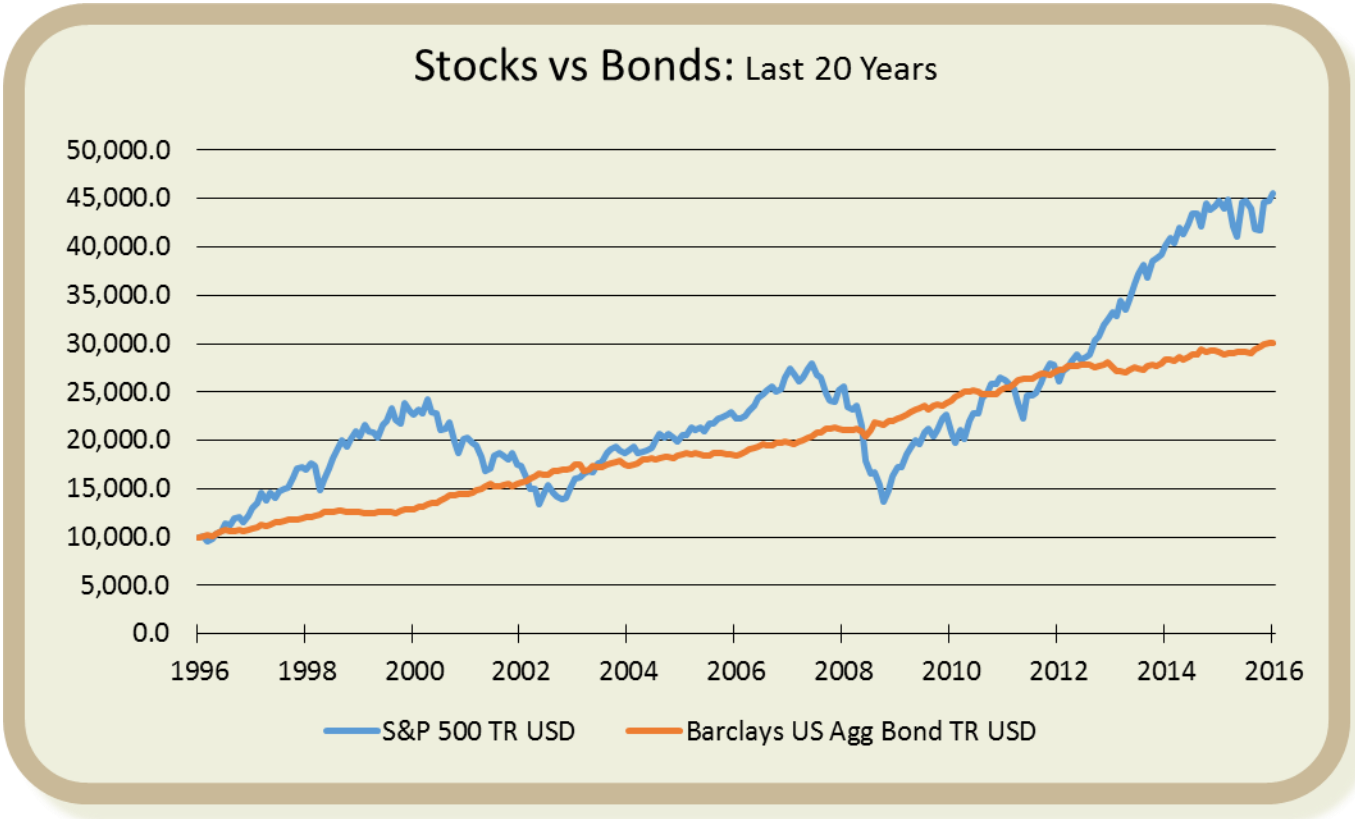


Source: US Treasury Department

Historical Perspective

To add a little bit of context, we need to look at a brief history of bond markets. The last time rates were this low was the late 1940s and early 1950s. Coming out of the Great Depression and the end of World War II, the Federal Reserve kept rates low. From 1935 to 1954, the yield on the 10-year treasury stayed below 3%. In 1954, the Federal Reserve started letting interest rates rise, not unlike our current situation. From 1954 to 1960, interest rates increased from 2.5% to 4.7%. Total returns from the 10-year treasury were 1.9%, with 4 of the 7 years posting negative returns. Meanwhile, the S&P rose 19.8% during the same time period. Rates for the 10-year treasury eventually topped out at just below 15% in 1982. Interest rates did not rise in a linear pattern; they had numerous spikes and pullbacks. During periods of rising rates, the S&P 500 was more likely to have positive returns than negative.

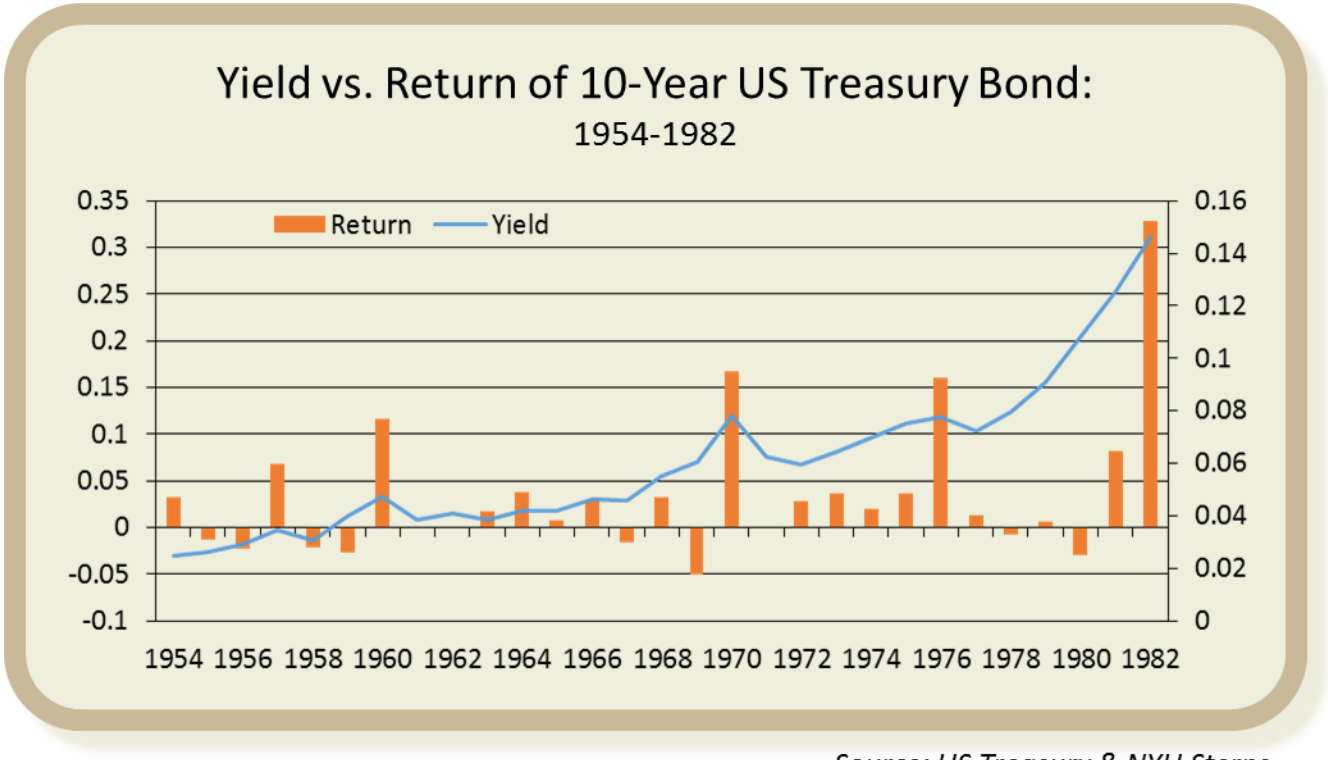
Investors have become accustomed to a general trend of falling or low-interest rates since 1982. However, just like stocks, it is better to not try and time the bond market but hold through the cycles. Looking at rising rates from a longer time period can give perspective on this sentiment. We took the year-end 10-year treasury yield from 1954 to 2013 and found the periods in which yields rose for 3 consecutive years. Then we looked at the annualized return on the 10-year Treasury bond during those years and a trend developed. What we see are low returns during rising rates, with big returns at the peaks. Look at the graph below and notice how at each peak of interest rates the return is the highest. On average, through the periods of rising rates, the 10-year Treasury bonds had positive returns, but only if you hold the bonds through the full cycle. Excluding the last year of returns of each



Source: Morningstar

sequence would lose an investor on average close to 3% annually. This is an argument for investors not to sell bonds as interest rates start to rise because they will probably miss the big returns right before yields start to drop.

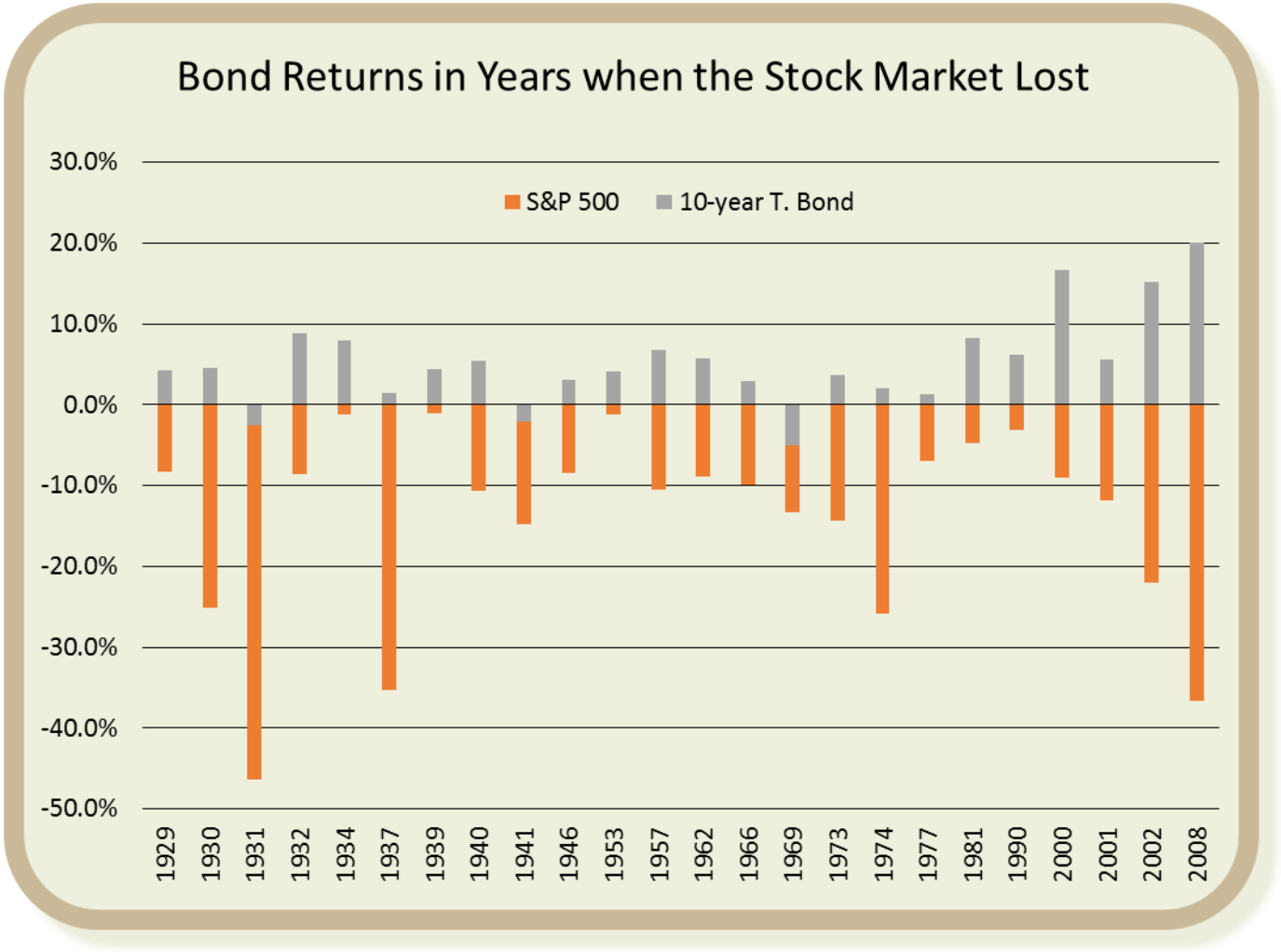
Bonds have historically been a very good balance to stocks. Bonds are very stable. Over the last 20 years, bonds have only had two years in which they lost money: 2013 and 1999. Stocks are volatile and run through cycles of dramatic ups and downs while bonds just plug along. In fact, stocks have returned an average of 6.3% annually with bonds returning 4.7% for the last 20 years. Having a dedicated bond portion of your portfolio can help smooth out some of the downturns. Of the 24 years when the stock market was down, 21 of them had positive bond returns.



Source: US Treasury & NYU Sterns

Interest Rate and Inflation Risk in Your Portfolio

At Headwater Investments, we employ different techniques to insulate portfolios from the risks associated with rising interest rates and inflation. In terms of interest rate risk, the first metric we monitor in all of our bond positions is duration. Duration is a complicated formula that measures the sensitivity of the price of a bond when interest rates change. Duration is expressed as a number of years. A lower duration means that the price of a bond will not fall as much when interest rates increase. At Headwater Investments, we invest in bond mutual funds and monitor the average duration of all the bonds in the fund. The



Source: NYU Sterns

duration is 3.4 for our model portfolios, putting our model portfolio slightly under the Barclays U.S. Aggregate Bond Index which has a 5.6 duration.

Another metric that we monitor in all of our bond holdings is the 12-month trailing yield (also known as the TTM yield) for each mutual fund. This is a weighted average of the percentage income each bond in the mutual fund returned over the last 12 months. We watch this measure in order to track how effective managers are at capturing yield in their portfolios. In a rising interest rate environment, we would expect to see yields of funds rise as investors buy new higher yielding securities.

Headwater Investments also considers interest rate risk and inflation risk in our portfolio construction. We focus on a blend of short term and intermediate term bonds. These are bonds that have a maturity of fewer than 10 years. Maturity is the date in the future when the principal of the bond will be repaid. In most of our model portfolios, we recommend a mix of 3 or 4

different U.S. bond mutual funds that all have varying maturities. We limit our exposure to funds that invest in long-term maturities (10+ years). By limiting maturity, we limit the risks associated with interest rate hikes and rising inflation. Longer maturity securities are more susceptible to these risks, and they lose more value in adverse environments than securities with shorter maturities.

In addition to our maturity tilt, we use diversification within bond holdings to limit the exposure to interest rate movements and inflation. All of our portfolios contain a variety of bonds from different issuers: U.S. treasury bonds, U.S. agency bonds, municipal bonds, corporate bonds, and mortgage-backed securities. We also try to diversify internationally, offering bond funds that contain securities from foreign countries. All of these different securities will react differently in response to changes in US interest rates and inflation.

Our model portfolios also include a specific allocation that invests in products designed to protect against the threat of rising inflation. One of the most common ways to have inflation protection is to buy Treasury Inflation-Protected Securities (TIPS). TIPS are a treasury security that is indexed to the Consumer Price Index CPI, a measure of inflation. We are also cognizant of the maturity on TIPS and have opted for a lower duration mutual fund.

At Headwater Investments, we believe that bonds hold an important function in any long term portfolio. They make a stable base on which to maintain wealth and assets. As people get close to retirement and are in retirement, they can't afford to ride the downs and ups of the stock market. Even though stocks, over long periods, make more money, in retirement it is more important to protect and maintain wealth, not reach for the best return. As interest rates rise, and we hope they do, we will continue to hold bonds. Even though in the short term they may decrease slightly in value, there is no indication that bonds will suffer significant losses. We have confidence that bonds are a good long term investment and offer stability and protection in our clients' portfolios.