

Investing in a Low Interest Rate Environment

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Overview

Investors have had a thirty-year love affair with fixed income markets as yields have fallen and prices have risen. Yields have now fallen to record lows. In the following paper, we provide some background about why rates are so low, make an assessment about why this is likely to change and discuss the potential dangers of a rapid rate rise. Investors seeking safety but lulled into complacency by a 30-year bull-market in fixed income assets must wake up to the reality of the current environment and embrace diversification or they risk suffering a substantial loss in purchasing power and potentially a loss in capital as well.

Since the early 1980s, yields on the 10-year US Treasury note have fallen from over 15% to as low as 1.4% in recent months. And falling yields equates to higher prices. After such a long period of strong returns, many investors have naturally begun to assume that the 'safest' portfolio is one comprised of predominantly if not entirely of bonds.



Source: Ibbotson & Associates Data, Bloomberg

The one-way train with bond prices moving higher is not a U.S. -only phenomena. The average yield on bonds issued by G7 nations has fallen to 1.12% recently. In Germany the 10-year Bund yields have fallen to below 1.20%. Switzerland's 2-year yields have been negative since April, meaning investors are currently paying for the right to lend that nation money.

Positive asset class returns have tended to cluster historically. Equities made the vast majority of their positive returns in the 1920s, 1950s and 1960s, and 1980s and 1990s. In other periods, they made very little. The same is true of fixed income. Most of the real, inflation-adjusted returns from U.S. bonds over the past 100 years came in just two eras: the 1920s and 30s, and the period since 1981. In other periods, bondholders fared far worse. In the 1970s, long-term bonds were such a poor investment that they became known as "certificates of confiscation."

The recent extended bull market has had the impact of distorting investors' perception about the reliability and level of returns from fixed income investments. In the last 15 years, US Government bonds (Barclays US Government Bond Index) returned 5.91% vs. only 4.56% for the S&P 500 Index. This may not seem remarkable, but the largest 1-month loss US Government Bonds experienced was only 4% over this period. When yields consistently go down and prices go up, people sometimes mistakenly take this as a sign of safety, when in reality it is a sign of rising risk.

While this may seem counterintuitive to investors given their experience over the last thirty years, in the current environment there is substantial risk in a fixed income only portfolio. In this paper we will discuss the sources of that risk and demonstrate a much more robust way to ensure portfolio safety.

WHY ARE RATES SO LOW?

Coordinated easy monetary policy by global central banks is the primary reason rates are currently so low. There has been massive ongoing quantitative easing programs in the U.S. and Europe to push down long-term bond yields in an effort to stimulate the economy with lower borrowing costs for consumers, businesses and governments.

The supply of bonds has swelled as governments borrowed to stimulate their economies. The Bank of America Merrill Lynch Global Broad Market Index shows total outstanding debt issuance of \$40 trillion, up from \$24 trillion in June 2007 and \$15 trillion a decade ago. However, global central banks have soaked up this extra supply allowing policy makers to inject money into their economies. The balance sheets of the world's six biggest central banks have more than doubled since 2006 to \$13.2 trillion, according to Chicago-based Bianco Research LLC.

Another factor contributing to current low rates is fear. Fixed income investors have sold bonds of southern European countries that are borderline bankrupt and instead purchased bonds from "safe haven" countries like Germany, the U.K. and the U.S. The same fear has driven investors out of equity markets and into fixed income markets. In 2012, over \$220 billion of investment flowed into bond funds while \$80 billion left equity funds (Investment Company Institute). Since 2008, these numbers are staggering: \$900 billion into bond funds; over \$400 billion out of equity funds.

IS THIS A 'BOND BUBBLE' ?

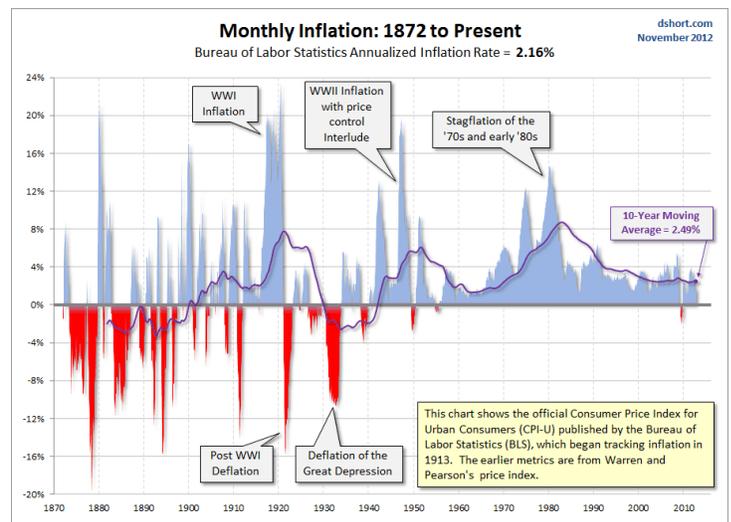
A common question given the unprecedented nature of what is happening is whether the rally in fixed income investments has created a "Bond Bubble" like the technology stock or residential real estate bubbles of the past decade. Traditionally bubble's are characterized by greed and the desire to make money. In this case, the level of rates is a reflection of fear and the desire to preserve capital.

Given the dearth of yield on many fixed income investments, most if not all financial market prognosticators have discussed the possibility of a bond bubble over the last 3 years. Publications such as CNN, Fortune, Forbes, Bloomberg, the Wall Street Journal, and even

Warren Buffett have said that investors should avoid bonds. Most bond market bears say the easy money policies of central banks combined with the rising amount of debt will eventually spark a rapid acceleration in inflation. Investors that simply put money in fixed income due to past results could easily face the same rude awakening technology investors experienced in 2000 when the tech bubble burst.

1.6% YIELD - SO WHAT? WHY DOES IT MATTER TO ME?

How do we put a yield of 1.6% in context? The goal of most individual investors is to increase their purchasing power through time so they can continue to buy the same basket of goods and also grow their underlying pool of capital. Phrased differently, most investors attempt to earn the rate of inflation plus some additional return. Bonds have typically returned about 2% per year over inflation. With 10-year government bond yields at 1.6% and 30-year yields at 3.25%, it would be impossible to have 2% inflation-adjusted returns unless inflation was negative over the next 10 years and 1% over the next 30 years. Is that likely? No. Inflation has been negative only 3 times in the last 60 years. The average rate of inflation over the same 60 years has been 3.7%. In addition the Federal Reserve has stated publicly that it will continue to print money until the economy is healthy resulting in reasonable (good case) or high (bad case) inflation. In other words, with yields where they are currently, investors purchasing government bonds are willingly accepting a reduction in purchasing power over time. This is not a safe investment!



Source: BLS, dshort.com

WHAT IMPACT COULD RISING RATES HAVE ON MY PORTFOLIO?

Expected Return vs. Coupon. We have heard many potential clients tell us their advisor is getting them 4-5% a year on “safe” fixed income securities such as municipal bonds. Even if the bonds are unlikely to default, this statement is wrong for two reasons:

First, remember coupon payment does not equal return! Many municipal bonds have coupons of 4% or 5% because they were issued in the past when rates were higher. This does not mean an investor will make 5% on their money over time. A 10-year bond with a 5% coupon would trade at around \$127 in the current environment. The investor would indeed receive \$5 for every \$100 of bonds purchase but would have to pay \$127 today to buy that \$100 worth of bonds. When the bond matures the investor will only receive \$100 in principal repayment. Thus the actual yield on this security (the rate of return of the investment) is 2%.

Second, there is significant potential for capital loss. Rising rates hurt bondholders because if the bond has a maturity longer than the holding horizon, the holder will experience capital losses. In the above example of a 10-year 5% coupon bond trading at \$127, if market yields were to rise 1% from 2% to 3%, the price of the bond would decline from \$127 to \$117, an almost 8% loss. Unless the investor holds the bond for the remaining 10 years and the issuer makes all payments, this 8% immediate loss likely overwhelms the 2% per year the investor hopes to make by holding the bond.

Furthermore, there are various less direct consequences on assets classes from rising interest rates. For example, companies which rely on short-term financing have increased borrowing costs and therefore lower profitability which hurts equities of those companies. Increased short-term borrowing costs also impact investment decisions by investors. It is no longer costless to hold commodities such as gold when your money can be earning a return in cash and so gold prices will fall. Borrowing to buy assets becomes more expensive which can cause asset prices to fall.

MAYBE THE U.S. IS LIKE JAPAN ?

Perhaps, as in Japan, low interest rates are here to stay. Japan has been in and out of recession since the mid-1990s. During that entire period rates have stayed low.

Many argue this could be a model for the United States. Japanese 10-year yields fell to 2% in 1997 from 5.7% in 1990 and they haven't closed above 2% since 2006.

Deeper inspection of the Japanese economy, however, reveals there are significant differences between it and the United States that make the analogy less accurate, including:

1. The U.S. reacted to its financial crisis with stimulating monetary and fiscal policy immediately whereas Japan took several years to react when it faced financial crisis in the early 1990s. This delayed reaction helped entrench Japan's economy in a low-growth state for an extended period of time.
2. The U.S. has a much more dynamic work force than Japan where corporate policies often make it difficult to change jobs, making firm operations suboptimal and worker wages more stagnant.
3. The demographics of the two countries are very different. Japan has an old and rapidly aging population which has experienced negative growth in recent years. The US population is aging much more slowly and continues to grow in size.

In our opinion, the US is not Japan and we will eventually return to greater growth and higher interest rates.

WHEN ARE RATES EXPECTED TO INCREASE?

Many market practitioners have been calling for higher rates for several years based on one simple theory: ‘they can't go much lower’. While there is some truth to this statement, this explanation fails to identify events that might push rates higher. *There are a few reasons why rates may stay low for the time being:*

1. Continued slow economic growth globally, hampered by continued economic issues in Europe.
2. The Fed has pledged to keep rates low via their “Quantitative Easing” program, hoping low rates will boost economic activity.
3. As the population of the US and the developed world continues to age, older investors will have a tendency to shift their portfolio away from growth-oriented investments such as equities towards ‘stable’ investments such as bonds.

But there are also several potential catalysts that we believe will eventually push rates higher:

1. *Improving economic conditions* caused by an improvement in Europe, a positive resolution of the fiscal cliff, and/or a strong rebound in housing.
2. *An increase in sovereign credit concerns:* The US has similar total debt to GDP levels as Spain and Spain's 10-year yields recently leaped to over 7.50%. The U.K. has one of the highest total debt ratios in the developed world at 507%. And Germany is ultimately holding the bag for endless European bailouts. At some point rates may rise sharply if the market becomes concerned about the ability of countries to make repayment.
3. *Bernanke stepping down:* The Fed policy which has established low rates as a possible solution to slow growth was architected by Chairman Ben Bernanke. There is a reasonable likelihood Bernanke will step down in early 2014 when his term is up and the new incoming Fed Chair will almost certainly be less enthusiastic about low rates.
4. *Inflation:* This is the most often mentioned potential catalyst for higher rates. There is still a lot of slack in the global economy however and so we don't see demand-driven inflation as likely.

IS AN ALL FIXED INCOME PORTFOLIO THE 'SAFEST' PORTFOLIO?

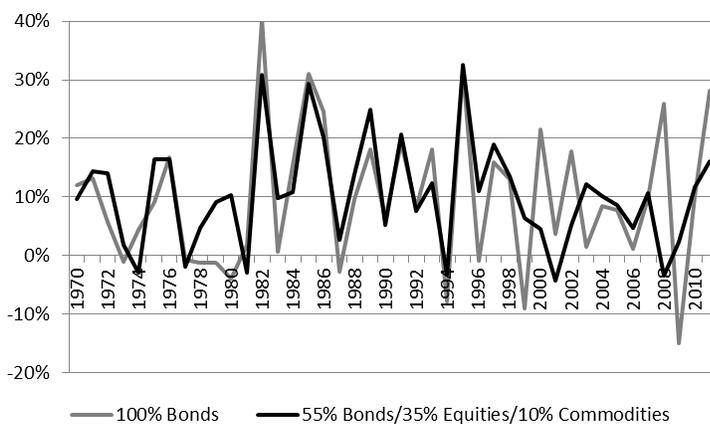
Many investors believe that a portfolio which is 100% fixed income is the 'safest'. While this may have been true for the last thirty years, it is not true conceptually, or historically.

Conceptually, asset prices are driven by macroeconomic risk factors, most notably growth and inflation. Fixed income assets are anti-growth because during periods of higher than expected growth, the fixed rate nature of bonds cannot keep up growth rates. Similarly, fixed income assets underperform in periods of high inflation because their fixed payments fail to keep up with the rate of inflation. Given that the economic environment varies between higher than expected and lower than expected growth as well as higher than expected and lower than expected inflation, it stands to reason that the 'safest' portfolio is one that is balanced to high-growth and low-growth environments as well as to inflationary and deflationary (low to negative inflation) times.

Historical results verify this conceptual belief. If we focus first on growth and use equities as a pro-growth balance to fixed income, you'll see that historically a blend of approximately 70% bonds (US Gov't Bonds) and 30% equities (S&P 500) has been 'safest' based on annual returns since 1970 (Ibbotson & Associates) as judged by either lowest drawdown or lowest volatility (standard deviation).

% Allocation to Bonds	100%	90.0%	80.0%	70.0%	60.0%	50.0%	40.0%
% Allocation to Equities	0%	10.0%	20.0%	30.0%	40.0%	50.0%	60.0%
Risk (Standard Deviation)	11.95%	10.96%	10.35%	10.19%	10.49%	11.24%	12.33%
Largest Annual Loss	-14.90%	-10.76%	-6.63%	-5.17%	-7.95%	-11.04%	-14.12%

When considering inflation as a risk factor, commodities (GSCI) and other real assets can be used to balance the risk in equities and bonds, which both do poorly in times of rising inflation. Indeed using commodities, the safety can further be increased. A portfolio of 35% equities, 55% bonds, and 10% commodities produces the lowest annual loss since 1970 of only 4.3% and has a standard deviation of only 9.1%. In addition, this portfolio has an average annual return of over 0.7% higher than the 100% bond portfolio.



Source: Ibbotson & Associates, GenTrust Calculations

In other words, diversification away from 100% fixed income is key even if an investor's sole priority is to minimize volatility and drawdowns in her portfolio. Given the risks to fixed income in the current environment that we've already outlined, this lesson has never been more important.

HOW DO YOU REDUCE THE EXPOSURE OF A FIXED INCOME PORTFOLIO TO RISING RATES?

There are several ways to reduce the risk of loss in a rising rate environment:

1. *Duration*—Decreasing the maturity of the bonds in your fixed income portfolio reduces its exposure to rising interest rates. Select bonds which have maturities that are equal to or less than your expected holding period.
2. *Extension*—Avoid callable bonds such as mortgage-backed securities or bonds whose expected maturity could extend if rates were to rise.
3. *Diversify*—As shown previously, adding equity, real asset, and alternatives exposures will likely lower the risk of a fixed income portfolio.

BUT I NEED INCOME, WHAT ELSE CAN I DO?

In today's diverse investment landscape, there are several alternative sources of income for those relying on their investment portfolio to produce cash flow. Some of the investment which have less exposure to rising rates which also produce income include:

1. High-quality dividend-paying stocks
2. Real Estate Investment Trusts ("REITs")
3. Master Limited Partnerships ("MLPs")
4. Floating Rate Bonds (including Bank Loans)
5. Inflation-Linked Bonds

SUMMARY

Globally, fixed income markets currently offer near-record low yields. This is driven in large part by central bank bond purchases aimed at encouraging growth. Such low yields indicate investors either expect extended periods of deflation (which has rarely happened) or are willing to lose purchasing power through time. Perhaps the extended bull market in fixed income over the last 30 years has distorted investor perception about the safety of fixed income investments. Regardless of the cause, it is clear many investors have become complacent about fixed income investments and risk falling into the trap of assuming that the 'safest' portfolio is one comprised entirely of bonds. Both conceptually and historically this is false. As our analysis demonstrated, the safest portfolio is diversified across economic environments and contains allocations to equities and real assets such as commodities in addition to fixed income. Indeed the only way in the current environment to meet the goal of our most conservative clients who desire to maintain their purchasing power through time is to implement a portfolio with balanced exposure across asset classes.



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