Rising Bond Yields and a Historical Perspective

As bond yields hover near all-time lows, the fear that bond yields will rise and thus push down bond prices is on the minds of many investors. While the timing of this rise is extremely difficult to predict, as evidenced by many prognosticators in recent years, the worries are real.

The general rule of thumb is that for every 1% change in interest rates, the price of a bond will change by approximately 1% in the opposite direction for every year of duration. Duration is a measure of a bond's price sensitivity to a change in interest rates. While this rule of thumb does not take into account convexity, it does a decent job of estimating losses and gains at a very basic level. Below is an illustration of the price impact of a 1% rise/fall in interest rates on different bond indexes. As you can see, a 1% rise in interest rates would cause an over 5.5% drop in the Barclays U.S. Aggregate Bond index and an over 19% decline in the Barclays U.S. Treasury: 20+ Year Index. Over the course of a year, the income generated from the bonds could help cushion a drop in price, but with yields at low levels this may not be enough to offset a loss from a large jump in interest rates. For example, the Barclays U.S. Aggregate Bond Index currently has a yield around 2%.

Chart 1:

Barclays Index	Duration in Years*	Loss Due to +1% Δ in rates	Gain Due to -1% Δ in rates
U.S. Aggregate Bond	5.52	-5.52%	5.52%
U.S. Treasury: 7-10 Year	7.70	-7.70%	7.70%
U.S. Treasury: 20+ Year	19.20	-19.20%	19.20%
U.S. Treasury: U.S. TIPS	5.22	-5.22%	5.22%
U.S. Intermediate Credit	4.38	-4.38%	4.38%
U.S. Corporate High Yield	4.07	-4.07%	4.07%
Municipal Bond	5.78	-5.78%	5.78%

*Source: Barclays; durations as of August 10, 2016

While the fear of rising rates is warranted, using history as a guide may ease some of the worries in fixed income. Although many would argue we are currently in uncharted waters, yields after World War II were also very low and offer some contextual precedent.

For the first half of the 1950's, the 10-Year Treasury yield was under 3% as America emerged from the war with a large debt burden. As yields gradually rose into the 1970's, there were some years when bond returns were negative. Looking at an intermediate term bond index as an example (see Chart 2), returns in 1955 (-0.65%), 1956 (-0.42%), 1958 (-1.29%) and 1959 (-0.39%) were all negative. With the exception of 1969, the years in which the intermediate term bond index fell, the S&P 500 index gains were significant. In other words, within the context of a diversified portfolio, the gains from the equity portion of portfolios may offset the losses from the fixed income portion. As expected, long term bonds did not fare as well as shorter duration bonds during these negative years due to their longer durations. However, losses in the bond market and especially the intermediate term or limited duration bond market are generally much less than equity markets.

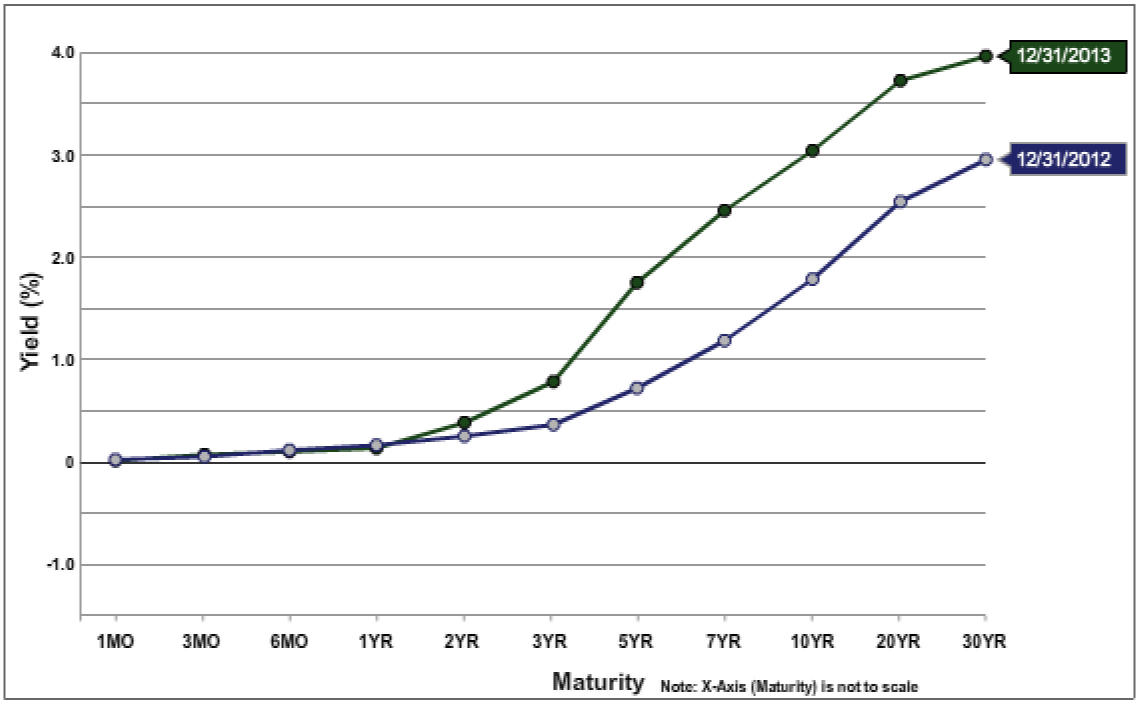
Chart 2:

Date	10-Year Constant Maturity Rate	Intermediate Term Bond Index*	Long Term Bond Index*	S&P 500
1953-12-31	2.59	3.23	3.64	(0.94)
1954-12-31	2.51	2.68	7.19	52.27
1955-12-31	2.96	(0.65)	(1.29)	31.41
1956-12-31	3.59	(0.42)	(5.59)	6.48
1957-12-31	3.21	7.84	7.46	(10.72)
1958-12-31	3.86	(1.29)	(6.09)	43.15
1959-12-31	4.69	(0.39)	(2.26)	11.95
1960-12-31	3.84	11.76	13.78	0.45
1961-12-31	4.06	1.85	0.97	26.88
1962-12-31	3.86	5.56	6.89	(8.66)
1963-12-31	4.13	1.64	1.21	22.76
1964-12-31	4.18	4.04	3.51	16.43
1965-12-31	4.62	1.02	0.71	12.46
1966-12-31	4.84	4.69	3.65	(10.02)
1967-12-31	5.70	1.01	(9.18)	23.89
1968-12-31	6.03	4.54	(0.26)	11.04
1969-12-31	7.65	(0.74)	(5.07)	(8.40)

Source: Board of Governors of the Federal Reserve System (US) and Morningstar
**Intermediate Term Bond Index represented by IA SBBI US IT Govt TR USD; Long Term Bond Index represented by IA SBBI US LT Govt TR USD*

Many investors point to 1994 as a terrible year for bonds calling it the "1994 Bond Massacre." However, the Barclays U.S. Aggregate Bond Index was down less than 3% that year. If we turn to more recent history when the taper tantrum occurred in 2013, the yield on the 10-Year Treasury jumped from 1.72% in 2012 to 2.90% in 2013 as the Fed discontinued its quantitative easing program. The benchmark bond index dropped 2.02% in 2013, while the S&P 500 rose over 30%. This is also a good example of the yield curve not shifting in a parallel fashion. While the long end of the yield curve and 10-year part of the yield curve saw interest rates rise in 2013, the shorter end of the curve remained relatively unchanged. Rising rates impacted longer duration bonds but not shorter duration bonds. This helps explains why the Barclays U.S. Aggregate Bond Index, which had a duration around five years, only fell about 2% when the 10-year Treasury yield rose 1.18%.

Chart 3: Treasury Yield Curve



Source: U.S. Department of the Treasury

The risk of rising yields in the bond market is a very legitimate concern, as a sharp jump in yields would also mean a sudden decline in bond prices. Of course, this time could be different, but historically, these declines, especially for intermediate term bonds, were manageable, and bonds have acted as a good diversifier against equity volatility. While yields in the U.S. will likely go higher in the future, it is hard to predict when. Currently, there has been strong demand for longer-dated Treasuries from institutions and foreign investors, which may keep the long end of the yield curve range-bound. Although the Fed may raise rates, and possibly have a direct impact on the short end of the yield curve, impact to the long end may continue to be muted. While we do not expect long term rates to change dramatically, small changes in the long end of the yield curve could cause large changes in bond prices. Thus, we still recommend maintaining shorter-than-benchmark duration in portfolios though strong demand for longer dated Treasuries has been noted. We also recommend an overweight to credit, which should provide more yield, and thus a greater buffer, against a fall in bond prices. Hopefully, when yields do rise, it will be driven by a strong economy and rebounding equity markets. In addition, the U.S. Federal Reserve is expected to try to ensure that rates rise gradually, not suddenly. While we favor more credit-sensitive bonds, we still recommend some exposure to rate-sensitive bonds in a diversified portfolio to help mitigate volatility from equities.

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Glossary

*The **Barclays U.S. Aggregate Bond Index**, which used to be called the Lehman Aggregate Bond Index, is a broad base index, maintained by Barclays Capital, and is often used to represent investment grade bonds being traded in the U.S. Barclays Capital (BarCap) U.S. Aggregate Bond Index is made up of the Barclays Capital U.S. Government/Corporate Bond Index, Mortgage-Backed Securities Index, and Asset-Based Securities Index, including securities that are of investment grade quality or better, have at least one year to maturity, and have an outstanding par value of at least $100 million.*

*The **Barclays U.S. Treasury: 7-10 Year** Index measures the performance of U.S. Treasury securities that have a remaining maturity of at least seven years and less than 10 years.*

*The **Barclays U.S. Treasury: 20+ Year** Index measures the performance of U.S. Treasury securities that have a remaining maturity of at least 20 years.*

*The **Barclays U.S. Treasury: U.S. TIPS** Index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have $250 million or more of outstanding face value.*

*The **Barclays U.S. Intermediate Credit** index measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a remaining maturity of greater than one year and less than ten years.*

*The **Barclays U.S. Corporate High Yield Index** measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt.*

*The **Barclays U.S. Municipal Bond Index** is an unmanaged, market-value-weighted index of investment-grade municipal bonds with maturities of one year or more.*

The **IA SBBI US IT Govt *Bond* TR *Index*** *is the Ibbotson Associates Stocks, Bonds, Bills and Inflation Intermediate Term Government Bond Total Return Index which i a custom unmanaged index designed to measure the performance of U.S. Treasury bonds with no less than 5 years to maturity.*

The **IA SBBI US LT Govt *Bond* TR *Index*** *is the Ibbotson Associates Stocks, Bonds, Bills and Inflation Long Term Government Bond Total Return Index which is a custom unmanaged index designed to measure the performance of long-term U.S. government bonds which includes U.S. Treasury and U.S. Government Agency bonds with maturities of seven years or longer.*

*The **S&P 500** is an index of 500 stocks chosen for market size, liquidity and industry grouping (among other factors) designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe.*