CBIS

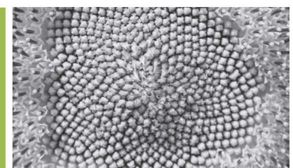
Christian Brothers Investment Services

ACTIVE MANAGEMENT

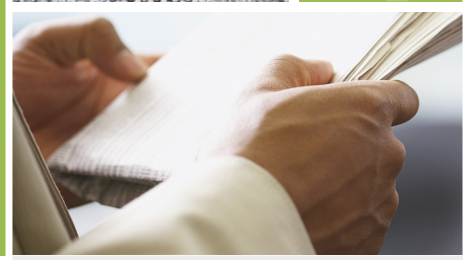
Bond Investing and Rising Rates

DECEMBER 2015

Rising rates don't mean the death of bonds. While a sharp jump in rates will almost certainly produce near-term losses for bond portfolios, the decline in principal value can be recovered with higher yields over time. Core bond investors can generate positive long-term returns even as rates climb. Core bonds can remain a valuable source of income and a hedge on equity market weakness.



Catholic Responsible Investing



Fear of rising interest rates has been a dominant theme confronting bond investors since the 2008/2009 financial crisis, if not before. After a 30-year secular decline in interest rates that started in the early 1980s, along with three rounds of post-financial-crisis quantitative easing and seven years of zero short-term rates, bond yields are at 60-year lows. And the Fed's experiment with unprecedented monetary stimulus has driven an equally unprecedented expansion in the size of its balance sheet. The Fed ended QE in 2014 and hopes to end its zero short-term rate policy as soon as possible. Most economists expect moderate U.S. economic growth to continue, and some decry the Fed's three rounds of QE as a pile of potentially inflationary tinder. To some market observers, interest rates would seem to have nowhere to go but up. Isn't that a real risk for bond investors?

The answer is "yes and no". Investors should certainly think carefully about how to structure their portfolio's bond allocation given the risk of rising rates. In fact, CBIS launched the **CUIT Opportunistic Bond Fund** in 2013 to help participants do this. But investors should also keep rate fears in perspective. Given the mathematics of bond portfolio management, a sharp rise in rates may very well result in a year or more of negative returns as bond prices fall. But rising rates also mean rising bond yields, creating an increasing stream of coupon income as rates climb. This would be good news for long-term bond investors, such as underfunded pension plans, who

Summary

- With interest rates at 60-year lows and eight years of unprecedented interest rate suppression, many bond investors are concerned about the impact of rising rates on bond exposure and broader portfolio performance.
- A rise in rates may result in short-term negative returns, but also higher future income and longer-term bond returns.
- Historically, the strongest returns came when market yields were high, augmented by rising principal values during the secular decline in interest rates that began in the 1980s.
- Rolling 10-year bond returns never fell below zero and rolling 3-year returns rarely did, over nearly a century of data.
- Equities may in fact be the weaker asset class as rates rise; bonds may still function well as a hedge on equity market weakness.
- The best way for Catholic institutions with long-term horizons to address the risk of rising rates is through intelligent diversification of bond exposure.

need higher returns from their bond allocations in order to meet future obligations. Moreover, there's no guarantee that equities would fare better than bonds as rates rise; they may in fact do considerably worse. A core bond allocation can still serve as a valuable hedge on equity market weakness.

A CENTURY OF RATES AND RETURNS

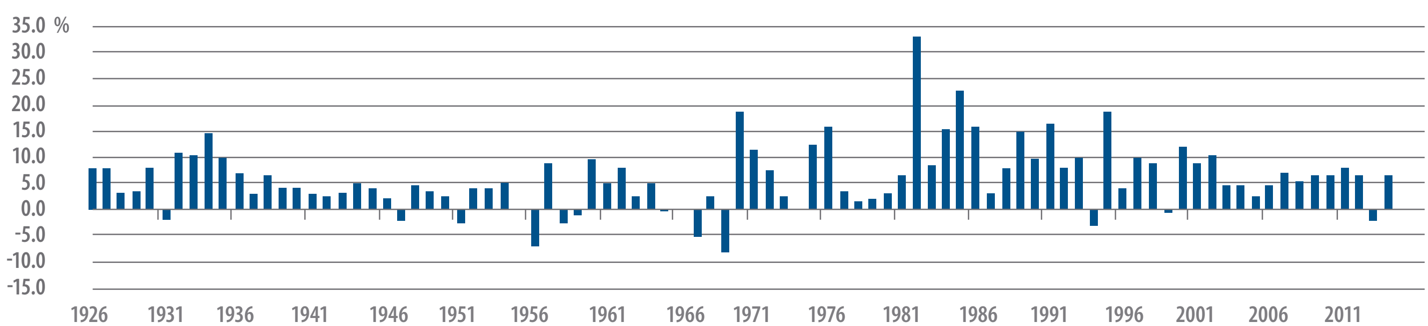
We can't know where yields will be next year or the year after (nor do we encourage participants to guess), but we can look at history and gain perspective on how bonds might perform should rising rates become a reality. Tables I and II show nearly a century of U.S. interest rates and bond returns. The interest rate data is the yield for bonds rated BAA by Moody's, a data series available from the Federal Reserve Bank of St. Louis website (FRED) that offers a historical record dating back to 1919. The bond return series is Wilshire Associate's U.S. Core Bond Index, a proxy for core bond returns developed from a range of sources, by Wilshire, to provide data back to 1925. (The index was developed for research and analysis and does not represent an investible benchmark, although it mirrors the Barclays Capital U.S. Aggregate Index back to that index's inception date in the 1970s.) A few key facts from the data quickly present themselves:

- While today's yields are certainly low, yields were even lower from the mid 1940s into the early 1950s. Should tepid economic growth and low inflation persist, today's low rates may last longer than many investors expect.
- Annual bond returns were generally positive over the nearly 100-year period, which is not a surprise, but were often positive even as rates were climbing
- The strongest absolute bond returns came when market yields were high (creating strong coupon income), augmented by rising principal values during the secular decline in interest rates that began in the 1980s.

I. A CENTURY OF INTEREST RATES: Moody's BAA Corporate Bond Yield (1919-2015)

Source: St. Louis Fed (FRED)

II. ANNUAL BOND RETURNS: U.S. Core Bond Index (1926-2014)



Source: Whilshire Compass, U.S. Core Bond Index

Table III presents the worst years for bonds over the entire period. The worst of the worst occurred in the 1950s and 1960s as yields rose from very low levels. However, with the exception of 1969 and the Great Depression year 1931, an investor with a diversified portfolio would have benefitted from generally strong stock market gains during the years bonds produced losses, showcasing the benefit of diversification.

Likewise, Table IV shows the weakest years for stocks. Unsurprisingly, these are far weaker than the worst years for bonds. And notably, in every year except 1931, bonds produced positive returns when equities were weakest, ameliorating to some extent the misery of equity market losses.

STAYING POSITIVE IN BONDS

Many CBIS participants have asset pools with investment horizons that extend, if not to an infinite future, then into a very distant future. With appropriate portfolio planning, CBIS participants can and should take a long-term view of asset class returns when structuring diversified portfolios.

Tables V and VI on the following page show rolling 3-year and rolling 10-year quarterly returns for bonds and equities over nearly a century of financial history. The bond data series starts in 1926, permitting a rolling 3-year record to begin in 1929 and a rolling 10-year record to begin in 1936. The equity data series uses S&P 500 Index returns that begin in 1936.

Despite the secular trend in rising rates from the mid 1940s to the early 1980s (and a few years with notable losses for bonds), bonds produced positive rolling 10-year returns over the entire period and generally positive 3-year returns. To be sure, bond returns were not very strong during the decades of the 1950s and 1960s — in part due to the very low yields of the period. But outside of a few brief stretches during the late 1950s and 1960s, when rolling 3-year returns dipped into negative territory, longer-term bond returns remained positive.

III. WORST YEARS FOR BONDS

(1926 – 2014)

Year	Bonds' Return (%)	Stocks' Return (%)
1969	-8.09	-8.40
1956	-6.81	6.48
1967	-4.95	23.89
1994	-2.92	1.32
1951	-2.69	23.97
1947	-2.34	5.63
1958	-2.22	43.15
2013	-2.02	32.39
1931	-1.85	-52.67
1959	-0.97	11.95
1999	-0.83	21.04
1965	-0.46	12.46

Source: Wilshire Compass
Note: U.S. Core Bond Index; S&P 500 back to 1937; for 1931, Dow Jones Industrial Average price return.

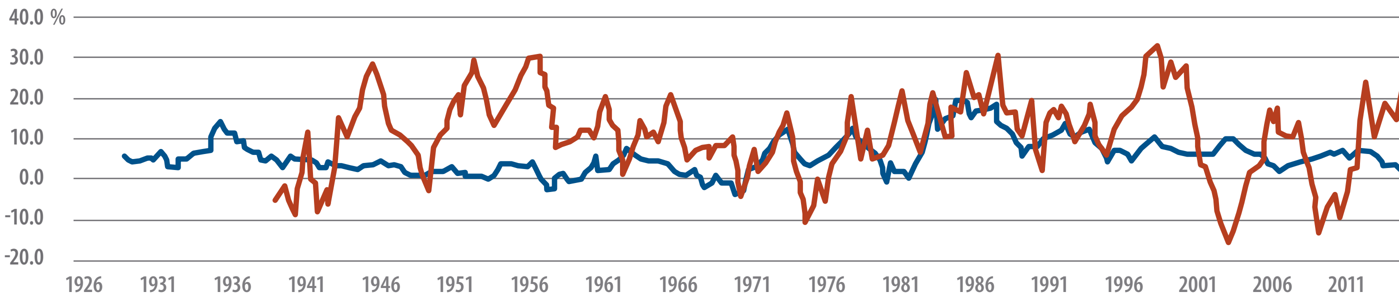
IV. WORST YEARS FOR STOCKS

(1926 – 2014)

Year	Stocks' Return (%)	Bonds' Return (%)
1931	-52.67	-1.85
2008	-37.00	5.24
1937	-34.73	2.75
1930	-33.37	7.98
1974	-26.47	0.17
1932	-22.64	10.82
2002	-22.10	10.26
1929	-17.17	3.27
1973	-14.69	2.30
2001	-11.89	8.43
1941	-11.59	2.73
1957	-10.72	8.71

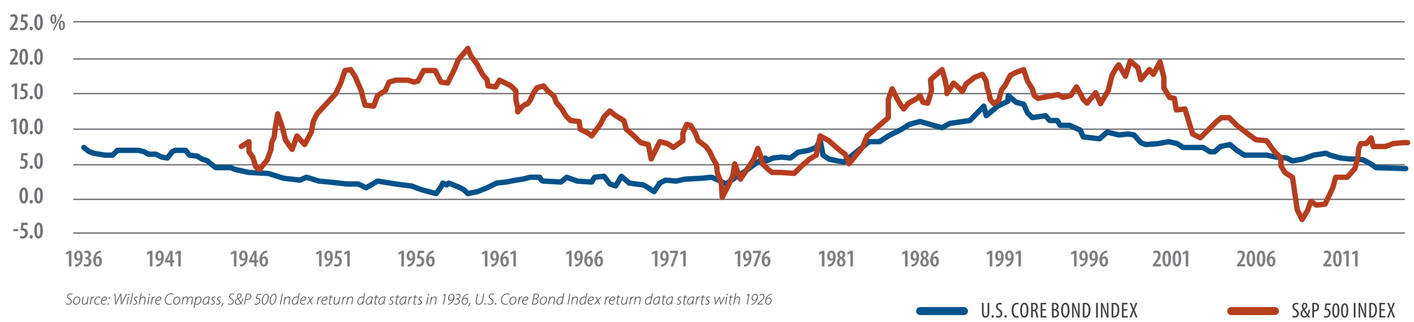
Source: Wilshire Compass
Note: U.S. Core Bond Index; S&P 500 back to 1937; for 1929, 1930, 1931, 1932, Dow Jones Industrial Average price return.

V. ROLLING 3-YEAR RETURNS (1926-2014)



Source: Wilshire Compass, S&P 500 Index return data starts in 1936, U.S. Core Bond Index return data starts with 1926

VI. ROLLING 10-YEAR RETURNS (1926-2014)



Source: Wilshire Compass, S&P 500 Index return data starts in 1936, U.S. Core Bond Index return data starts with 1926

Table VII shows a different framing of the data. Bonds produced positive compound annualized returns during the 1950s and 1960s, a two-decade stretch that spanned much of the 30-year uptrend in rates that began in the 1940s. In the inflation wracked 1970s, bond returns benefitted from the interest income produced by heightened yields and solidly outperformed stocks, as stocks produced back-to-back years with significant losses in 1973 (-14.7%) and 1974 (-26.5%) along with a moderate decline in 1977 (-7.2%). The secular decline in yields that began in the early 1980s, and continues to this day, has helped produce positive results for bonds for each of the past three decades.

EVALUATING RISK OF RISING RATES TODAY

Analysis of historical data offers a context for examining the current risk of rising rates, yet it doesn't fully substitute for a thoughtful assessment of today's circumstances. We can gain additional insight by looking at a bond portfolio's duration (i.e. its price sensitivity to changes in rates). Generally speaking, duration is a measure of the sensitivity of a bond portfolio's market value to a uniform rise or fall in interest rates across the yield curve. Duration can offer a rough proxy for a bond portfolio's overall price sensitivity to a shift in prevailing market yields.

VII. BONDS AND STOCKS BY THE DECADE: COMPOUND ANNUALIZED RETURNS

Year	Bonds (%)	Stocks (%)
1950s	1.00	19.25
1960s	1.68	7.81
1970s	7.16	5.87

Year	Bonds (%)	Stocks (%)
1980s	12.44	17.56
1990s	7.69	18.21
2000s	6.33	-0.95

Source: Wilshire Compass, U.S. Core Bond Index, S&P 500 Index

The **CUIT Intermediate Diversified Bond Fund,** for example, had a duration of 5.0 years at September 30, 2015, typical of the 4- to 6-year range that characterizes most core bond programs (as well as the Barclays Aggregate Index, the standard core bond benchmark). A duration of 5.0 years indicates a bond portfolio's value would decline by roughly 5% (5.0 x 1%) given a 100-basis-point (i.e. one percentage point) rise in rates across the yield curve. A 200-basis-point jump would result in an about a 10% decline in portfolio value. However, these estimates should not be taken too literally. A parallel shift in yields is highly unlikely; yields are far more likely to rise differently across the curve. A bond portfolio also earns interest income as time passes, eventually offsetting the impact of rising yields on its principal value. And active bond portfolio managers can take advantage of a range of strategies — such as curve positioning, sector positioning, security selection, and active trading — in search of enhanced yield and overall return.

IMPACT ON BOND PORTFOLIOS OF VARYING DURATIONS

Despite the inability to make anything but rough estimates of the impact of rising rates on bond returns, some investors may find such an exercise to be a helpful way to gain insight. It would seem highly unlikely, given the prevailing slow growth and deflationary forces still at work globally, that rates could or would jump sharply higher. But the concept of duration gives a rough guide to what might happen across a range of bond portfolios as rates rise. Table VIII shows four hypothetical bond portfolios with increasing effective durations that range from a short-maturity proxy (at 1.5 years duration) all the way to a very long-maturity portfolio (at 10 years duration). The exercise assumes two distinct rate rise scenarios: parallel shifts upward in rates of +100 basis points and +200 basis points. The total impact over one year includes the estimated decline in principal value due to portfolio duration plus positive return from coupon income during the year. There is no attempt to predict any contribution from active management decisions, changes in credit spreads, non-parallel shifts in the yield curve, changes in the yield curve over time, portfolio convexity (the change in duration as rates change) or other potential factors that would impact real-world return. The exercise is simply one of basic arithmetic, yet it may help put into perspective the headwind a sudden rate rise would pose to bond performance. Note also that the higher yields available at the start of year two would help recover losses (particularly for shorter-maturity portfolios) relatively quickly in subsequent years, provided rates did not jump yet again.

Duration is a useful metric for estimating interest rate sensitivity, but it does not by itself produce a useful return forecast, particularly for longer-term performance. That requires a more nuanced judgment and a recognition of all the forces at play that determine bond portfolio returns over varying time frames. A thoughtful review of historical data is perhaps a more meaningful exercise.

VIII. RISING RATES: IMPACT ON BOND PORTFOLIOS OF VARYING DURATIONS

	HYPOTHETICAL BOND PORTFOLIOS							
Effective Duration	1.5 years		3 years		5 years		10 years	
Rate Rise	+100 bps	+200 bps	+100 bps	+200 bps	+100 bps	+200 bps	+100 bps	+200 bps
Current Yield	1.5%	1.5%	1.75%	1.75%	3.25%	3.25%	4.0%	4.0%
Duration Impact	-1.5%	-3.0%	-3.0%	-6.0%	-5.0%	-10.0%	-10.0%	-20.0%
Yield Impact	+1.5%	+1.5%	+1.75%	+1.75%	+3.25%	+3.25%	+4.0%	+4.0%
Year 1 Total Impact	0%	-1.5%	-1.25%	-4.25%	-1.75%	-6.75%	-6.0%	-16.0%
Year 2 Starting Yield	2.5%	3.5%	2.75%	3.75%	4.25%	5.25%	5.0%	6.0%

Note: The total impact over 1 year is not a prediction or forecast of return for an actual bond portfolio. This is simply an arithmetical exercise that roughly depicts the return headwind to bond portfolios generated by the indicated rise in rates across the yield curve. The Duration Impact is simply the Effective Durations shown multiplied by the indicated rate rise; this represents the decline in portfolio market value caused by the rate rise. The Yield Impact is simply the contribution to overall return from the portfolio's current yield over 1 year. Real world bond portfolio returns will also be influenced by active management decisions made by the portfolio managers over the 1-year period as well as the influence of convexity (i.e. the change in duration as rates change).

One key fact, however, should not be minimized. Given today's very low absolute levels of bond yields, there is little interest income available to cushion even a moderate sudden rise in rates. In this regard, today's bond market environment may be analogous to that of the 1950s (although the global economic backdrop and prevailing practices in central banking across developed nations are starkly different). Investors should expect the likelihood of a year or more of negative returns if rates do jump, but they should not overdramatize this threat.

INTELLIGENT DIVERSIFICATION IS THE BEST DEFENSE

CBIS does not try to forecast moves in interest rates, and we advise participants not to base portfolio strategy on a belief they have special insight into future rate moves. Few professional bond investors have been able to do this successfully; more often they get whipsawed by failed forecasts and by the emotion that comes with poor performance. CBIS has chosen our bond sub-advisors based on their differing investment styles and how they complement each other within each of the CBIS-managed funds. They succeed by virtue of their skill and experience in a variety of market environments and with a variety of strategies for adding value.

If we knew with certainty what bond returns and stock returns would be in the years ahead, our portfolio allocation decisions would be easy. But we simply don't know. So we exercise our best judgment, formed around a careful analysis of history and of the risks and opportunities evident in today's macroeconomic landscape, ever mindful of the difficulty of predicting interest rate or stock market moves with any consistency or precision. In that light, we think there are good reasons for CBIS participants to maintain a core bond allocation, even in today's low-interest rate environment. Core bonds offer a valuable hedge on equity market weakness as well as an income stream, albeit a modest one right now given today's yields. And even if interest rates do begin to rise, the weaker asset class may be stocks, while bond portfolios can recover initial losses with higher yields over time.

In CBIS view, the best way for participants to address the risk of rising rates is through intelligent diversification of bond exposure and the use of skilled, veteran sub-advisers with a demonstrated ability to succeed in a variety of market environments. CBIS offers three bond funds that give any CBIS participant the ability to structure an intelligently diversified bond portfolio.

- **CUIT Short Bond Fund** — a short-duration vehicle emphasizing income, whose yield will climb along with market yields if interest rates rise.
- **CUIT Opportunistic Bond Fund** — a short- to moderate duration vehicle that offers its two sub-advisers wide latitude to manage duration and the ability to implement a broad range of strategies.
- **CUIT Intermediate Diversified Bond Fund** — a traditional core bond vehicle diversified across three sub-advisers with unique and complementary styles.

Institutional investors should focus on carefully tailoring portfolio strategy to meet their organization's short- and long-term financial needs — this is often the best approach when facing the ups and downs, risks and opportunities and emotional highs and lows presented by ever-changing markets.

CBIS INSTITUTIONAL FIXED INCOME FUNDS			
	CUIT Short Bond	CUIT Opportunistic Bond	CUIT Intermediate Drivers. Bond
Manager (% Assets)	Longfellow (100%)	Longfellow (50%) Reams (50%)	Jennison Associates (40%) Dodge & Cox (35%) Reams Asset Mgmt. (25%)
Benchmark	BofA/ML 1-3 Year Treasury Index	Barclays 1-5 Year Government Credit Index	Barclays Capital Aggregate Index
Investments	■ Short-term U.S. government, agency, corporate, asset-backed and mortgage-backed securities. ■ Up to 10% of the portfolio may be invested in short-maturity bonds rated below-investment-grade.	■ Primarily U.S. government, agency, corporate, mortgage- and asset-backed securities (below-BBB permitted up to 20% of total Fund assets) ■ Opportunistic but modest use of derivatives to employ credit spread strategies and duration exposure at reduced trading costs ■ Opportunistic but modest use of merger-arbitrage (announced mergers only with no leverage).	■ U.S. Government, agency, corporate, mortgage-backed and asset-backed securities with an effective duration of 4 to 6 years. ■ Holdings are primarily investment grade (BBB to AAA, based on the three primary agency ratings), with no more than 10% of the portfolio rated below BBB.
Duration Range	Approximately 1.5 years	Approximately 1 to 4 years	Approximately 4 to 6 years
Portfolio Applications	■ Yield enhancement for cash not requiring immediate liquidity. ■ Income (dependent on the level of short-term yields) ■ Principal protection	■ Hedge against equity market weakness ■ Source of stable income ■ Helps bond exposure contend with volatile and generally rising interest rates.	■ Deflation hedge ■ Portfolio hedge against equity market weakness ■ Source of stable income
Inception Date	January 1985	May 2013	January 1995

All CBIS institutional funds are managed in accordance with CBIS' industry-leading Catholic responsible investing criteria

Important Information

The CUIT Funds are exempt from registration with the Securities and Exchange Commission and therefore are exempt from regulatory requirements applicable to registered mutual funds. All performance (including that of the comparative indices) is reported net of any fees and expenses, but inclusive of dividends and interest. Past performance is not indicative of future performance. The return and principal value of the Fund(s) will fluctuate and, upon redemption, shares in the Fund(s) may be worth less than their original cost. Complete information regarding each of the Funds, including certain restrictions regarding redemptions, is contained in disclosure documents which can be obtained by calling 800-592-8890. Shares in the CUIT Funds are offered exclusively through CBIS Financial Services, Inc., a broker-dealer subsidiary of CBIS. This is for informational purposes only and does not constitute an offer to sell any investment. The Funds are not available for sale in all jurisdictions. Where available for sale, an offer will only be made through the prospectus for the Funds, and the Funds may only be sold in compliance with all applicable country and local laws and regulations.