



## Market and economic commentary

# Great-West Lifetime Funds

To date, 2016 has been volatile in the financial markets. Despite the various ups and downs, however, the year has generally been a good one for both equities and fixed income, with the majority of asset classes posting positive returns. Although the heightened volatility has continued to drive headlines and drive a risk-on/risk-off type of environment, the underlying asset class return numbers have been relatively strong.

Economic growth continued at a slow pace in the second quarter, with the final estimate coming in at an annualized rate of 1.4% (which reflects an increase from 0.8% in the first quarter).<sup>1</sup> Slow economic growth remains a distinct headwind for the performance of financial markets. After some very inspiring jobs numbers in June and July (where the economy created 292,000 and 252,000 new jobs, respectively), the numbers slipped a bit in August and September and reflected only 167,000 and 156,000<sup>2</sup> new jobs, respectively. At this point, it is difficult to discern whether the slowing jobs market can be called a trend or simply reflects the natural volatility of month-by-month job creation.

In the third quarter of 2016, oil prices continued to stay in the \$40-\$50-per-barrel range. This represents a significant price increase from early this year when oil prices slipped below \$34 per barrel in January as well as a dramatic decrease from where prices were several years ago. While more stable oil prices have helped the energy sector, prices in the current range are challenging for many energy producers. Commodities, at large, are having a relatively strong year after several consecutive years of significant declines. Gold prices had hovered in the \$1,300-\$1,375 range in terms of price per ounce before pulling back as we reached the end of September.<sup>3</sup>

The U.S. Federal Reserve (the "Fed") again passed on a rate increase at their most recent meeting in September, likely pushing any rate hikes beyond the date of the upcoming election. The market now predicts a rate increase at the December meeting. At the time of this writing, the likelihood of a Fed rate increase coming out of the December meeting as implied by the futures markets is now greater than 50%.<sup>4</sup> The Fed Funds rate currently remains targeted at 0.25%.

As we discussed last quarter, longer rates are still depressed. At the start of the year, the benchmark 10-year Treasury note was trading around 2.25%, and it declined nearly 0.90% in the period following the June "Brexit" vote. However, through Q3, the 10-year Treasury note slowly worked its way higher, briefly crossing 1.70% before closing the quarter near 1.60%.<sup>5</sup>

### Impact of rising rates on stock market returns

As we continue to edge ever closer to the widely anticipated next Fed rate hike, it is worth analyzing what type of impact this may have on the future returns of equities. The markets remain jittery over the prospect of rising rates. A rising-rate climate is generally perceived by the market to have a dampening effect on economic growth, which, in turn, should impact the future performance of equity markets. Great-West Capital Management, LLC (GWCM) analyzed the annual returns of the S&P 500 Index and the three-month T-Bill Rate since 1937 (the first year data was available). We looked at the relationship between the changes in T-Bill yields during each year opposite the return of the S&P 500® Index.

Our analysis uncovered a relationship that was a bit surprising. First, there is virtually no correlation between

1 <http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm>

2 <http://www.bls.gov/news.release/empstat.nr0.html>

3 <http://www.wsj.com/articles/gold-prices-fall-to-new-four-month-low-1475765972>

4 <http://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html>. Accessed October 6, 2016

5 <http://www.bloomberg.com/quote/USGG10YR:IND>

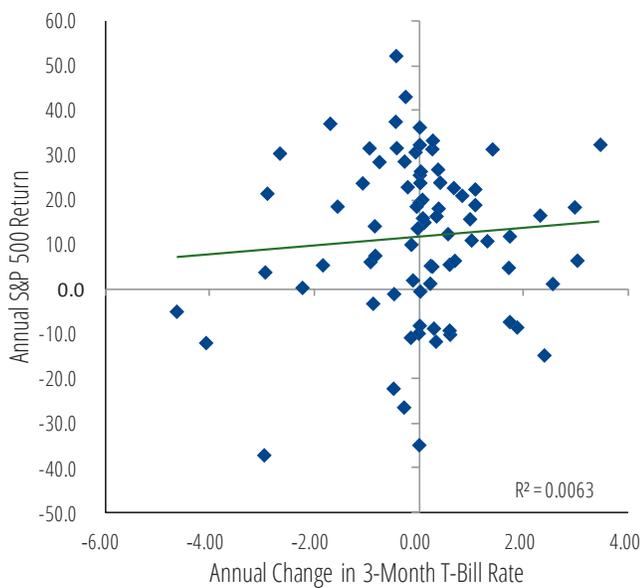


interest rate movements and stock market performance. The R-Squared Value (which measures the degree of statistical correlation between two sets of data) was virtually zero, suggesting there is very little relationship between the two outcomes. This suggests that rising rates do not directly impact future stock market returns. Intuitively, this makes sense. While rising rates indicate that the Fed may be attempting to slow growth to help prevent inflation, it also indicates that the economy is generally healthy enough to absorb the rate hike. While interest rate changes may have some degree of influence on stock market performance, they are clearly not a critically important factor. Nor is it reasonable to

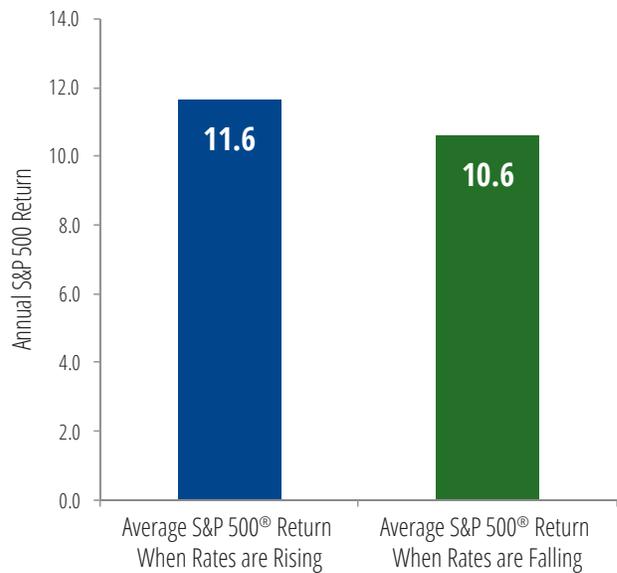
believe that rising rates, in and of themselves, will be enough to derail the current stock market rally. That said, when looking at sheer averages, the stock market appears to actually do marginally better during rising-rate environments, on average, than it does in falling-rate environments. On average, since 1937, when three-month T-Bill rates increased during a single quarter, the S&P 500® Index has returned 11.6% annually. However, during falling-rate environments, the index has returned, on average, only 10.6%.

This analysis should demonstrate that rising rates are not necessarily anything to fear for stock market investors in the near term.

Annual S&P 500 Returns vs. Annual Change in T-Bill Rate (1937-2015)



S&P 500 Returns Under Various Rate Conditions (1937-2015)



### Asset class performance

A number of asset classes have produced strong, if not record-setting, returns so far into 2016. The slow yet positive economic growth has been enough for equities to chart an upward, albeit volatile, path. Much of this performance continues to be seen in the domestic equity markets, and international names continue to lag behind their domestic counterparts—a trend that we have witnessed for a number of years. As we'll see below, the year has also been kind to fixed-income investors.

The S&P 500® Index, a widely followed barometer of U.S. large-cap stock performance, closed the quarter with a gain of 3.9% on a total return basis, bringing the year-to-date return up to 7.8%. Over longer time periods, the returns for the index remained even stronger. While the three-year return for the index for the period that ended September 30, 2016, was 11.2% on an annualized basis, the five-year annualized number was an impressive 16.4%.

Source: Morningstar Direct; U.S. Federal Reserve; GWCM Analysis. Three years where there was no change to the 3-month T-Bill rates were omitted from the analysis (1943, 1944, 1945, 1946, and 2013).



Small cap stocks, as measured by the S&P SmallCap 600® Index, again had a stronger quarter than the large-cap stocks, and longer-term numbers are catching up to the returns of the domestic large-cap names. For the quarter, the S&P SmallCap 600® posted an impressive return of 7.2%, bringing the year-to-date number for the index up to 13.9%. The one-year number for the period that ended September 30, 2016, was 18.1%, and the annualized five-year number as of September 30, 2016, was 17.9%. The three-year number reflects some more choppiness than we've seen in recent years and reflects a more muted 9.0% on an annualized basis.

### International equities

Outside the U.S., equity markets were very strong in the quarter, although longer-term numbers lagged domestic equities. The MSCI EAFE® Index, which measures the performance of developed equity markets outside the U.S. and Canada (primarily in Western Europe and developed Asia), realized a total return of 6.4% on the quarter, dragging the year-to-date return into positive territory at 1.7%. The MSCI Emerging Markets® Index was even more impressive, generating a total return of 9.0% for Q3. Year to date, emerging markets have generally been encouraging, generating a total return of 16.0% and outperforming developed-world equities both in the U.S. and globally. Emerging markets could finally be shaking off a long-term rough patch in which the three-year return has been an annualized loss of 0.6%.

Returns on commodities slipped again in 3Q. The Bloomberg Commodity® Index, which tracks a broad-based basket of various commodities, realized a positive return of -3.9% for the third quarter, dragging the year-to-date number down to a still formidable 8.9%. Despite the strong recent returns so far in 2016, however, commodities have performed very poorly over longer-term periods, posting annualized losses of 12.3% and 9.4% annualized over the three-year and five-year trailing periods, respectively.

Growth names outperformed value names, on average, in the quarter (reflecting a recent resurgence in growth stocks). The Russell 1000 Growth Index has realized a return of 4.6% for the quarter, relative to 3.5% for the Russell 1000 Value Index. A similar relationship held in small caps where the Russell 2000 Growth Index, which

measures the performance of U.S. small-cap growth names returned 9.2% relative to 8.9% for its value-oriented counterpart (the Russell 2000 Value) in a strong quarter for small caps all around.

### Fixed-income markets

The third quarter was generally a good time for fixed-income investors despite a marginally rising-rate environment. The yield on the benchmark 10-year Treasury note increased from 1.49% at the end of the second quarter to 1.60% by the end of the third quarter. Despite the increase in rates on the quarter, fixed-income returns were generally positive and remain well into positive territory for the year-to-date period. While the Barclays U.S. Aggregate Bond® Index posted a return of 0.5% for the quarter, the year-to-date return on the index now stands at 5.8%. High-yield bonds were strong in the quarter, as they have been for the year so far. The Barclays U.S. Corporate High Yield Index®, which tracks the returns of the non-investment-grade bond market, posted a return of 5.6% for the quarter and was up 15.1% in the first nine months of the year.

### Real estate

Finally, the domestic real estate market as measured by the performance of the FTSE NAREIT All Equity REITs® Index was the one blight on asset class returns in the quarter, with the Index posting a loss of 1.2%. Despite the poor showing in the quarter, the index remains in positive territory to the tune of 12.3% for the year-to-date period, and an impressive 20.9% in the one-year period which reflects a very strong quarter for real estate in the fourth quarter of 2015.

### Performance of the Great-West Lifetime Funds®

The Great-West Lifetime Funds and Great-West Lifetime Conservative Funds each closed out the quarter with positive returns ranging from 2.3% to 4.9%. Each of the funds benefited during the quarter from the positive returns generated by most asset classes, particularly due to their investments in non-U.S. equities, which posted a strong quarter. Each Fund, by design, is broadly diversified across global equity and fixed income asset classes. In general, the performance of each of the Funds is influenced, overall, by the performance of the various equity and fixed income asset classes in which the Funds invest.



In the longer term, the fund's results continue to match our expectations for performance. Over longer time periods, the performance variations among asset classes become far more pronounced. The Great-West Lifetime Conservative Funds, which tend to have less equity exposure and are structured to place greater emphasis on downside protection relative to their peers, have generally performed in line with their Morningstar® categories in the three-year trailing period, despite a broad underweight to equity securities in a period where equities generally outperformed fixed income. As expected, the returns of the Conservative funds have lagged their Morningstar categories in the five-year period, due, largely to their underweight in fixed income relative to other funds in their respective categories. Also as expected during a relatively strong period for equity markets, the Lifetime Conservative Funds have underperformed the Great-West Lifetime Funds. The Lifetime Funds, which have significantly greater exposure to equity securities and are intended to target more upside market capture, have generally outperformed their Morningstar categories over longer term periods — again, in line with our goals for investment performance.

One positive driver of relative performance for the funds was their investment in the Great-West MFS International Value Fund.<sup>7</sup> This fund has been a consistent high-performer in the space and has been regularly cited as a reason for outperformance of the funds over recent years. This fund deploys a compelling stock selection process to non-U.S. (primary large-cap, developed-market) names. The managers of the fund have consistently been able to generate outperformance for fund investors. While the fund's return of only 5.4% in the third quarter was

not particularly impressive, relative to other funds in the category, longer-term results have been very strong. The fund returned 16.3% and 7.8%<sup>8</sup> on an annualized basis over the one and three-year periods, respectively, which rank in the top 2% and 1% of all funds in the Morningstar category, respectively.<sup>9</sup>

Another positive driver of fund performance for the quarter was the Great-West Putnam High Yield Bond Fund.<sup>10</sup> This strategy leverages Putnam's deep capabilities in high-yield fixed income to identify names in the space that they expect to outperform. The fund has had an impressive run over the past several years, despite a more conservative tilt versus many other funds in the high-yield space. Year to date, the fund has posted a return of 13.9%, which ranks among the top quarter of all funds in the Morningstar high-yield bond category. Over the last five years, the fund has returned an average of 7.9% annually.<sup>11,12</sup>

During the third quarter, each of the Lifetime funds implemented updates to the glidepath to reflect that the funds are now one year closer to investors' anticipated retirement dates and to reflect new capital market assumptions from Morningstar Investment Management LLC (Morningstar Investment Management). GWCM retains Morningstar Investment Management as a consultant to help develop the asset allocation in the funds. Morningstar Investment Management has deep expertise in the asset allocation space and is an expert in converting the latest research from academia into practice. Morningstar Investment Management's asset allocation models have informed GWCM's development of the funds' glidepaths over time and have added considerable value to the long-term performance of the funds.

6 The Great-West Lifetime Funds may invest in other funds advised by GWCM, funds that are sub-advised by affiliated and unaffiliated sub-advisers retained by GWCM, funds that are advised by affiliated and unaffiliated investment advisers of GWCM, and in a fixed-interest contract issued and guaranteed by Great-West Life & Annuity Insurance Company. Asset allocation funds are subject to the risks of the underlying funds, which can be a mix of equity funds and fixed-income funds. For more information, see the prospectus. Performance comments for the Lifetime Funds apply across the Institutional, T, T1 and L share classes of each fund. Performance for Institutional Class shares before their inception is derived from the historical performance of Initial Class shares, which has not been adjusted for the lower expenses; had it, returns would have been higher.

7 Foreign investments involve special risks, including currency fluctuations, taxation differences and political developments.

8 Great-West MFS International Value Fund Institutional Class performance as of September 30, 2016, performance for the one-, three-, five- and 10-year and since inception periods was 16.3%, 7.8%, 13.1%, 3.3% and 5.6%, respectively. The date of inception for the fund was May 1, 2015. The gross expense ratio as of September 30, 2016, is 0.72%. Performance for Institutional Class shares before their inception is derived from the historical performance of Initial Class shares, which has not been adjusted for the lower expenses; had it, returns would have been higher.

9 The Great-West MFS International Value Fund Institutional Shares ranked 684 of 910 funds in the Morningstar foreign large-blend category for the three-month period, 34 of 884 funds in the year-to-date period, 8 of 715 funds in the three-year period, and 5 of 634 funds in the five-year period. The three-year and five-year rankings reflect the Initial Class Shares, because the Institutional class shares were inception on May 1, 2015.

10 Compared to higher rated securities, high yield bond investment options are subject to greater risk, including the risk of default. A bond fund's yield, share price and total return change daily and are based on changes in interest rates, market conditions, economic and political news, and the quality and maturity of its investments. In general, bond prices fall when interest rates rise and vice versa.

11 Great-West Putnam High Yield Fund Institutional Class performance as of September 30, 2016, performance for the one-, three-, five- and 10-year and since inception periods was 11.9%, 4.8%, 7.9%, 5.5% and 5.9%, respectively. The date of inception for the fund was May 1, 2015. The gross expense ratio as of June 30, 2016, is 0.75%. Performance for Institutional Class shares before their inception is derived from the historical performance of Initial Class shares, which has not been adjusted for the lower expenses; had it, returns would have been higher.

12 The Great-West Putnam High Yield Bond Fund Institutional Shares ranked 90 of 796 funds in the Morningstar high-yield bond category for the three-month period, 44 of 765 funds in the year-to-date period, 189 of 659 funds in the three-year period, and 116 of 524 funds in the five-year period. The three-year and five-year rankings reflect the Initial Class Shares, because the Institutional class shares were inception on May 1, 2015.

Fund performance and Morningstar ratings as of September 30, 2016

FUND NAME	TICKER	INCEPTION DATE	CATEGORY	MORNINGSTAR RATING/ TOTAL # OF FUNDS			TOTAL RET. RANK CATEGORY*/ # OF FUNDS		
				OVERALL	3-YEAR	5-YEAR	1-YEAR	3-YEAR	5-YEAR
Great-West Lifetime 2015 Instl	MXNX	5/1/15	Target Date 2015	★★★★93	★★★★93	★★★76	21/133	—	—
Great-West Lifetime 2020 Institutional	MXAKX	4/29/16	Target Date 2020	—	—	—	1/238	—	—
Great-West Lifetime 2025 Instl	MXQBX	5/1/15	Target Date 2025	★★★★160	★★★★160	★★★★121	17/205	—	—
Great-West Lifetime 2030 Institutional	MXAYX	4/29/16	Target Date 2030	—	—	—	—	—	—
Great-West Lifetime 2035 Instl	MXTBX	5/1/15	Target Date 2035	★★★★160	★★★★160	★★★★121	7/205	—	—
Great-West Lifetime 2040 Institutional	MXBGX	4/29/16	Target Date 2040	—	—	—	—	—	—
Great-West Lifetime 2045 Instl	MXWEX	5/1/15	Target Date 2045	★★★★160	★★★160	★★★114	8/205	—	—
Great-West Lifetime 2050 Institutional	MXBSX	4/29/16	Target Date 2050	—	—	—	—	—	—
Great-West Lifetime 2055 Instl	MXZHX	5/1/15	Target Date 2055	★★★128	★★★128	★★★81	9/202	—	—
Great-West Lifetime Cnsvr 2015 Instl	MXMAX	5/1/15	Target Date 2015	★★93	★★★93	★★76	78/133	—	—
Great-West Lifetime Cnsvr 2020 Instl	MXAFX	4/29/16	Target Date 2020	—	—	—	—	—	—
Great-West Lifetime Cnsvr 2025 Instl	MXOZX	5/1/15	Target Date 2025	★★160	★★★160	★★121	114/205	—	—
Great-West Lifetime Cnsvr 2030 Instl	MXARX	4/29/16	Target Date 2030	—	—	—	—	—	—
Great-West Lifetime Cnsvr 2035 Instl	MXRCX	5/1/15	Target Date 2035	★★★160	★★★160	★★★121	97/205	—	—
Great-West Lifetime Cnsvr 2040 Instl	MXBCX	4/29/16	Target Date 2040	—	—	—	—	—	—
Great-West Lifetime Cnsvr 2045 Instl	MXUCX	5/1/15	Target Date 2045	★★★160	★★★160	★★★114	37/205	—	—
Great-West Lifetime Cnsvr 2050 Instl	MXBNX	4/29/16	Target Date 2050	—	—	—	—	—	—
Great-West Lifetime Cnsvr 2055 Instl	MXXFX	5/1/15	Target Date 2055	★★128	★★★128	★★81	31/202	—	—

\* A lower percentile ranking is more favorable (higher relative returns).



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*The date in a target date fund's name represents an approximate date when an investor is expected to retire (which is assumed to be at age 65). The principal value of the funds is not guaranteed at any time, including the target date. For more information, please refer to the fund prospectus.*

*Current performance may be lower or higher than performance data shown. Performance data quoted represents past performance and is not a guarantee or prediction of future results. For performance data current to the most recent month-end, please visit [greatwestfunds.com](http://greatwestfunds.com). The investment return and principal value of an investment will fluctuate so that, when redeemed, shares/units may be worth more or less than their original cost.*

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