As a lifelong Detroit Lions fan — yes, we exist — I have witnessed just about every which way a professional football team has found to lose a football game. The Detroit Lions already have had 7 different head coaches just during this century. Jim Caldwell, the current head coach and highly regarded person known league wide, has a rather impressive coaching resume that includes a Super Bowl appearance with the Peyton Manning-led Indianapolis Colts. The Lions were off to a horrible start to the 2015 season, after reaching the playoffs the previous year, and finished the first half with a 1-7 record. In professional sports, that is a recipe for losing your job. When asked about the team’s poor start, he said, “I have patience, but I don’t have a lot of time...” Such is life for a head coach in the National Football League. By the way, the Lions went 6-2 during the second half of the year and, as I write, Jim Caldwell remains the head coach — for now.

I won’t drown you in my football sorrows, but I found this quote to be appropriate for many employers responsible for reviewing investments they make available, on behalf of their employees, in their defined contribution plan menu. Should we or shouldn’t we? That is a common question many defined contribution Plan Sponsors ask themselves – and their consultants – about whether or when to remove an underperforming investment from their portfolio. It is only natural behavior to have a desire to “do something” instead of standing still when something is not perceived to be working as expected and, in this case, performing up to investment monitoring standards.

“**I HAVE PATIENCE BUT I DON’T HAVE A LOT OF TIME, THAT’S THE REAL KEY HERE.**”

- Jim Caldwell, Head Coach of the Detroit Lions
Economic and Market Recap

The seven-plus year bull market that began in March 9, 2009, has lifted the cumulative return of the S&P 500 Index over 220 percent as of June 30, 2016. Of course, an extended bull market does not ordinarily come without experiencing significant and multiple drawdown events throughout their cycles. For example, we experienced a 19 percent plunge in August/September 2011 when concerns were raised about Congress possibly not extending the federal debt ceiling. More recently, the S&P 500 nose-dived 12 percent in August/September 2015 and shed 13 percent during the first six weeks of 2016.

This bull market has been unprecedented in a few respects. First and foremost, we have witnessed — and continue to observe — remarkable global central bank interference and money supply expansions. Central banks have infused record amounts of capital into the global markets and have helped fuel the bull market. Most recently, the global objectives of keeping interest rates low has resulted in over $9.4 trillion of global debt offering yields below zero. Prior to the summer of 2014, the globe offered $0 of negative yielding debt. This is a good quantitative representation of how central banks have impacted the global money supply and, thus, helped encourage higher Price-to-Earnings multiples on stocks, lower mortgage interest rates and financial incentives for investors to do anything but make deposits into low-yielding savings accounts. Graphs on this page illustrate how much negative yielding debt is now available in our global capital markets.
The current bull market is also unique in that, here in the US, we have not experienced a year where we have eclipsed 3 percent gross domestic product (GDP) growth. This is highly unusual given we had such a steep drop in economic output in 2008 and 2009. Past recessions of this magnitude were historically followed by a year or two with GDP growth well north of 3%. Growth in the US and globally, has been muted albeit positive since 2009. The graph on the right is a good visual aid of how previous economic recessions have been followed by strong GDP growth. You will notice that this most recent economic recovery is markedly different.

This paper is by no means a statement on whether this is a good policy or bad, but rather highlighting the unique circumstances of the current market environment.

Lastly, we have experienced very low volatility during this bull market. These low levels of volatility recently hit an extraordinarily low point in August 2016. Low levels of equity market volatility often favor passive index strategies over actively managed strategies and this time period has been no exception.

---

The charts below illustrate how the margin of active manager underperformance has grown considerably over the most recent 5-year period ending August 31, 2016, compared to the 10-year period. The 10-year period ending August 31, 2016, of course, includes a three-year period of more normal volatility prior to 2009.

**U.S. Large Cap Stock Funds:**
Percentage of Category with Above Benchmark Returns (trailing)

![Graph showing percentage of U.S. Large Cap Stock Funds with above benchmark returns](image1)


**U.S. Small Cap Stock Funds:**
Percentage of Category with Above Benchmark Returns (trailing)

![Graph showing percentage of U.S. Small Cap Stock Funds with above benchmark returns](image2)

Equity Investing for the Long Term

Investing in equities should be a long-term experience regardless of what percentage of the portfolio they represent. We do know that investing in equities has a greater potential for long-term return, but not without greater levels of short-term risk. Unfortunately, more and more equity investors have allowed a short-term mindset to dictate their equity holding periods. MFS recently conducted study on this behavior and their findings were quite profound. Below you will see the average holding period for investment managers is 1.45 years (or approximately 17 months)! Not so symbiotic with the meaning "long-term".

Stock Holding Periods by Investment Managers for 20 Largest Morningstar Equity Categories

Source MFS, Morningstar. Data reflects largest 20 US open-end mutual fund categories as of December 31, 2014. Holding periods were calculated by taking 1 minus the 2014 turnover ratio for each category.
So why is there such a focus on the short term? Contributing factors may range from media coverage to behavioral finance, but for investment managers, it appears likely the majority of this is due to their compensation.

A survey was conducted by the CFA Institute with regards to investment manager compensation. The survey showed that 43 percent of investment managers received more than half of their compensation based upon their one year performance results. Furthermore, 79 percent of investment managers have less than half of their compensation tied to long-term performance goals. This can have drastic impacts on investment manager portfolios leading up to the end of their one year performance periods and can cause a manager lagging their benchmark to take risks that may not align with investors longer term goals.

What Percentage of Your Compensation is Related to the Following?

Source: CFA Institute Short-Termism Survey, May 2008 (over 1,100 portfolio managers and analysts surveyed).

“CONTRIBUTING FACTORS MAY RANGE FROM MEDIA COVERAGE TO BEHAVIORAL FINANCE, BUT FOR INVESTMENT MANAGERS, IT APPEARS LIKELY THE MAJORITY OF THIS IS DUE TO THEIR COMPENSATION.”

As a result of this short-minded investment philosophy, we believe that managers with longer investment horizons can pursue lucrative investment opportunities and can seek to outperform in the long-term as seen in the following chart.

**Return Dispersion Increases with Time**
MSCI World total return dispersion around the mean return (2010-2014)

![Chart showing return dispersion increases with time](image)

Source: MFS research. MSCI World holding as of January 1, 2010. Forward total cumulative returns around the mean in USD within the 10th to 90th percentile range.

The chart above shows that there has historically been a greater return dispersion for a security as its holding period increases. It can be difficult for a manager to seek large gains with daily or weekly trading due to transaction costs and price change limitations in a short time horizon. Because of this, we believe long-term managers with disciplined investment processes can take advantage of the short-sighted nature of others, and have the potential to outperform over 3 to 5 year market cycles.3

Behavioral Finance

Since 1994, Dalbar’s Quantitative Analysis of Investor Behavior has been measuring the effect of investor behavior on buy, sell, and exchanges into investment strategies over both long-term and short-term periods. Their results for this annual research have remained consistent. The average investor earns less, in many cases much less, than the benchmark composite of the investment strategy. The 2016 survey covers 30 years of investor returns, through bull and bear markets and their conclusion is a strong one: **Investment results are more dependent on investor behavior than on investment strategy performance.** Investors who buy and hold are typically more successful than those who try to time the market or let their behavioral biases take hold. These biases ultimately detract from investors’ returns, causing their average return to lag market index returns such as the S&P 500 and Barclay’s Aggregate Bond Index.

2014 Index Returns vs Average Investor

![Graph showing 2014 Index Returns vs Average Investor](source: QAIB 2015, DALBAR Inc. www.dalbar.com. Returns are for the period ending December 31, 2014. Average equity strategy investor and average bond strategy investor performances were from the DALBAR study, QAIB 2015. DALBAR's 2015 QAIB study examines real investor returns from equity, fixed income and money market mutual funds from January 1984 through December 2014. The study was originally conducted by DALBAR, Inc. in 1994 and was the first to investigate how mutual fund investors' behavior affects the returns they actually earn.)

Most fiduciaries know one of their many responsibilities is to prudently select and monitor the investment alternatives offered in their retirement plan(s). Benchmarking and monitoring the performance of these investments include quantitative and qualitative measurements. Behavioral finance has taught us that psychology plays a big part in our investing lives.

For instance, as a result of research on prospect theory in 1979, we know that investors typically feel the pain of a financial loss much more intensely than the pleasure felt from a gain of the same size.4

This information we know on investor psychology can be used in creating a thoughtful investment menu. In the manager selection process, given the choice between two investment options of similar long-term return potential yet a markedly different path to get there, an investor would prefer the least bumpy path, i.e., lower beta/lower standard deviation/more consistent performing manager.

**Investment Monitoring Criteria**

Our proprietary investment monitoring criteria takes into account this natural behavioral bias. Performance is only 30 percent of our score, while other criteria including expenses, up/down capture, and risk adjusted return potential make account for 60 percent.

Looking at the table of our criteria below, you can see five-year criteria is weighted heavier than three-year, reflecting our focus on longer term performance and less on short term cyclical performance. A full market cycle is generally considered 3-5 years. While evaluating three year performance is important to detect a declining trend in performance and/or any stylistic changes, a 5 year window may be more apt to include bull and bear market periods, a more accurate reflection of the manager performance. Incorporating investor psychology and behavior into our benchmarking, we value up/down market performance and maximum drawdown, reflecting our preference for more historically lower levels of volatility. Maximum drawdown measures the performance of an investment from peak to trough.

**Investment Analysis – Investment Scoring Criteria Details**

<table>
<thead>
<tr>
<th>Performance (30%)</th>
<th>Risk Adjusted Return (40%)</th>
<th>Up/Down Capture (20%)</th>
<th>Expense (10%)</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment/Peer/Index/Score</td>
<td>3 YR Return</td>
<td>5 YR Return</td>
<td>3 YR Sharpe</td>
<td>5 YR Sharpe</td>
</tr>
<tr>
<td>Investment Policy Statement Target Score</td>
<td>10</td>
<td>20</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

Sheridan Road’s Investment Scoring Criteria weights 30 percent of our score on three and five year returns vs. peers, 40 percent on risk adjusted return measures, 20 percent on up/down capture, and 10 percent on fund expenses. This combination of data will compute whether a fund fails (below 60) or passes (60 or above) our Investment Scoring Criteria.

Inevitably, managers are likely to fail the scoring criteria from time to time. Many plan sponsors are easily patient with one quarter or two quarters of underperformance and/or failing score. Beyond that, if nothing qualitatively has changed — i.e., manager change, process change, etc. — the question becomes, how long should we hold onto it before making a change? This brings us to our “art and science” thesis on benchmarking as the numbers only tell part of the story.

Ultimately, the decision to retain or replace a manager cannot be made by a formula only. There are many intangibles to consider, including: Is our research team confident in the manager’s ability? Does he/she have tenure long enough to demonstrate a consistent process through tough markets? Are certain prevailing winds taking hold, such as the current indexing strategies that needs to be considered?

Many investment committees have a process of determining how underperforming active managers should be placed on their respective Watch Lists, but many do not have a working blueprint for determining how long a manager should remain on that Watch List before being removed or replaced. The remainder of this paper provides plan sponsors with a framework for making more informed Watch List decisions.
Watch List Framework

If a manager has a long-standing investment philosophy, long tenure with the firm, experience in multiple market cycles and has given us reason to believe their approach has the potential to perform well in the next stage of the market cycle, we will remain patient — within reason — even if they have a failing Investment Policy Score. As an example, let's review characteristics of two U.S. Large Cap Growth strategies, strategy A and strategy B. Strategy A is the current investment option offered in this Plan's lineup, while strategy B is an investment option within the same U.S. Large Cap Growth category. We recommended strategy A be placed on the Watch List on March 31, 2015. We then evaluated the qualitative characteristics of the investment strategy, approach, the management team's history, experience and organizational stability. We also examined the management team's 10-year record with the strategy. Charts on this page are a historical comparison of performance, risk and investment monitoring criteria scores between these two investment options:

**Standard Deviation**

![Standard Deviation Chart]

Source: Morningstar Direct data as of September 29, 2016.

**Excess Return**

![Excess Return Chart]

Source: Morningstar Direct data as of September 29, 2016.
Investment Scoring Criteria Details

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Q1 '14</th>
<th>Q2 '14</th>
<th>Q3 '14</th>
<th>Q4 '14</th>
<th>Q1 '15</th>
<th>Q2 '15</th>
<th>Q3 '15</th>
<th>Q4 '15</th>
<th>Q1 '16</th>
<th>Q2 '16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morningstar Category Percentile Rank</td>
<td>21</td>
<td>84</td>
<td>39</td>
<td>55</td>
<td>84</td>
<td>28</td>
<td>52</td>
<td>8</td>
<td>31</td>
<td>18</td>
</tr>
</tbody>
</table>


Morningstar percentile rank in category is the fund’s total-return percentile rank relative to all funds that have the same Morningstar Category. The highest (or most favorable) percentile rank is one and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of one. Proprietary Fund Score is based upon Sheridan Road’s Investment Scoring Criteria described above. Standard deviation is a historical measure of the variability of returns relative to the average annual return. If a portfolio has a high standard deviation, its returns have been volatile. A low standard deviation indicates returns have been less volatile.

Strategy A (blue) is the current investment option in this plan’s lineup and has posted a failing score (below 60 percent) since Q1 of 2014, but returned to a passing score (greater or equal to 60 percent) in Q1 2016. Strategy B (orange) has scored a passing mark since Q1 2014 and has held that through Q1 2016.

Had we replaced strategy A with strategy B at any point during the 8 quarters the strategy was failing, come Q2 2016 that decision would have negatively impacted investors’ returns. In this case, staying with a tenured manager preserved investors’ capital and prevented the Plan committee from chasing performance.

We are keenly aware the quarterly reporting process and corresponding money manager analysis can result in an environment where defined contribution investment committees feel compelled to act. We stress acting with patience based on a set of measurable variables.

The below chart outlines the length of time (quarters) we are willing to stick with a manager once they are placed on our watch list:

If a manager exhibits all of the traits mentioned above, we are willing to retain that manager for longer periods of time, even if failing, because of our initial thorough due diligence selection process. Our investment monitoring process evaluates both quantitative and qualitative qualities and the belief they have the potential to succeed through a full market cycle. No formula alone should dictate whether a manager remains or is replaced. Other factors, specific to that manager, should be determinate on the virtuousness of our patience.
This information was developed as a general guide to educate plan sponsors but is not intended as authoritative guidance or tax or legal advice. Each plan has unique requirements, and you should consult your attorney or tax advisor for guidance on your specific situation. In no way does advisor assure that, by using the information provided, plan sponsor will be in compliance with ERISA regulations.

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. All performance referenced is historical and is no guarantee of future results. All indices are unmanaged and may not be invested into directly.

The S&P 500 Index is a capitalization weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

The CBOE Volatility Index® (VIX®) is meant to be forward looking, showing the market’s expectation of 30-day volatility in either direction, and it considered by many to be a barometer or investor sentiment and market volatility, commonly referred to as “Investor Fear Gauge.”

The MSCI World Index is a market capitalization weighted index designed to provide a broad measure of equity-market performance throughout the world.

The Bloomberg Barclays U.S. Aggregate Bond Index is an index of the U.S. investment-grade fixed-rate bond market, including both government and corporate bonds.

Investing in stock includes numerous specific risks including: the fluctuation of dividend, loss of principal and potential illiquidity of the investment in a falling market.

The prices of small cap stocks are generally more volatile than large cap stocks.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise and bonds are subject to availability and change in price. Government bonds and Treasury bills are guaranteed by the US government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value.

Investing in mutual funds involves risk, including possible loss of principal. Mutual fund performance quoted reflects the reinvestment of dividends and capital gains, is net of expenses and does not reflect sales charges. Such fees, if taken into consideration, will reduce the performance quoted.

Investment return and principal value will fluctuate so that an investor’s shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance information quoted. To obtain current month-end performance information, please call.

Value investments can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time.

Real gross domestic product (real GDP) is a macroeconomic measure of the value of economic output adjusted for price changes, i.e., inflation or deflation.

Beta Measures a portfolio’s volatility relative to its benchmark. A Beta greater than one suggests the portfolio has historically been more volatile than its benchmark. A Beta less than one suggests the portfolio has historically been less volatile than its benchmark.

There is no assurance that the techniques and strategies discussed are suitable for all investors or will yield positive outcomes. Investing involves risk including possible loss of principal.