

Investment Performance Review
Period Ending March 31, 2019

Washoe County 457 & 401a Plans



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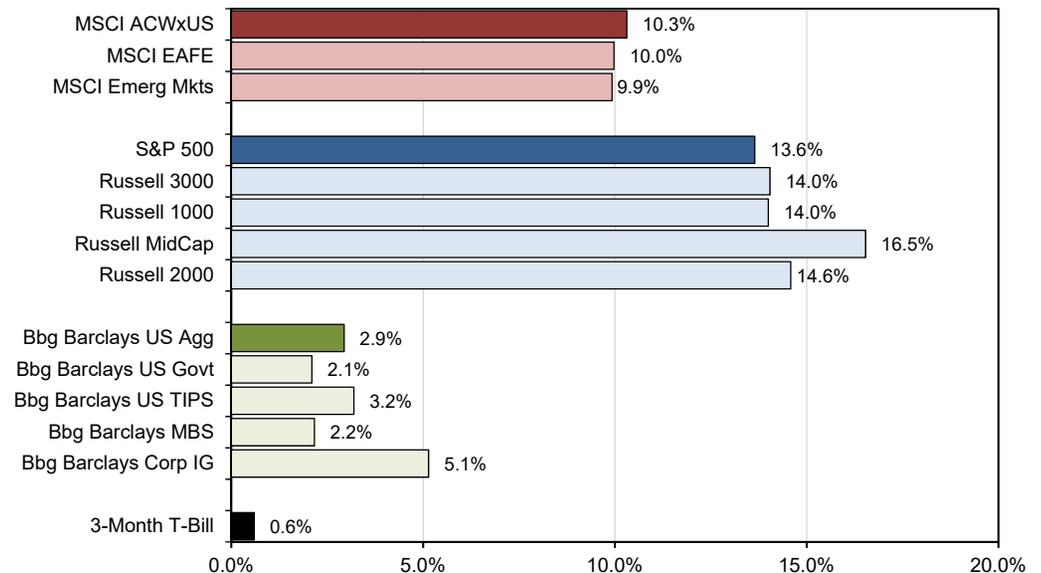


1st Quarter 2019 Market Environment

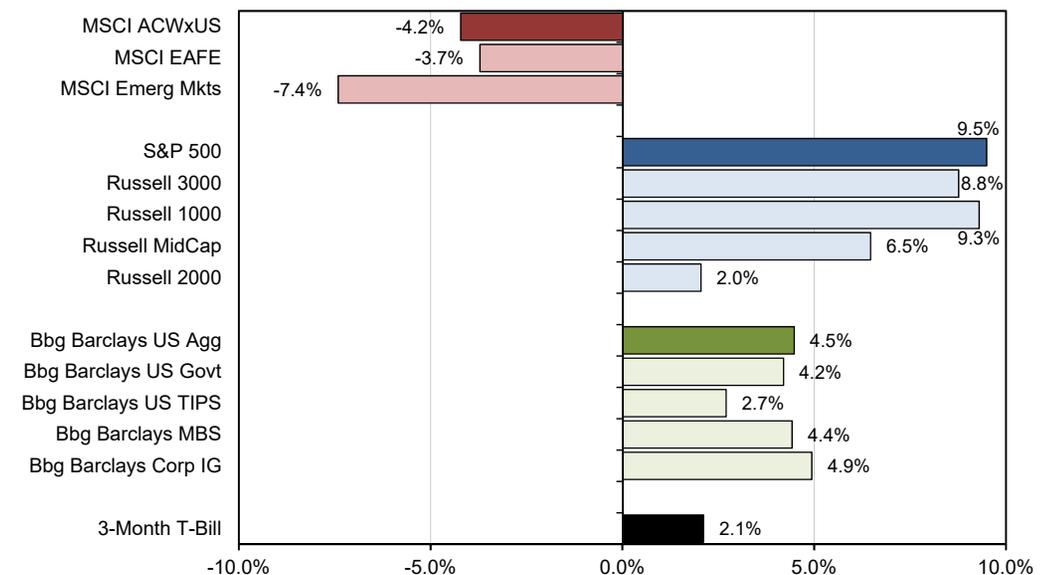


- After a difficult end to 2018, markets rebounded strongly during the 1st quarter of 2019 with higher risk assets posting the greatest returns. Broad international and domestic equity markets had double-digit gains during the period as investors overlooked signs of weakening global growth in favor of increased accommodation in global monetary policy and progress in global trade negotiations. While muted relative to equities, fixed income returns were also positive during the quarter. Within equities, domestic stocks outperformed international markets. US markets pushed higher as the US Federal Reserve (Fed) shifted their stance on monetary policy toward a more accommodative posture, the US and China moved closer to a resolution of their ongoing trade dispute and the partial government shutdown that began in December came to an end. The large cap S&P 500 Index returned 13.6% during the quarter while the small cap Russell 2000 Index gained 14.6% for the period. US equity returns over the 1-year period are positive with the S&P 500 appreciating 9.5% while the Russell 2000 posted a more modest gain of 2.0%.
- Similar to US markets, international equity investors were encouraged by a general easing in central bank monetary policy, including new stimulus measures in Europe and China, as well as the de-escalation of trade tensions with the US. Despite the continued softening in global macroeconomic data and the lack of certainty around Brexit, international equity index returns finished the quarter in positive territory with the MSCI ACWI ex US Index returning 10.3%. The developed market MSCI EAFE Index and the MSCI Emerging Markets Index had similar performance during the 1st quarter returning 10.0% and 9.9% respectively. Despite the strong quarter, returns over the 1-year period remain negative with developed markets falling -3.7%, outperforming emerging markets which fell -7.4%.
- Fixed income securities underperformed equities to start 2019 with the broad market Bloomberg Barclays Aggregate Index returning 2.9%. Interest rates fell for all maturities across the US Treasury Yield Curve as Fed guidance signaled a pause in monetary policy tightening through 2019. Interest rates in the middle of the curve saw the greatest declines causing the curve to invert with shorter-term maturities paying higher interest rates than those in the middle of the curve. This has historically preceded a recession by 6-24 months. Investment grade corporate issues were the best performing securities this quarter, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 5.1% for the period, as corporate credit had tailwinds due to its greater interest rate sensitivity, higher yields and tightening credit spreads. Corporate issues also outperformed the other major fixed income sectors over the 1-year period, returning 4.9% versus a 4.5% return for the Bloomberg Barclays Aggregate Index.

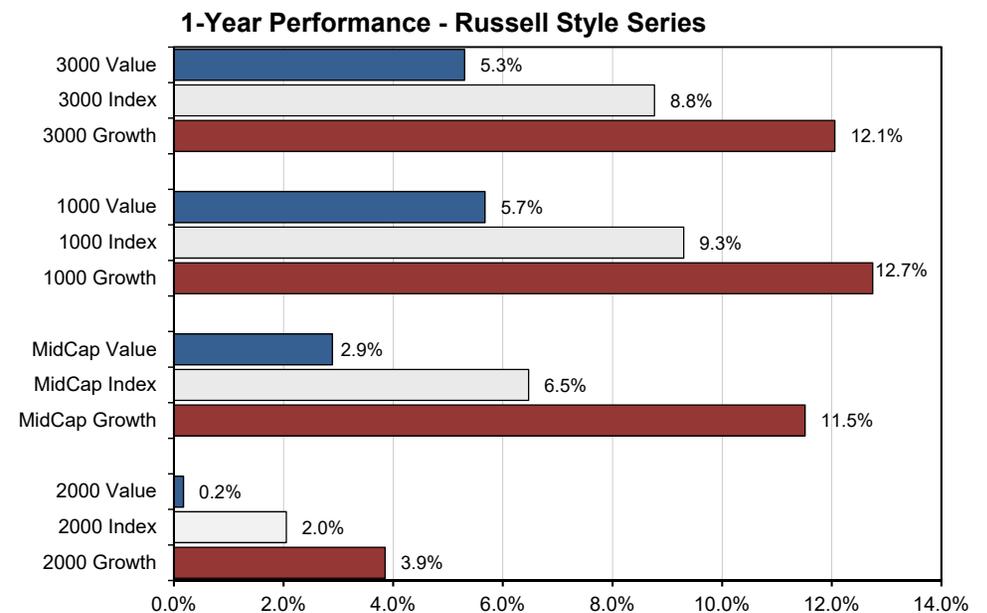
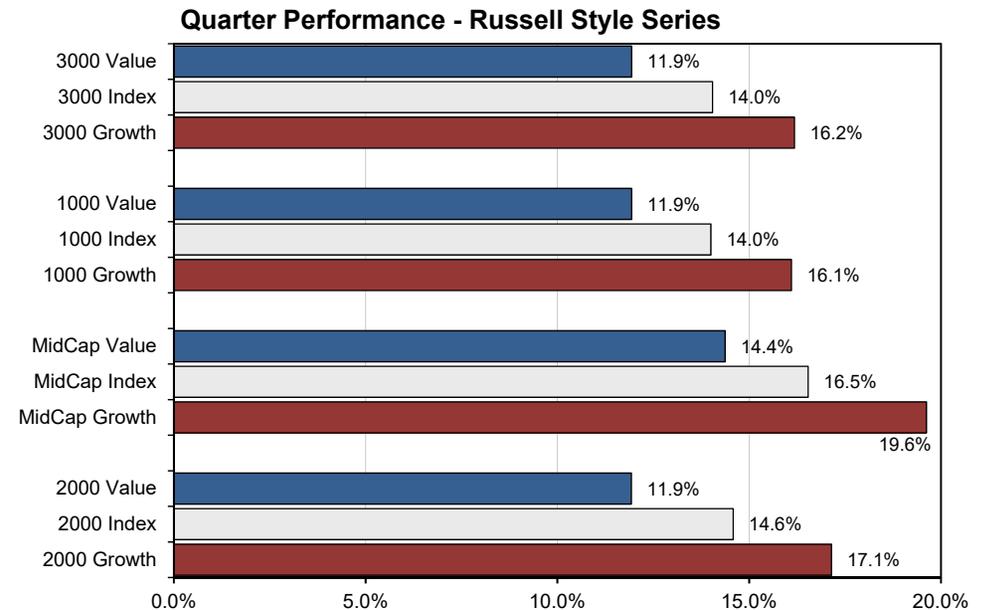
Quarter Performance



1-Year Performance

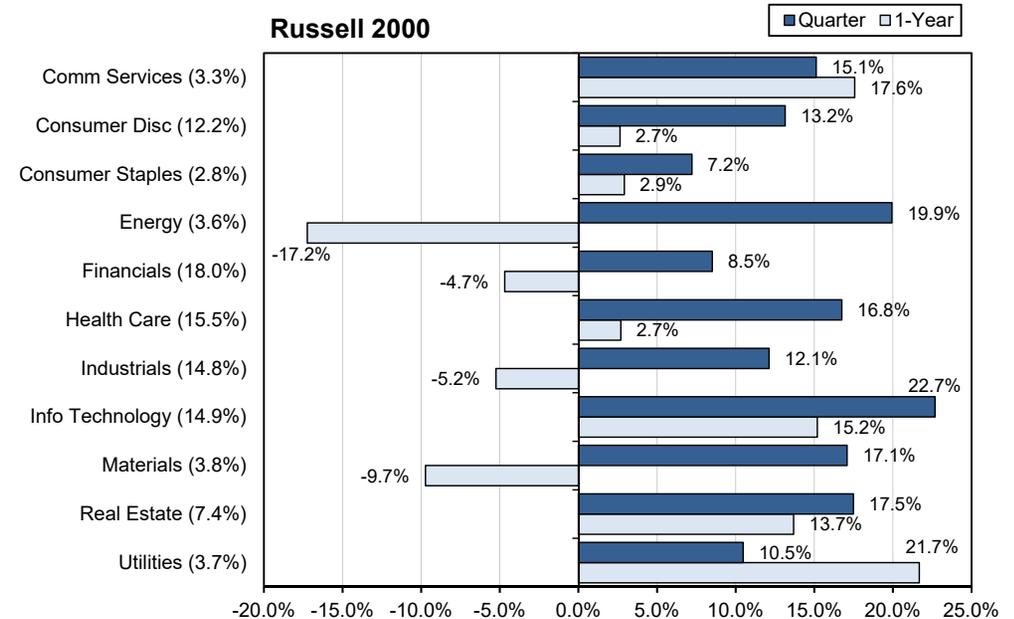
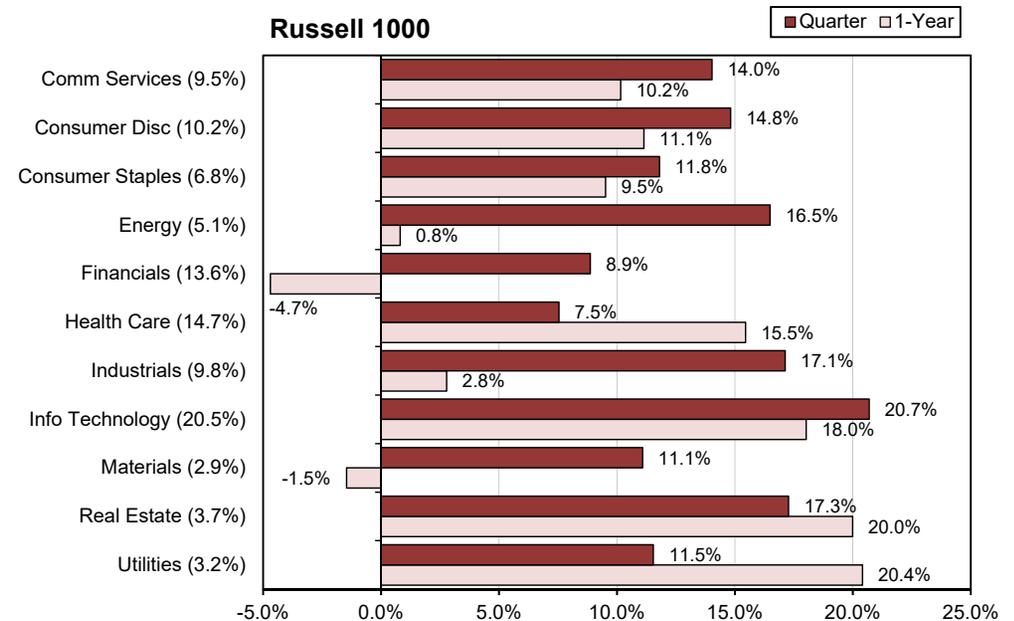


- US equity index returns were strongly positive across the style and capitalization spectrum to start the year with all indices posting double digit returns. Macroeconomic data released during the quarter was mixed with disappointing data released late in the quarter for GDP and employment being particularly notable. Even though earnings reported during the period were viewed favorably, many companies provided negative forward earnings guidance due to slowing global growth, trade concerns and the fading effects of US tax reform. However, investor concerns over the economy were overshadowed by positive developments in trade negotiations with China and an accommodative shift in Fed monetary policy. With regards to trade, President Trump delayed the implementation of new Chinese tariffs scheduled for March 1st citing substantial progress in ongoing discussions. Stocks also rallied on Fed guidance to put further monetary policy tightening on hold as they lowered projections for growth and inflation. Lastly, we saw the end of the partial government shutdown that began in December due to a partisan disagreement over funds for the construction of a border wall with Mexico. While the spending bill that passed did not budget for the wall, President Trump declared a national state of emergency later in the quarter in order to secure the needed funding.
- During the quarter, mid cap stocks were the best performers while small cap stocks outperformed large cap equities across growth, value and core indices. The Russell MidCap Index gained 16.5% during the period versus a 14.6% return for the small cap Russell 2000 Index and a 14.0% gain on the large cap Russell 1000 Index. Part of the reason for strength in small cap names is the projected hold on interest rate increases that occurred over 2018 as small and mid-cap companies typically maintain higher percentages of debt than their large cap peers. Small and mid-cap companies are usually more domestically focused which will serve as a tailwind in periods where the US economy is on stronger footing than international markets. It is also not unusual for smaller market cap stocks to outperform in risk-on market environments. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 9.3% for the year while the Russell 2000 gained only 2.0%.
- Growth indices outperformed value indices across the market cap spectrum during the 1st quarter. Growth stocks have outperformed value in all but one quarter over the last two years. The Russell MidCap Growth Index was the best performing style index for the period, returning 19.6% for the quarter. The large cap and small cap value indices had the lowest relative returns, both gaining 11.9%. The trend of growth outperformance is also visible over the 1-year period as growth indices have benefitted from larger exposures to technology which has been a large driver of index performance over the last year, as well as a meaningful underweight to financials which has been a relative detractor.



- Sector performance was broadly positive across large cap sectors for the 1st quarter. There were strong gains for all sectors within the Russell 1000 Index during for the period with five sectors outpacing the return of the index. While the rally was broad with nine of eleven sectors posting double digit returns, cyclical sectors such as technology, industrials and energy were some of the best performers through the quarter returning 20.7%, 17.1% and 16.5% respectively. Technology stocks rose on strong earnings and attractive valuations following their 4th quarter 2018 sell off. Energy companies benefitted from a large rebound in oil prices which increased by over 30% during the quarter following an OPEC led supply cut and US sanctions against Iran and Venezuela. Industrial stocks, among others, gained on hopes that trade tensions between the US and China would continue to abate. REITs also had a particularly strong quarter, returning 17.3% as the prospect of lower interest rates acted as a tailwind. Financials and health care stocks were the worst performers during the period returning 8.9% and 7.5% respectively. Health care stocks faced uncertainty around the potential for future regulation following congressional hearings on drug pricing while the prospect of lower earnings due to a muted interest rate environment weighed on financial stocks. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Utilities, REITs and information technology were the best performers returning 20.4%, 20.0% and 18.0% respectively. Financials and materials posted negative results at -4.7% and -1.5% while energy was only slightly positive at 0.8%.

- Quarterly results for small cap sectors were mixed relative to their large capitalization counterparts with six of eleven sectors outperforming their corresponding large cap equivalents. Like large caps, all eleven sectors produced gains during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter and nine returning over 10.0%. Similar to large caps, cyclical sectors performed well with technology, energy and materials returning 22.7%, 19.9% and 17.1% respectively. Real estate also did well returning 17.5%. The largest detractors over the period were consumer staples, financials and utilities which still produced gains of 7.2%, 8.5% and 10.5%. Over the trailing 1-year period, returns varied significantly with four sectors posting double digit gains and four losing value. Despite a very strong quarter, energy stocks were the worst performers over the 1-year period, falling a considerable -17.2%, while the defensive utilities sector produced the greatest gains, appreciating 21.7%.



Source: Morningstar Direct

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2019

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.42%	20.9%	14.9%	Information Technology
Microsoft Corp	3.39%	16.6%	30.8%	Information Technology
Amazon.com Inc	2.78%	18.6%	23.0%	Consumer Discretionary
Facebook Inc A	1.50%	27.2%	4.3%	Communication Services
Berkshire Hathaway Inc B	1.48%	-1.6%	0.7%	Financials
Johnson & Johnson	1.42%	9.0%	12.1%	Health Care
Alphabet Inc C	1.36%	13.3%	13.7%	Communication Services
Alphabet Inc A	1.33%	12.6%	13.5%	Communication Services
Exxon Mobil Corp	1.30%	19.8%	12.9%	Energy
JPMorgan Chase & Co	1.27%	4.6%	-5.6%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Versum Materials Inc	0.02%	81.9%	34.7%	Information Technology
Coty Inc Class A	0.02%	77.3%	-34.3%	Consumer Staples
Nabors Industries Ltd	0.00%	72.5%	-48.7%	Energy
Sage Therapeutics Inc	0.03%	66.0%	-1.3%	Health Care
Wayfair Inc Class A	0.03%	64.8%	119.8%	Consumer Discretionary
Chipotle Mexican Grill Inc Class A	0.07%	64.5%	119.8%	Consumer Discretionary
Universal Display Corp	0.02%	63.5%	51.7%	Information Technology
Xerox Corp	0.02%	63.1%	15.7%	Information Technology
Floor & Decor Holdings Inc	0.01%	59.2%	-20.9%	Consumer Discretionary
bluebird bio Inc	0.03%	58.6%	-7.9%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Uniti Group Inc	0.01%	-27.8%	-23.8%	Real Estate
PG&E Corp	0.03%	-25.1%	-59.5%	Utilities
The Kraft Heinz Co	0.07%	-23.2%	-45.1%	Consumer Staples
Realogy Holdings Corp	0.01%	-21.8%	-57.3%	Real Estate
Nu Skin Enterprises Inc Class A	0.01%	-21.5%	-33.7%	Consumer Staples
Biogen Inc	0.18%	-21.4%	-13.7%	Health Care
Centennial Resource Development A	0.01%	-20.2%	-52.1%	Energy
CenturyLink Inc	0.04%	-19.3%	-19.0%	Communication Services
Qurate Retail Inc Class A	0.03%	-18.1%	-36.5%	Consumer Discretionary
Macy's Inc	0.03%	-18.0%	-15.2%	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Etsy Inc	0.40%	41.3%	139.6%	Consumer Discretionary
Five Below Inc	0.33%	21.4%	69.4%	Consumer Discretionary
The Trade Desk Inc A	0.32%	70.6%	298.9%	Information Technology
Integrated Device Technology Inc	0.31%	1.2%	60.3%	Information Technology
HubSpot Inc	0.30%	32.2%	53.5%	Information Technology
Planet Fitness Inc A	0.30%	28.2%	81.9%	Consumer Discretionary
Cree Inc	0.29%	33.8%	41.9%	Information Technology
Ciena Corp	0.26%	10.1%	44.2%	Information Technology
Primerica Inc	0.26%	25.4%	27.7%	Financials
Array BioPharma Inc	0.25%	71.1%	49.4%	Health Care

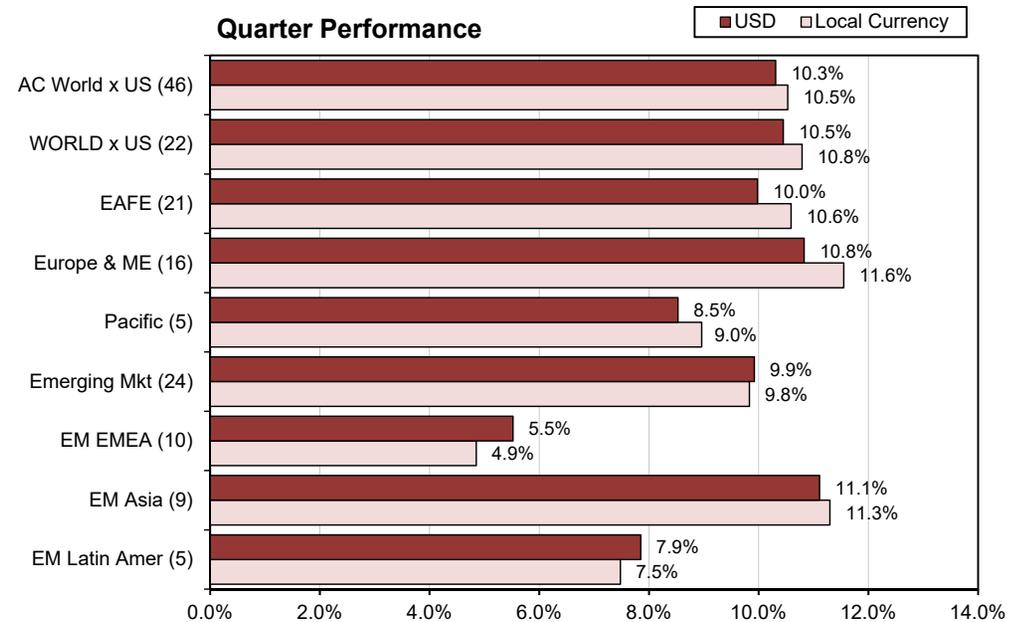
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Immune Design Corp	0.01%	350.0%	77.3%	Health Care
Diebold Nixdorf Inc	0.04%	344.6%	-28.1%	Information Technology
Constellation Pharmaceuticals Inc	0.01%	237.9%	N/A	Health Care
Flotek Industries Inc	0.01%	197.2%	-46.9%	Materials
Spark Therapeutics Inc	0.18%	191.0%	71.0%	Health Care
Magenta Therapeutics Inc	0.01%	188.9%	N/A	Health Care
ION Geophysical Corp	0.01%	178.8%	-46.7%	Energy
Catalyst Pharmaceuticals Inc	0.02%	165.6%	113.4%	Health Care
VirnetX Holding Corp	0.02%	163.8%	60.3%	Information Technology
Rockwell Medical Inc	0.01%	151.8%	9.2%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Zomedica Pharmaceuticals Corp	0.00%	-77.0%	-84.2%	Health Care
Aptinyx Inc	0.00%	-75.5%	N/A	Health Care
Alta Mesa Resources Inc Class A	0.00%	-73.5%	-96.7%	Energy
Novavax Inc	0.01%	-70.1%	-73.8%	Health Care
Maxar Technologies Inc	0.01%	-66.3%	-91.0%	Industrials
Solid Biosciences Inc	0.01%	-65.7%	22.7%	Health Care
Achaogen Inc	0.00%	-62.9%	-96.5%	Health Care
EP Energy Corp A	0.00%	-62.9%	-80.6%	Energy
Proteostasis Therapeutics Inc	0.00%	-61.1%	-73.5%	Health Care
Approach Resources Inc	0.00%	-59.4%	-86.4%	Energy

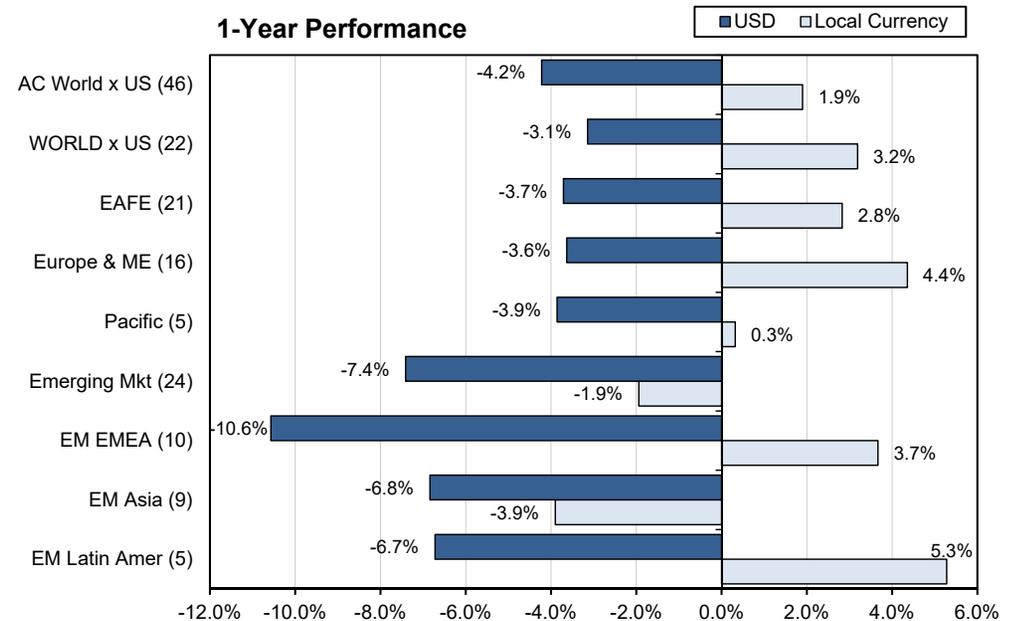


- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 10.5% in local currency terms and 10.3% in USD terms during the 1st quarter. Similar to US markets, international equity investors were encouraged by central bank responses to slowing global growth as they shifted towards more accommodative policies and the improvement in dialogue around global trade. Returns in local currency typically outperformed USD returns in the developed markets, as the USD continued to strengthen against most major developed currencies. While the currency effect was detrimental in developed markets, it acted as a slight tailwind in emerging markets. The USD strength is particularly noticeable over the 1-year period where local currency returns on the MSCI ACWI ex US Index were 1.9%, but after accounting for foreign exchange, translated to a loss of -4.2% for a USD investor.
- Fourth quarter results for developed market international indices were positive in both local currency and USD terms with the MSCI EAFE Index returning 10.6% and 10.0% respectively. Ongoing weakness in global economic reporting pushed major central banks to move toward less restrictive postures around monetary policy. In Europe, the European Central Bank (ECB) announced plans for additional stimulus while putting any future interest rate increases on hold until 2020. The Bank of England (BoE) left policy unchanged as uncertainties around Brexit coincided with a slowing economy. Prime Minister Theresa May held two votes on her withdrawal plan, both of which failed, forcing her to request an extension to the March 29th withdrawal deadline. Data from Japan drew concerns that the country's economy is contracting as corporate earnings, exports, manufacturing, retail sales and inflation all hinted at an economic slowdown. The MSCI EAFE Index returned 2.8% and -3.7% for the last twelve months in local currency and USD terms respectively.
- Emerging markets slightly underperformed relative to developed markets for the 1st quarter, but still appreciated in both local currency and USD terms with the MSCI Emerging Markets Index returning 9.8% and 9.9% respectively. A major tailwind for equity markets was the improvement in trade relations between the US and China. As Chinese economic data appeared to be slowing, the Chinese government also announced continued stimulus in the form of tax cuts, infrastructure investment and lowered the reserve requirement for banks in order to encourage lending. We also saw commodity prices rise over the quarter which is generally beneficial to emerging market countries with rising oil prices helping Russian and Colombian equity returns. In Brazil, President Jair Bolsonaro officially took office. Bolsonaro announced his plan to reform the country's debt laden pension system and promised market friendly economic reforms. One year returns for the MSCI Emerging Market Index were -1.9% in local currency terms and -7.4% in USD terms.

Quarter Performance



1-Year Performance



The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	4.3%	-4.5%
Consumer Discretionary	11.0%	7.5%	-10.4%
Consumer Staples	11.8%	12.4%	3.3%
Energy	5.9%	10.4%	4.6%
Financials	18.9%	6.9%	-12.7%
Health Care	11.3%	11.2%	7.4%
Industrials	14.4%	10.6%	-5.4%
Information Technology	6.3%	15.3%	-3.8%
Materials	7.5%	13.2%	-3.0%
Real Estate	3.9%	14.0%	4.2%
Utilities	3.7%	9.0%	8.7%
Total	100.0%	10.0%	-3.7%

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.1%	6.9%	-1.8%
Consumer Discretionary	11.1%	11.2%	-10.3%
Consumer Staples	9.9%	11.2%	1.6%
Energy	7.4%	12.4%	5.2%
Financials	21.6%	7.7%	-9.4%
Health Care	8.4%	11.0%	4.4%
Industrials	11.7%	10.2%	-4.9%
Information Technology	8.4%	14.7%	-7.3%
Materials	7.6%	11.3%	-3.6%
Real Estate	3.5%	14.4%	2.8%
Utilities	3.3%	8.2%	6.1%
Total	100.0%	10.3%	-4.2%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	12.3%	9.5%	-3.3%
Consumer Discretionary	13.4%	20.8%	-13.2%
Consumer Staples	6.4%	5.3%	-8.4%
Energy	8.1%	12.2%	9.4%
Financials	24.2%	7.2%	-6.0%
Health Care	2.6%	3.6%	-23.4%
Industrials	5.4%	4.8%	-7.6%
Information Technology	14.6%	12.8%	-10.8%
Materials	7.4%	6.9%	-6.2%
Real Estate	3.2%	15.6%	-2.1%
Utilities	2.5%	4.2%	-2.7%
Total	100.0%	9.9%	-7.4%

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1-Year Return
Japan	24.0%	16.1%	6.7%	-7.8%
United Kingdom	17.1%	11.5%	11.9%	-0.1%
France	11.3%	7.6%	10.7%	-3.7%
Switzerland	8.9%	6.0%	13.1%	7.5%
Germany	8.6%	5.8%	6.9%	-13.7%
Australia	6.9%	4.7%	11.4%	4.5%
Hong Kong	4.1%	2.8%	15.6%	8.0%
Netherlands	3.6%	2.4%	13.6%	-2.3%
Spain	3.0%	2.0%	7.0%	-8.8%
Sweden	2.6%	1.8%	7.4%	-5.1%
Italy	2.4%	1.6%	14.6%	-10.6%
Denmark	1.8%	1.2%	12.8%	-3.2%
Singapore	1.3%	0.9%	6.2%	-6.4%
Finland	1.0%	0.7%	8.0%	-3.6%
Belgium	1.0%	0.7%	16.2%	-15.5%
Norway	0.7%	0.5%	7.0%	-4.4%
Ireland	0.5%	0.4%	11.4%	-11.6%
Israel	0.5%	0.4%	10.1%	9.9%
Austria	0.2%	0.2%	8.4%	-23.0%
New Zealand	0.2%	0.2%	16.7%	18.1%
Portugal	0.2%	0.1%	10.2%	-4.9%
Total EAFE Countries	100.0%	67.1%	10.0%	-3.7%
Canada		6.8%	15.4%	3.1%
Total Developed Countries		73.9%	10.5%	-3.1%
China		8.6%	17.7%	-6.2%
Korea		3.4%	4.9%	-16.7%
Taiwan		3.0%	9.0%	-6.1%
India		2.4%	7.2%	6.8%
Brazil		1.9%	8.1%	-4.2%
South Africa		1.5%	4.4%	-18.0%
Russia		1.0%	12.2%	2.2%
Mexico		0.7%	5.5%	-11.7%
Thailand		0.6%	7.4%	-6.9%
Indonesia		0.6%	4.3%	2.0%
Malaysia		0.6%	0.3%	-13.1%
Poland		0.3%	-0.6%	-5.7%
Philippines		0.3%	7.9%	1.8%
Chile		0.3%	4.1%	-17.5%
Qatar		0.2%	-3.5%	22.2%
United Arab Emirates		0.2%	8.7%	1.3%
Turkey		0.1%	-3.2%	-40.3%
Colombia		0.1%	24.8%	5.3%
Peru		0.1%	11.0%	2.2%
Hungary		0.1%	6.0%	0.5%
Greece		0.1%	12.8%	-23.6%
Czech Republic		0.0%	3.8%	-6.8%
Egypt		0.0%	15.8%	-10.2%
Pakistan		0.0%	8.3%	-36.6%
Total Emerging Countries		26.1%	9.9%	-7.4%
Total ACWIxUS Countries		100.0%	10.3%	-4.2%

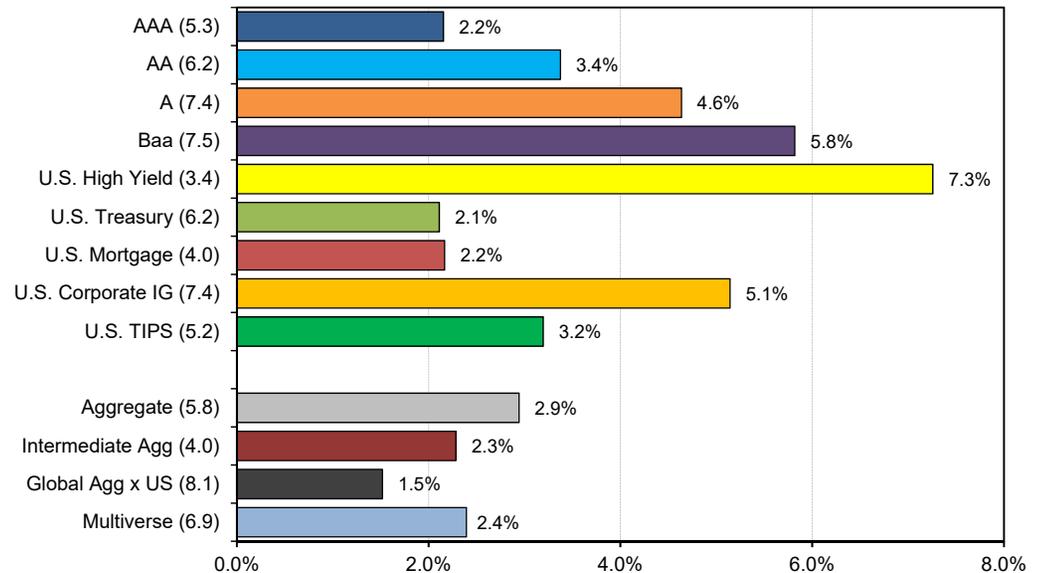
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

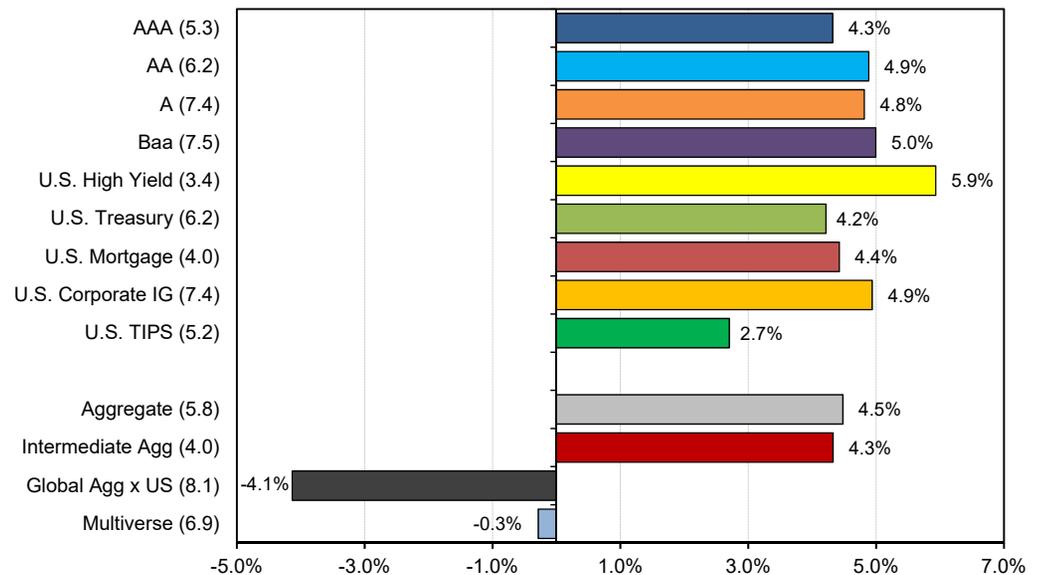


- Broad fixed income benchmarks were positive to start 2019. Following the late 2018 market volatility, the Federal Open Market Committee (FOMC) issued dovish guidance after their January meeting stating that they would be patient in determining future interest rate adjustments. The FOMC also commented on the ongoing balance sheet reduction program, stating that they would be open to changes to the program if market conditions warranted them. Later in March, Fed Chair Jerome Powell communicated that the FOMC is no longer projecting any further interest rate increases through 2019. He also stated that they would begin tapering the roll off from the balance sheet reduction program in May with a plan to halt the program entirely in September. The stoppage of the balance sheet reduction program represents an easing of monetary policy. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. This caused continued inversion in the yield curve with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.14% with the 30-day T-Bill yielding more than the 10-year bond by 0.02%. Historically, an inverted yield curve has been a leading indicator of a recession in the next 6-24 months. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 2.9% and 4.5% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 5.8% for the quarter, while AAA was the worst performing, returning 2.2%. Despite their relatively low durations, high yield securities posted very strong returns for the quarter, gaining 7.3%, as spreads tightened by 135 basis points on these issues. When viewed over the 1-year period, returns for the various quality segments generally show lower quality securities outperforming higher quality issues by a small margin.
- During the 1st quarter, investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors. Investment grade corporate credit returned 5.1%, as the drop in interest rates benefitted these securities to a greater degree and credit spreads tightened considerably since the end of 2018. This quarter's performance carried through to the 1-year period as corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 4.9% versus a 4.4% return for mortgages and 4.2% gain on Treasury securities.

Quarter Performance

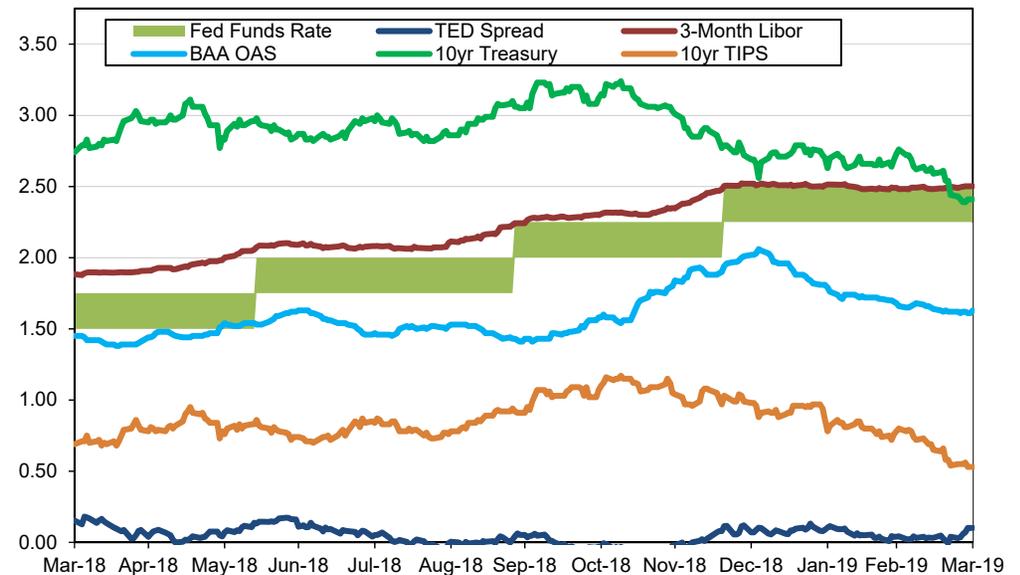


1-Year Performance

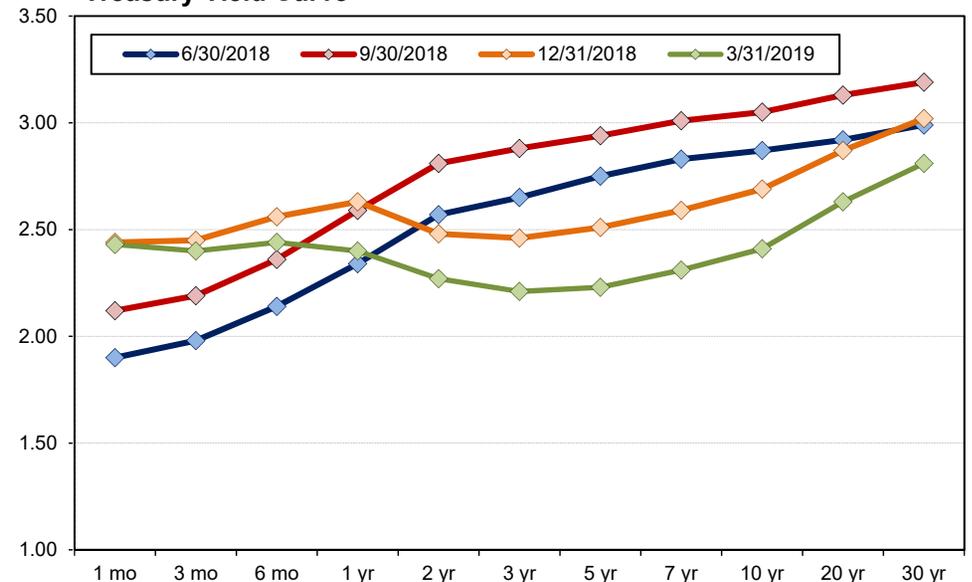


- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 1st quarter. These indices have lower, or in some cases (Germany, Japan), negative yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD has appreciated against most other developed currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 1.5% and -4.1% for the quarter and 1-year period respectively. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. Notably, the ECB announced a program to extend loans to European banks in an effort to increase lending and pledged to keep interest rates steady through the end of 2019. China also announced new stimulus to help spur its economy. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) fell from recent high's greater than 3.0%, to yields below 2.5% to end the first quarter. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads dropped steadily over the 1st quarter of 2019. This spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. These credit spreads have tightened by about 34 basis points over the last three months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate due to the tightening of US monetary policy during 2018. As mentioned, the Fed's current guidance is for zero rate increases in 2019.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift of interest rates as well as a general flattening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorter-term maturities fell less than interest rates in the middle- to long-end of the curve.

1-Year Trailing Market Rates



Treasury Yield Curve



Evaluation Process

This section presents charts and graphs that highlight the investment character of each portfolio analyzed. The performance, portfolio characteristics, risk profile, and style traits of each portfolio are compared against those of its benchmark(s) and other funds with similar objectives. Eight criteria-specific rankings are developed, and then combined, to establish each portfolio's overall status.

The table below describes the evaluation standards used. Significant changes in portfolio characteristics compared to historical positioning, large performance deficits, and risk or style shortcomings are fundamental factors in concluding if remedial action is advisable. However, a violation of one of more of the standards does not automatically require remedial action.

Investment Policy Criteria	Weighting	Summary of Evaluation
Manager Performance		
Investment Returns vs. Peer Group	20%	A fund is evaluated relative to where its 1, 3 and 5-year returns fall within its peer group. The results for each period are combined to determine total ranking (satisfactory, modest breach, significant concern). A similar process is used to evaluate the fund's performance relative to its benchmark(s).
Historical Performance vs. Benchmark	20%	
Portfolio Characteristics		
Adherence to Standards	10%	These criteria compare portfolio characteristics such as market capitalization, number of holdings, cash, and concentration of holdings against objective standards and benchmarks. For example, a fund with a high allocation to cash or with a high/low average market capitalization relative to its benchmark will receive a lower grade. Additionally, funds having less than three years of performance history or having manager tenure of less than three years will receive a lower grade.
Inception & Manager Tenure	10%	
Risk Profile		
Sharpe Ratio & Standard Deviation Relative to Peer Group	10%	A fund is evaluated relative to where its 3- and 5-year Sharpe ratio and standard deviation fall within its peer group. The results for each period are combined to determine total ranking. A similar process is used to evaluate the fund's Sharpe ratio and standard deviation relative to its benchmark(s).
Sharpe Ratio & Standard Deviation Relative to Benchmark	10%	
Style Traits		
Adherence to Investment Objectives	10%	A fund's style is evaluated based upon how closely it adheres to its stated investment objective and how stable its style has been historically. Criteria used to evaluate a fund's style traits include returns-based style analysis, statistics such as r-squared, and portfolio characteristics such as price/earnings ratio. Funds with style traits that are inconsistent with their stated objective or historically unstable receive lower grades.
Historical Style Stability	10%	
Status		
Overall Status		The results for all criteria are combined to determine an overall ranking for the fund. Rankings include Satisfactory, Modest Breach ("Guarded" status) and Significant Concern ("Watch List" status).

Note: Grades are based on AndCo's Proprietary scale



Portfolio Evaluation Summary

This report provides opinions, analysis, and supporting statistical information concerning:

- the performance, volatility, and characteristics of each designated Plan fund
- the continuing suitability of each fund as a Plan investment option

Portfolio Performance and Suitability of Plan Funds

Our overall evaluation of the Plan's investment funds may be summarized as follows:

Summary Evaluation	Number of Funds
Pass (Satisfactory)	15
Guarded	1
Watch	2

See the Plan Funds Observations and Comments, below, for further explanation.

Plan Fund Observations and Comments

The majority of Plan funds have substantially achieved their category-specific standards for performance, controlled volatility, and portfolio characteristics. The charts in the following pages reveal some modest breaches compared to established

evaluation standards; however, we do not find divergences from the funds' stated objectives or styles that are worrisome except as discussed below.

Fund Commentary

Hotchkis & Wiley Mid Cap Value remains on **GUARDED** status as the long term returns continue to lag. However, the fund did experience significantly improved performance during this latest quarter. The fund has underperformed the benchmark index over the three and five years periods, while outperforming during the last ten years annualized. Relative peer group and benchmark returns are still strong during the last ten years annualized periods. The value style has certainly provided most of the drag on returns. We will continue to monitor.

The Lazard Emerging Markets Fund was downgraded to **WATCH** status due to continued poor relative performance when compared to the peer group and market index. Emerging markets funds experienced severe downside volatility during the last four quarters, and although absolute returns were better in the first quarter The value style of Lazard continued to be the primary cause for the funds severe underperformance over the one, three and five year periods. We continue to believe that Lazard is still a strong long-term EM strategy. We will continue to monitor.

The DFA International Small Cap Value fund has been placed on **WATCH** status due to significant underperformance during the last twelve months that has caused a deterioration on the longer term relative returns. As we have seen with some of our other value oriented strategies the style has been the primary driver of the funds poor performance. The fund represents a small allocation in the overall assets of the plan. We will continue to monitor.



Portfolio Evaluation Summary

- 1 Trailing 1, 3 and 5-year portfolio returns versus peer group
- 2 Historic performance relative to benchmark
- 3 Portfolio characteristics compared to established standards
- 4 At least 3 years of investment performance/At least 3 years with current fund manager
- 5 Sharpe ratio and standard deviation of fund relative to peer group
- 6 Sharpe ratio and standard deviation of fund relative to benchmark
- 7 Style consistent with fund objective
- 8 Style historically stable
- 9 Summary Evaluation

Pass (Satisfactory)
Guarded
Watch

Investment Funds	1	2	3	4	5	6	7	8	9
Lazard Emerging Markets Equity (LZOEX)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
DFA International Small Cap Value (DISVX)	Watch	Watch	Pass	Pass	Pass	Guarded	Pass	Pass	Watch
American Funds EuroPacific Growth (RERGX)	Pass	Pass	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
Wells Fargo Small Co Growth R6 (WSCRX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Small Cap Index Adm (VSMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
AMG Managers Skyline Special Equities (SKSEX)	Pass	Guarded	Pass	Pass	Pass	Guarded	Pass	Pass	Pass
Hartford Mid Cap (HIMCX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Vanguard Mid Cap Index Adm (VIMAX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hotchkis & Wiley Mid Cap Value (HWMIX)	Guarded	Guarded	Pass	Pass	Pass	Guarded	Pass	Pass	Guarded
American Funds Growth Fund of America (RGAGX)	Pass	Guarded	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
Wells Fargo Disciplined US Core (EVSIX)	Pass	Guarded	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
Vanguard Institutional Index (VINIX)	Pass	Pass	Pass	Guarded	Pass	Pass	Pass	Pass	Pass
American Century Equity Income (AEUDX)	Pass	Pass	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
American Funds American Balanced (RLBGX)	Pass	Pass	Pass	Pass	Guarded	Guarded	Pass	Pass	Pass
PIMCO High Yield (PHIYX)	Pass	Pass	Pass	Pass	Guarded	Pass	Pass	Pass	Pass
PIMCO Foreign Bond USD-Hedged (PFORX)	Guarded	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Total Return Bond (HIABX)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
MassMutual Guaranteed Interest Account	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass



Historical Summary Evaluation

Pass (Satisfactory)

Guarded

Watch

Investment Funds	4Q18	3Q18	2Q18	1Q18	4Q17	3Q17	2Q17	1Q17	4Q16
Lazard Emerging Markets Equity (LZOEX)	Guarded	Guarded	Guarded	Pass	Guarded	Guarded	Guarded	Pass	Pass
DFA International Small Cap Value (DISVX)	Pass								
American Funds EuroPacific Growth (RERGX)	Pass								
Wells Fargo Small Co Growth R6 (WSCRX)	Pass	Pass	Pass	Pass	Pass	Pass			
Vanguard Small Cap Index Adm (VSMAX)	Pass								
AMG Managers Skyline Special Equities (SKSEX)	Guarded	Guarded	Guarded	Pass	Pass	Pass	Pass	Pass	Pass
Hartford Mid Cap (HIMCX)	Pass								
Vanguard Mid Cap Index Adm (VIMAX)	Pass								
Hotchkis & Wiley Mid Cap Value (HWMIX)	Guarded								
American Funds Growth Fund of America (RGAGX)	Pass								
Wells Fargo Disciplined US Core (EVSIX)	Pass								
Vanguard Institutional Index (VINIX)	Pass								
American Century Equity Income (AEUDX)	Pass								
American Funds American Balanced (RLBGX)	Pass								
PIMCO High Yield (PHIYX)	Pass								
PIMCO Foreign Bond USD-Hedged (PFORX)	Pass								
Hartford Total Return Bond (HIABX)	Pass								
MassMutual Guaranteed Interest Account	Pass								



Asset Allocation Attributes

	Mar-2019		Dec-2018		Sep-2018	
	(\$)	%	(\$)	%	(\$)	%
Total 457 Fund	164,682,108	100.00	155,626,513	100.00	168,165,817	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	1,248,809	0.76	1,172,330	0.75	1,257,641	0.75
DFA International Small Cap Value (DISVX)	1,384,967	0.84	1,255,726	0.81	1,502,311	0.89
American Funds EuroPacific Growth (RERGX)	4,663,439	2.83	4,108,472	2.64	4,670,446	2.78
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	2,959,611	1.80	2,551,478	1.64	3,208,533	1.91
Vanguard Small Cap Index (VSMAX)	2,818,903	1.71	2,408,630	1.55	2,916,459	1.73
AMG Managers Skyline Special Equities (SKSEX)	2,259,079	1.37	2,041,078	1.31	2,689,557	1.60
Hartford Mid Cap (HIMCX)	9,469,592	5.75	7,890,061	5.07	9,686,310	5.76
Vanguard Mid Cap Index (VIMAX)	2,868,679	1.74	2,484,906	1.60	2,947,832	1.75
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,716,779	1.65	2,325,742	1.49	3,247,238	1.93
AF Growth Fund of America (RGAGX)	14,588,895	8.86	12,922,280	8.30	15,496,479	9.21
Wells Fargo Disciplined US Core (EVSIX)	12,229,332	7.43	10,881,687	6.99	12,936,065	7.69
Vanguard Institutional Index (VINIX)	12,045,266	7.31	10,702,954	6.88	12,586,588	7.48
American Century Equity Income (AEUDX)	6,779,281	4.12	6,214,511	3.99	6,909,990	4.11
Balanced Fund						
American Funds American Balanced (RLBGX)	5,780,556	3.51	5,472,323	3.52	5,997,891	3.57
Fixed Income						
PIMCO High Yield (PHIYX)	2,041,630	1.24	1,926,869	1.24	2,117,851	1.26
PIMCO Foreign Bond USD-Hedged (PFORX)	984,025	0.60	949,338	0.61	926,980	0.55
Hartford Total Return Bond (HIABX)	3,417,417	2.08	3,269,210	2.10	3,329,622	1.98
Cash						
MassMutual Guaranteed Interest Account	73,728,945	44.77	74,349,570	47.77	73,051,392	43.44
Loan Account	2,696,903	1.64	2,699,348	1.73	2,686,632	1.60



Asset Allocation
457 Retirement Models
As of March 31, 2019

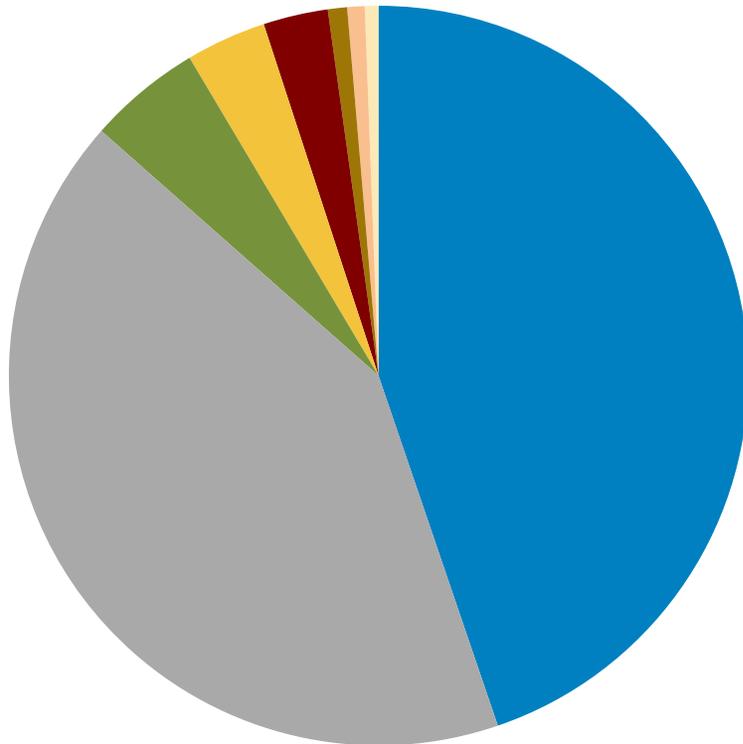
Asset Allocation Attributes	Mar-2019		Dec-2018		Sep-2018	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	1,549	0.02	1,378	0.02	734	0.01
WCAB 2055 Retirement	22,239	0.24	16,788	0.19	15,459	0.16
WCAB 2050 Retirement	930,952	9.84	834,999	9.60	1,059,838	11.03
WCAB 2045 Retirement	241,559	2.55	201,441	2.32	208,629	2.17
WCAB 2040 Retirement	2,632,554	27.82	1,957,770	22.50	2,259,765	23.51
WCAB 2035 Retirement	444,988	4.70	388,876	4.47	320,512	3.34
WCAB 2030 Retirement	2,451,957	25.92	2,680,467	30.81	2,983,402	31.04
WCAB 2025 Retirement	1,126,771	11.91	1,148,501	13.20	1,185,110	12.33
WCAB 2020 Retirement	1,551,915	16.40	1,410,296	16.21	1,506,985	15.68
WCAB 2015 Retirement	-	0.00	-	0.00	-	0.00
WCAB Income Retirement	56,869	0.60	59,660	0.69	69,534	0.72
Model Portfolios Total	9,461,354	100.00	8,700,176	100.00	9,609,968	100.00



March 31, 2019 : \$164,682,108

Allocation

	Market Value	Allocation
Cash	73,728,945	44.8
US Equity	68,735,418	41.7
US Fixed Income	8,155,951	5.0
US Balanced	5,780,556	3.5
International Equity	4,663,439	2.8
International-Developed Equity	1,384,967	0.8
International-Emerging Equity	1,248,809	0.8
International Fixed Income	984,025	0.6

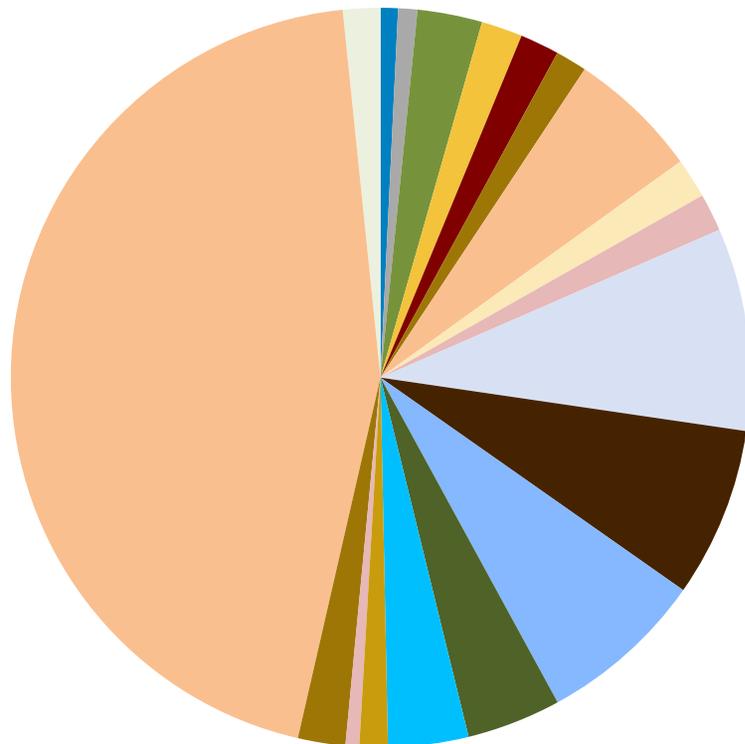


Asset Allocation By Manager

457 Total Plan

As of March 31, 2019

March 31, 2019 : \$164,682,108



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	1,248,809	0.8
DFA International Small Cap Value (DISVX)	1,384,967	0.8
American Funds EuroPacific Growth (RERGX)	4,663,439	2.8
Wells Fargo Small Co Growth (WSCRX)	2,959,611	1.8
Vanguard Small Cap Index (VSMAX)	2,818,903	1.7
AMG Managers Skyline Special Equities (SKSEX)	2,259,079	1.4
Hartford Mid Cap (HIMCX)	9,469,592	5.8
Vanguard Mid Cap Index (VIMAX)	2,868,679	1.7
Hotchkis & Wiley Mid Cap Value (HWMIX)	2,716,779	1.6
AF Growth Fund of America (RGAGX)	14,588,895	8.9
Wells Fargo Disciplined US Core (EVSIX)	12,229,332	7.4
Vanguard Institutional Index (VINIX)	12,045,266	7.3
American Century Equity Income (AEUDX)	6,779,281	4.1
American Funds American Balanced (RLBGX)	5,780,556	3.5
PIMCO High Yield (PHIYX)	2,041,630	1.2
PIMCO Foreign Bond USD-Hedged (PFORX)	984,025	0.6
Hartford Total Return Bond (HIABX)	3,417,417	2.1
MassMutual Guaranteed Interest Account	73,728,945	44.8
Loan Account	2,696,903	1.6



Asset Allocation Attributes

	Mar-2019		Dec-2018		Sep-2018	
	(\$)	%	(\$)	%	(\$)	%
Total 401(a) Fund	12,160,188	100.00	11,284,725	100.00	12,244,204	100.00
International Equity						
Lazard Emerging Markets Equity (LZOEX)	148,972	1.23	139,058	1.23	147,098	1.20
DFA International Small Cap Value (DISVX)	157,667	1.30	139,951	1.24	165,538	1.35
American Funds EuroPacific Growth (RERGX)	410,201	3.37	360,260	3.19	407,480	3.33
Domestic Equity						
Wells Fargo Small Co Growth (WSCRX)	298,639	2.46	257,843	2.28	323,815	2.64
Vanguard Small Cap Index (VSMAX)	280,060	2.30	240,442	2.13	304,418	2.49
AMG Managers Skyline Special Equities (SKSEX)	260,185	2.14	227,646	2.02	296,589	2.42
Hartford Mid Cap (HIMCX)	864,683	7.11	695,036	6.16	841,765	6.87
Vanguard Mid Cap Index (VIMAX)	260,336	2.14	219,795	1.95	272,261	2.22
Hotchkis & Wiley Mid Cap Value (HWMIX)	268,752	2.21	226,283	2.01	301,859	2.47
American Funds Growth Fund of America (RGAGX)	831,450	6.84	725,306	6.43	847,470	6.92
Wells Fargo Disciplined US Core (EVSIX)	910,499	7.49	800,488	7.09	923,053	7.54
Vanguard Institutional Index (VINIX)	1,147,322	9.44	1,024,994	9.08	1,193,311	9.75
American Century Equity Income (AEUDX)	665,292	5.47	605,152	5.36	649,115	5.30
Balanced Fund						
American Funds American Balanced (RLBGX)	558,992	4.60	515,484	4.57	542,494	4.43
Fixed Income						
PIMCO High Yield (PHIYX)	143,528	1.18	132,714	1.18	140,303	1.15
PIMCO Foreign Bond USD-Hedged (PFORX)	95,467	0.79	92,876	0.82	97,033	0.79
Hartford Total Return Bond (HIABX)	354,558	2.92	341,387	3.03	340,444	2.78
Cash						
MassMutual Guaranteed Interest Account	4,302,708	35.38	4,325,160	38.33	4,224,815	34.50
Loan Account	200,878	1.65	214,851	1.90	225,343	1.84



Asset Allocation
401(a) Retirement Models
As of March 31, 2019

Asset Allocation Attributes	Mar-2019		Dec-2018		Sep-2018	
	(\$)	%	(\$)	%	(\$)	%
WCAB 2060 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2055 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2050 Retirement	63,147	5.38	53,253	5.04	58,079	4.93
WCAB 2045 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2040 Retirement	173,804	14.81	151,467	14.32	167,950	14.25
WCAB 2035 Retirement	60,611	5.17	53,738	5.08	60,005	5.09
WCAB 2030 Retirement	137,314	11.70	120,939	11.44	183,979	15.61
WCAB 2025 Retirement	478,138	40.75	433,368	40.98	473,488	40.17
WCAB 2020 Retirement	-	0.00	-	0.00	-	0.00
WCAB 2015 Retirement	23,328	1.99	21,746	2.06	-	0.00
WCAB Income Retirement	236,985	20.20	222,982	21.09	235,161	19.95
Total Model Portfolios	1,173,326	100.00	1,057,494	100.00	1,178,662	100.00

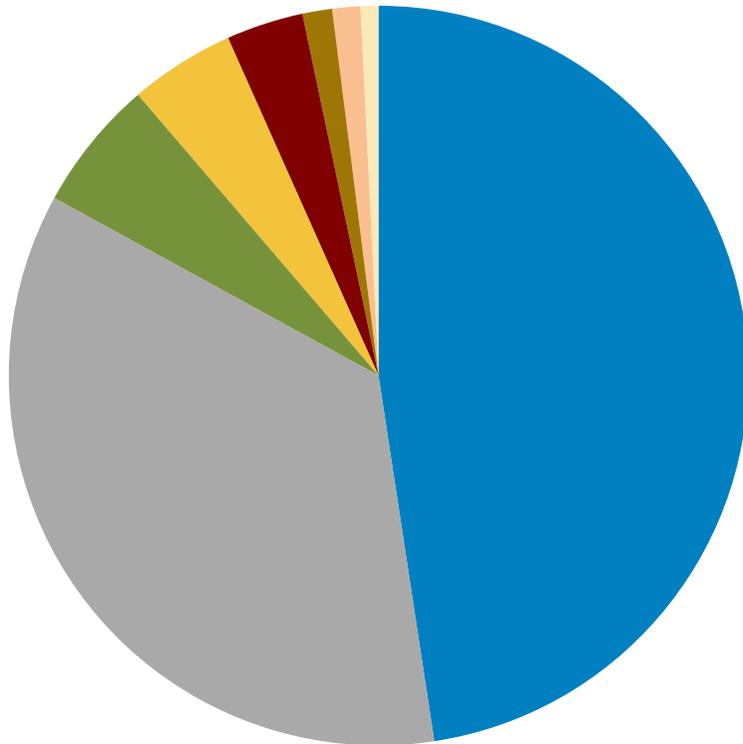


Asset Allocation By Asset Class
401(a) Total Plan
As of March 31, 2019

March 31, 2019 : \$12,160,188

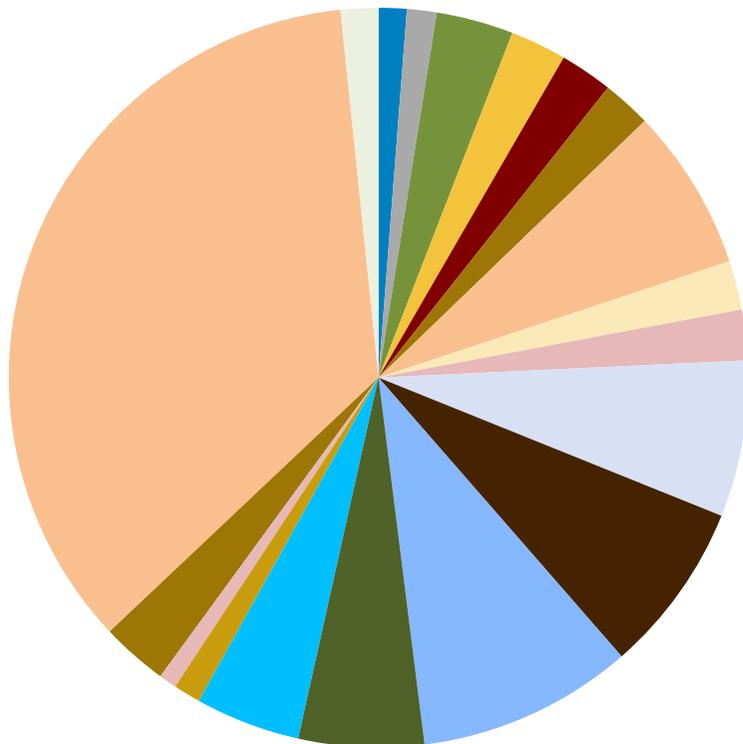
Allocation

	Market Value	Allocation
■ US Equity	5,787,217	47.6
■ Cash	4,302,708	35.4
■ US Fixed Income	698,964	5.7
■ US Balanced	558,992	4.6
■ International Equity	410,201	3.4
■ International-Developed Equity	157,667	1.3
■ International-Emerging Equity	148,972	1.2
■ International Fixed Income	95,467	0.8



Asset Allocation By Manager
401(a) Total Plan
As of March 31, 2019

March 31, 2019 : \$12,160,188



Allocation

	Market Value	Allocation
Lazard Emerging Markets Equity (LZOEX)	148,972	1.2
DFA International Small Cap Value (DISVX)	157,667	1.3
American Funds EuroPacific Growth (RERGX)	410,201	3.4
Wells Fargo Small Co Growth (WSCRX)	298,639	2.5
Vanguard Small Cap Index (VSMAX)	280,060	2.3
AMG Managers Skyline Special Equities (SKSEX)	260,185	2.1
Hartford Mid Cap (HIMCX)	864,683	7.1
Vanguard Mid Cap Index (VIMAX)	260,336	2.1
Hotchkis & Wiley Mid Cap Value (HWMIX)	268,752	2.2
American Funds Growth Fund of America (RGAGX)	831,450	6.8
Wells Fargo Disciplined US Core (EVSIX)	910,499	7.5
Vanguard Institutional Index (VINIX)	1,147,322	9.4
American Century Equity Income (AEUDX)	665,292	5.5
American Funds American Balanced (RLBGX)	558,992	4.6
PIMCO High Yield (PHIYX)	143,528	1.2
PIMCO Foreign Bond USD-Hedged (PFORX)	95,467	0.8
Hartford Total Return Bond (HIABX)	354,558	2.9
MassMutual Guaranteed Interest Account	4,302,708	35.4
Loan Account	200,878	1.7



Comparative Performance
401(a) Trailing Returns
As of March 31, 2019

Comparative Performance	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
International Equity														
Lazard Emerging Markets Equity (LZOEX)	7.44	(84)	7.44	(84)	-13.91	(86)	7.44	(72)	0.60	(85)	0.78	(87)	7.95	(70)
MSCI Emerging Markets (Net) Index	9.93	(59)	9.93	(59)	-7.41	(33)	10.68	(31)	3.68	(33)	2.69	(45)	8.95	(46)
IM Emerging Markets Equity (MF) Median	10.38		10.38		-9.38		9.40		3.08		2.41		8.77	
DFA International Small Cap Value (DISVX)	8.65	(85)	8.65	(85)	-14.75	(78)	5.11	(76)	1.41	(81)	6.73	(53)	11.18	(76)
MSCI AC World ex USA Small Cap (Net)	10.26	(63)	10.26	(63)	-9.49	(36)	7.01	(47)	3.26	(45)	6.05	(65)	11.86	(59)
IM International SMID Cap Equity (MF) Median	10.72		10.72		-10.94		6.86		3.00		6.87		12.17	
American Funds EuroPacific Growth (RERGX)	13.20	(11)	13.20	(11)	-4.66	(34)	9.33	(2)	4.27	(1)	6.88	(1)	N/A	
MSCI EAFE (Net) Index	9.98	(52)	9.98	(52)	-3.71	(20)	7.27	(32)	2.33	(7)	5.63	(6)	8.96	(33)
IM International Large Cap Core Equity (MF) Median	10.04		10.04		-5.89		6.36		1.45		4.65		8.24	
Domestic Equity														
Wells Fargo Small Co Growth (WSCRX)	15.30	(33)	15.30	(33)	6.18	(43)	15.46	(49)	N/A		N/A		N/A	
Russell 2000 Growth Index	17.14	(19)	17.14	(19)	3.85	(57)	14.87	(50)	8.41	(34)	11.79	(29)	16.52	(42)
IM U.S. Small Cap Growth Equity (MF) Median	13.82		13.82		4.74		14.77		6.51		9.53		15.67	
Vanguard Small Cap Index (VSMAX)	16.18	(4)	16.18	(4)	5.58	(7)	12.78	(13)	7.91	(19)	11.67	(15)	16.97	(11)
Vanguard Spliced Small Cap Index	16.21	(4)	16.21	(4)	5.61	(7)	12.77	(13)	7.89	(19)	11.65	(15)	16.94	(12)
IM U.S. Small Cap Core Equity (MF) Median	11.60		11.60		-0.66		10.15		5.98		10.00		15.24	
AMG Managers Skyline Special Equities (SKSEX)	12.70	(32)	12.70	(32)	-7.47	(92)	5.25	(90)	3.20	(57)	9.30	(16)	16.40	(14)
Russell 2000 Value Index	11.93	(53)	11.93	(53)	0.17	(21)	10.86	(18)	5.59	(8)	9.61	(12)	14.12	(44)
IM U.S. Small Cap Value Equity (MF) Median	12.01		12.01		-4.24		8.30		3.68		8.10		13.87	
Hartford Mid Cap (HIMCX)	20.20	(29)	20.20	(29)	7.57	(74)	15.57	(36)	11.03	(25)	14.09	(11)	16.54	(35)
Russell Midcap Growth Index	19.62	(43)	19.62	(43)	11.51	(31)	15.06	(43)	10.89	(27)	12.97	(31)	17.60	(13)
IM U.S. Mid Cap Growth Equity (MF) Median	19.23		19.23		9.47		14.52		9.66		11.81		15.76	
Vanguard Mid Cap Index (VIMAX)	16.77	(8)	16.77	(8)	5.98	(16)	11.59	(23)	8.85	(13)	11.78	(13)	16.67	(7)
Vanguard Spliced Mid Cap Index	16.79	(6)	16.79	(6)	5.99	(15)	11.63	(22)	8.89	(12)	11.83	(10)	16.72	(4)
IM U.S. Mid Cap Core Equity (MF) Median	14.58		14.58		2.76		9.32		6.19		9.77		14.21	
Hotchkis & Wiley Mid Cap Value (HWMIX)	16.12	(1)	16.12	(1)	-4.31	(77)	6.46	(71)	2.61	(92)	8.98	(65)	16.67	(3)
Russell Midcap Value Index	14.37	(26)	14.37	(26)	2.89	(16)	9.50	(19)	7.22	(6)	11.30	(9)	16.39	(6)
IM U.S. Mid Cap Value Equity (MF) Median	13.37		13.37		-1.14		7.96		5.05		9.38		14.77	
American Funds Growth Fund of America (RGAGX)	13.87	(92)	13.87	(92)	7.67	(87)	16.12	(50)	11.87	(65)	14.03	(26)	N/A	
Russell 1000 Growth Index	16.10	(55)	16.10	(55)	12.75	(41)	16.53	(42)	13.50	(24)	14.34	(19)	17.52	(17)
IM U.S. Large Cap Growth Equity (MF) Median	16.26		16.26		12.03		16.08		12.46		13.28		16.16	

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Comparative Performance
401(a) Trailing Returns
As of March 31, 2019

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
Wells Fargo Disciplined US Core (EVSIX)	12.65	(62)	12.65	(62)	5.44	(77)	11.33	(72)	10.27	(27)	12.50	(21)	N/A	
S&P 500 Index	13.65	(32)	13.65	(32)	9.50	(21)	13.51	(22)	10.91	(12)	12.85	(12)	15.92	(14)
IM U.S. Large Cap Core Equity (MF) Median	13.12		13.12		7.74		12.37		9.37		11.58		14.58	
Vanguard Institutional Index (VINIX)	13.65	(31)	13.65	(31)	9.47	(22)	13.48	(23)	10.88	(13)	12.82	(12)	15.90	(14)
S&P 500 Index	13.65	(32)	13.65	(32)	9.50	(21)	13.51	(22)	10.91	(12)	12.85	(12)	15.92	(14)
IM U.S. Large Cap Core Equity (MF) Median	13.12		13.12		7.74		12.37		9.37		11.58		14.58	
American Century Equity Income (AEUDX)	10.67	(75)	10.67	(75)	9.43	(7)	10.91	(32)	9.75	(2)	N/A		N/A	
Russell 1000 Value Index	11.93	(40)	11.93	(40)	5.67	(33)	10.45	(47)	7.72	(32)	11.14	(18)	14.52	(24)
IM U.S. Large Cap Value Equity (MF) Median	11.56		11.56		4.23		10.28		7.12		10.23		13.41	
Balanced Fund														
American Funds American Balanced (RLBGX)	7.95	(62)	7.95	(62)	6.56	(5)	9.29	(24)	7.83	(2)	9.64	(3)	N/A	
American Balanced Fund Hybrid	8.24	(59)	8.24	(59)	7.29	(3)	7.80	(44)	6.93	(8)	7.72	(27)	9.93	(49)
IM All Balanced (MF) Median	8.86		8.86		2.87		7.32		4.87		6.41		9.86	
WCAB 2060 Retirement	12.62	(14)	12.62	(14)	2.43	(59)	N/A		N/A		N/A		N/A	
The WCAB 2060 Retirement Portfolio Policy	11.83	(47)	11.83	(47)	6.11	(1)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	11.69		11.69		2.84		10.00		6.46		8.52		12.15	
WCAB 2055 Retirement	12.62	(14)	12.62	(14)	2.43	(59)	N/A		N/A		N/A		N/A	
The WCAB 2055 Retirement Portfolio Policy	11.83	(47)	11.83	(47)	6.11	(1)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2055 (MF) Median	11.69		11.69		2.84		10.00		6.46		8.52		12.15	
WCAB 2050 Retirement	12.56	(13)	12.56	(13)	2.41	(60)	10.51	(24)	6.90	(24)	9.24	(14)	13.00	(5)
The WCAB 2050 Retirement Portfolio Policy	11.72	(40)	11.72	(40)	6.06	(1)	11.09	(6)	8.13	(1)	9.95	(4)	13.03	(5)
IM Mixed-Asset Target 2050 (MF) Median	11.52		11.52		2.84		9.83		6.22		8.37		12.06	
WCAB 2045 Retirement	12.43	(10)	12.43	(10)	2.40	(64)	N/A		N/A		N/A		N/A	
The WCAB 2045 Retirement Portfolio Policy	11.59	(44)	11.59	(44)	6.00	(1)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2045 (MF) Median	11.46		11.46		2.89		9.83		6.38		8.36		12.11	
WCAB 2040 Retirement	11.79	(21)	11.79	(21)	2.42	(64)	10.10	(28)	6.75	(25)	8.83	(20)	12.26	(27)
The WCAB 2040 Retirement Portfolio Policy	11.06	(47)	11.06	(47)	5.79	(2)	10.46	(18)	7.70	(2)	9.27	(8)	12.08	(36)
IM Mixed-Asset Target 2040 (MF) Median	10.98		10.98		2.82		9.48		6.02		8.02		11.77	
WCAB 2035 Retirement	11.23	(22)	11.23	(22)	2.44	(72)	N/A		N/A		N/A		N/A	
The WCAB 2035 Retirement Portfolio Policy	10.42	(44)	10.42	(44)	5.49	(2)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2035 (MF) Median	10.30		10.30		3.00		9.12		5.92		7.80		11.60	
WCAB 2030 Retirement	10.56	(7)	10.56	(7)	3.06	(53)	9.44	(11)	6.44	(9)	8.25	(13)	11.52	(29)
The WCAB 2030 Retirement Portfolio Policy	9.69	(37)	9.69	(37)	5.67	(1)	9.31	(15)	7.03	(2)	8.44	(7)	11.06	(45)
IM Mixed-Asset Target 2030 (MF) Median	9.52		9.52		3.16		8.27		5.37		7.21		10.92	

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Comparative Performance
401(a) Trailing Returns
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	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR	
WCAB 2025 Retirement	9.49	(10)	9.49	(10)	3.20	(54)	N/A		N/A		N/A		N/A	
The WCAB 2025 Retirement Portfolio Policy	8.72	(33)	8.72	(33)	5.37	(1)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2025 (MF) Median	8.48		8.48		3.29		7.46		5.02		6.70		10.35	
WCAB 2020 Retirement	8.40	(13)	8.40	(13)	3.14	(51)	8.13	(3)	5.80	(1)	7.24	(5)	10.12	(24)
The WCAB 2020 Retirement Portfolio Policy	7.68	(42)	7.68	(42)	4.85	(5)	7.50	(15)	5.88	(1)	6.99	(10)	9.22	(55)
IM Mixed-Asset Target 2020 (MF) Median	7.35		7.35		3.14		6.51		4.48		5.94		9.24	
WCAB 2015 Retirement	7.57	(19)	7.57	(19)	3.57	(39)	N/A		N/A		N/A		N/A	
The WCAB 2015 Retirement Portfolio Policy	6.84	(57)	6.84	(57)	4.90	(3)	N/A		N/A		N/A		N/A	
IM Mixed-Asset Target 2015 (MF) Median	7.11		7.11		3.32		6.24		4.49		5.87		9.21	
WCAB Income Retirement	6.52	(30)	6.52	(30)	3.85	(32)	6.62	(2)	5.17	(1)	6.26	(1)	8.70	(2)
The WCAB Income Retirement Portfolio Policy	5.84	(56)	5.84	(56)	4.79	(4)	5.65	(22)	4.67	(3)	5.44	(7)	7.20	(27)
IM Mixed-Asset Target Today (MF) Median	6.05		6.05		3.21		4.70		3.24		3.88		6.47	
Fixed Income														
PIMCO High Yield (PHIYX)	7.46	(21)	7.46	(21)	6.28	(5)	7.14	(46)	4.52	(10)	5.73	(21)	10.23	(26)
ICE BofAML High Yield Master II	7.40	(23)	7.40	(23)	5.93	(11)	8.69	(9)	4.70	(7)	6.26	(9)	11.24	(6)
IM U.S. High Yield Bonds (MF) Median	6.86		6.86		4.56		6.99		3.48		5.17		9.63	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.98	(30)	2.98	(30)	4.26	(15)	4.44	(9)	4.97	(4)	5.28	(1)	7.30	(1)
Bloomberg Barclays Global Aggregate	2.20	(49)	2.20	(49)	-0.38	(49)	1.49	(57)	1.04	(41)	1.19	(59)	3.05	(70)
IM International Fixed Income (MF) Median	2.16		2.16		-1.94		1.89		0.43		1.50		4.40	
Hartford Total Return Bond (HIABX)	3.72	(14)	3.72	(14)	4.36	(30)	3.24	(7)	3.11	(11)	3.16	(10)	5.14	(23)
Blmbg. Barc. U.S. Aggregate Index	2.94	(72)	2.94	(72)	4.48	(20)	2.03	(57)	2.74	(28)	2.48	(48)	3.77	(76)
IM U.S. Broad Market Core Fixed Income (MF) Median	3.23		3.23		4.09		2.13		2.49		2.45		4.50	
Cash														
MassMutual Guaranteed Interest Account	0.78	(9)	0.78	(9)	3.30	(5)	3.59	(1)	3.75	(1)	3.82	(1)	N/A	
Ryan 3 Yr GIC Master Index	0.56	(72)	0.56	(72)	2.09	(92)	1.73	(89)	1.49	(97)	1.40	(100)	1.95	(91)
IM U.S. GIC/Stable Value (SA+CF) Median	0.60		0.60		2.32		1.99		1.91		1.90		2.13	

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Comparative Performance
401(a) Calendar Returns
As of March 31, 2019

Comparative Performance	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
International Equity																				
Lazard Emerging Markets Equity (LZOEX)	-18.32	(68)	27.73	(82)	20.17	(6)	-20.33	(93)	-4.39	(69)	-1.14	(48)	22.03	(18)	-18.02	(32)	22.43	(22)	69.14	(63)
MSCI Emerging Markets (Net) Index	-14.58	(30)	37.28	(42)	11.19	(30)	-14.92	(63)	-2.19	(43)	-2.60	(58)	18.23	(56)	-18.42	(36)	18.88	(44)	78.51	(26)
IM Emerging Markets Equity (MF) Median	-16.41		35.37		8.35		-13.66		-2.92		-1.42		18.78		-19.51		18.32		72.67	
DFA International Small Cap Value (DISVX)	-23.31	(92)	27.98	(86)	8.00	(12)	3.99	(51)	-4.99	(30)	32.39	(12)	22.26	(25)	-17.46	(49)	18.10	(82)	39.51	(93)
MSCI AC World ex USA Small Cap (Net)	-18.20	(41)	31.65	(53)	3.91	(38)	2.60	(54)	-4.03	(25)	19.73	(84)	18.52	(71)	-18.50	(59)	25.21	(6)	62.91	(20)
IM International SMID Cap Core Equity (MF) Median	-18.83		32.11		-0.41		4.19		-6.07		24.27		20.14		-17.59		23.75		51.09	
American Funds EuroPacific Growth (RERGX)	-14.91	(47)	31.17	(10)	1.01	(58)	-0.48	(13)	-2.29	(26)	20.58	(49)	19.64	(30)	-13.31	(55)	9.76	(25)	N/A	
MSCI EAFE (Net) Index	-13.79	(27)	25.03	(42)	1.00	(59)	-0.81	(17)	-4.90	(32)	22.78	(24)	17.32	(55)	-12.14	(38)	7.75	(42)	31.78	(30)
IM International Large Cap Core Equity (MF) Median	-15.33		24.74		1.53		-2.51		-5.98		20.47		17.70		-13.09		7.28		29.75	
Domestic Equity																				
Wells Fargo Small Co Growth (WSCRX)	-3.57	(36)	20.68	(36)	7.76	(79)	-4.33	(54)	N/A		N/A		N/A		N/A		N/A		N/A	
Russell 2000 Growth Index	-9.31	(73)	22.17	(30)	11.32	(54)	-1.38	(35)	5.60	(9)	43.30	(41)	14.59	(29)	-2.91	(28)	29.09	(32)	34.47	(44)
IM U.S. Small Cap Growth Equity (MF) Median	-6.86		17.29		11.39		-3.32		0.65		42.17		11.97		-4.99		26.73		33.37	
Vanguard Small Cap Index (VSMAX)	-9.31	(23)	16.24	(13)	18.30	(78)	-3.64	(33)	7.50	(8)	37.81	(43)	18.24	(15)	-2.69	(38)	27.89	(25)	36.33	(28)
Vanguard Spliced Small Cap Index	-9.33	(23)	16.24	(13)	18.26	(78)	-3.68	(34)	7.54	(8)	37.77	(43)	18.20	(16)	-2.75	(39)	27.82	(25)	36.15	(29)
IM U.S. Small Cap Core Equity (MF) Median	-12.30		10.99		22.11		-4.96		4.07		36.93		14.65		-4.13		25.41		27.89	
AMG Managers Skyline Special Equities (SKSEX)	-19.00	(78)	8.39	(50)	21.32	(79)	-6.05	(23)	4.02	(37)	51.59	(4)	19.34	(29)	-2.05	(41)	26.07	(36)	52.79	(13)
Russell 2000 Value Index	-12.86	(27)	7.84	(55)	31.74	(22)	-7.47	(43)	4.22	(36)	34.52	(62)	18.05	(35)	-5.50	(67)	24.50	(57)	20.58	(82)
IM U.S. Small Cap Value Equity (MF) Median	-15.68		8.33		28.69		-8.73		2.91		35.57		15.78		-3.15		24.82		28.39	
Hartford Mid Cap (HIMCX)	-7.44	(75)	24.47	(55)	11.98	(8)	1.60	(38)	11.37	(14)	39.82	(14)	19.44	(7)	-7.92	(76)	23.45	(66)	30.96	(74)
Russell Midcap Growth Index	-4.75	(45)	25.27	(44)	7.33	(26)	-0.20	(56)	11.90	(11)	35.74	(46)	15.81	(29)	-1.65	(30)	26.38	(46)	46.29	(23)
IM U.S. Mid Cap Growth Equity (MF) Median	-5.18		24.74		4.80		0.53		7.26		35.41		14.01		-4.44		25.54		39.96	
Vanguard Mid Cap Index (VIMAX)	-9.23	(23)	19.25	(19)	11.22	(77)	-1.34	(22)	13.76	(9)	35.15	(48)	15.99	(49)	-1.97	(31)	25.59	(20)	40.48	(16)
Vanguard Spliced Mid Cap Index	-9.22	(23)	19.30	(18)	11.25	(75)	-1.28	(21)	13.83	(8)	35.21	(46)	16.04	(48)	-1.91	(30)	25.69	(18)	40.49	(16)
IM U.S. Mid Cap Core Equity (MF) Median	-11.57		15.28		14.37		-3.48		8.98		35.00		15.84		-3.39		23.15		33.22	
Hotchkis & Wiley Mid Cap Value (HWMIX)	-19.29	(81)	7.78	(88)	21.00	(22)	-12.53	(95)	12.18	(23)	42.55	(3)	31.09	(1)	-8.60	(91)	34.41	(1)	56.49	(3)
Russell Midcap Value Index	-12.29	(25)	13.34	(48)	20.00	(31)	-4.78	(54)	14.75	(10)	33.46	(72)	18.51	(30)	-1.38	(32)	24.75	(32)	34.21	(59)
IM U.S. Mid Cap Value Equity (MF) Median	-14.14		13.10		17.12		-4.39		9.91		35.31		16.68		-3.72		21.86		36.90	
American Funds Growth Fund of America (RGAGX)	-2.60	(70)	26.53	(77)	8.82	(2)	5.70	(54)	9.63	(60)	34.29	(46)	20.98	(4)	-4.53	(76)	12.67	(70)	N/A	
Russell 1000 Growth Index	-1.51	(58)	30.21	(41)	7.08	(8)	5.67	(54)	13.05	(23)	33.48	(55)	15.26	(46)	2.64	(10)	16.71	(33)	37.21	(42)
IM U.S. Large Cap Growth Equity (MF) Median	-0.85		29.47		2.17		6.01		10.46		33.91		14.80		-1.76		15.14		35.14	

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Comparative Performance
401(a) Calendar Returns
As of March 31, 2019

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
Wells Fargo Disciplined US Core (EVSIX)	-8.08	(85)	20.88	(55)	12.09	(24)	2.53	(21)	15.69	(4)	33.97	(22)	14.90	(56)	4.12	(13)	N/A		N/A	
S&P 500 Index	-4.38	(31)	21.83	(38)	11.96	(26)	1.38	(32)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(25)	26.46	(51)
IM U.S. Large Cap Core Equity (MF) Median	-5.60		21.17		10.06		0.14		11.36		31.77		15.34		-0.57		13.13		26.51	
Vanguard Institutional Index (VINIX)	-4.42	(31)	21.79	(39)	11.93	(26)	1.37	(32)	13.65	(16)	32.35	(39)	15.98	(39)	2.09	(22)	15.05	(25)	26.63	(50)
S&P 500 Index	-4.38	(31)	21.83	(38)	11.96	(26)	1.38	(32)	13.69	(16)	32.39	(38)	16.00	(39)	2.11	(22)	15.06	(25)	26.46	(51)
IM U.S. Large Cap Core Equity (MF) Median	-5.60		21.17		10.06		0.14		11.36		31.77		15.34		-0.57		13.13		26.51	
American Century Equity Income (AEUDX)	-4.17	(9)	13.83	(76)	19.88	(8)	0.94	(4)	12.84	(16)	N/A									
Russell 1000 Value Index	-8.27	(35)	13.66	(76)	17.34	(20)	-3.83	(57)	13.45	(9)	32.53	(48)	17.51	(28)	0.39	(28)	15.51	(21)	19.69	(73)
IM U.S. Large Cap Value Equity (MF) Median	-9.09		16.36		13.85		-3.58		10.82		32.40		15.83		-2.22		13.00		24.08	
Balanced Fund																				
American Funds American Balanced (RLBGX)	-2.42	(7)	15.84	(40)	8.90	(18)	2.03	(3)	9.22	(5)	22.12	(19)	14.57	(23)	4.16	(6)	13.39	(34)	N/A	
American Balanced Fund Hybrid	-1.90	(5)	12.37	(63)	7.38	(40)	1.21	(4)	9.85	(4)	14.08	(55)	10.13	(73)	5.28	(4)	11.29	(65)	16.34	(91)
IM All Balanced (MF) Median	-6.27		14.21		6.80		-1.59		4.73		15.24		12.14		-1.48		12.30		26.02	
WCAB 2060 Retirement	-9.02	(66)	19.06	(88)	N/A															
The WCAB 2060 Retirement Portfolio Policy	-5.80	(4)	20.16	(73)	N/A															
IM Mixed-Asset Target 2055 (MF) Median	-8.48		21.12		8.25		-1.67		5.43		23.21		15.58		-4.66		14.78		30.80	
WCAB 2055 Retirement	-9.02	(66)	19.06	(88)	N/A															
The WCAB 2055 Retirement Portfolio Policy	-5.80	(4)	20.16	(73)	N/A															
IM Mixed-Asset Target 2055 (MF) Median	-8.48		21.12		8.25		-1.67		5.43		23.21		15.58		-4.66		14.78		30.80	
WCAB 2050 Retirement	-9.00	(64)	18.90	(84)	11.88	(5)	-1.95	(59)	6.64	(25)	25.10	(23)	16.28	(25)	-4.13	(44)	17.93	(1)	33.46	(34)
The WCAB 2050 Retirement Portfolio Policy	-5.75	(4)	19.96	(72)	9.74	(14)	-0.34	(15)	8.81	(3)	24.71	(26)	14.68	(72)	-0.69	(7)	14.29	(58)	26.79	(99)
IM Mixed-Asset Target 2050 (MF) Median	-8.54		20.80		8.10		-1.63		5.61		23.08		15.47		-4.38		14.80		31.42	
WCAB 2045 Retirement	-8.89	(70)	18.72	(84)	N/A															
The WCAB 2045 Retirement Portfolio Policy	-5.68	(4)	19.74	(69)	N/A															
IM Mixed-Asset Target 2045 (MF) Median	-8.19		20.65		8.15		-1.65		5.55		23.07		15.47		-4.03		15.03		31.12	
WCAB 2040 Retirement	-8.31	(62)	18.16	(79)	11.43	(5)	-1.44	(44)	6.39	(26)	22.17	(46)	15.41	(37)	-2.67	(24)	16.48	(9)	31.03	(49)
The WCAB 2040 Retirement Portfolio Policy	-5.36	(2)	18.88	(70)	9.17	(16)	-0.24	(13)	8.23	(3)	21.96	(48)	13.52	(79)	-0.23	(6)	13.31	(70)	24.59	(95)
IM Mixed-Asset Target 2040 (MF) Median	-7.97		19.74		7.95		-1.66		5.38		21.61		14.92		-3.93		14.63		30.70	
WCAB 2035 Retirement	-7.82	(72)	17.40	(75)	N/A															
The WCAB 2035 Retirement Portfolio Policy	-5.04	(3)	17.82	(71)	N/A															
IM Mixed-Asset Target 2035 (MF) Median	-7.26		18.72		7.75		-1.53		5.40		20.78		14.75		-3.34		14.57		30.99	
WCAB 2030 Retirement	-6.70	(57)	15.96	(66)	11.11	(5)	-1.35	(45)	6.36	(20)	19.21	(40)	14.56	(36)	-1.71	(30)	15.53	(11)	29.56	(43)
The WCAB 2030 Retirement Portfolio Policy	-4.18	(6)	16.16	(61)	8.41	(18)	-0.08	(7)	7.93	(1)	19.45	(38)	12.40	(76)	0.41	(8)	12.40	(79)	22.29	(94)
IM Mixed-Asset Target 2030 (MF) Median	-6.32		16.92		7.30		-1.47		5.18		17.87		13.71		-2.56		13.63		28.81	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.



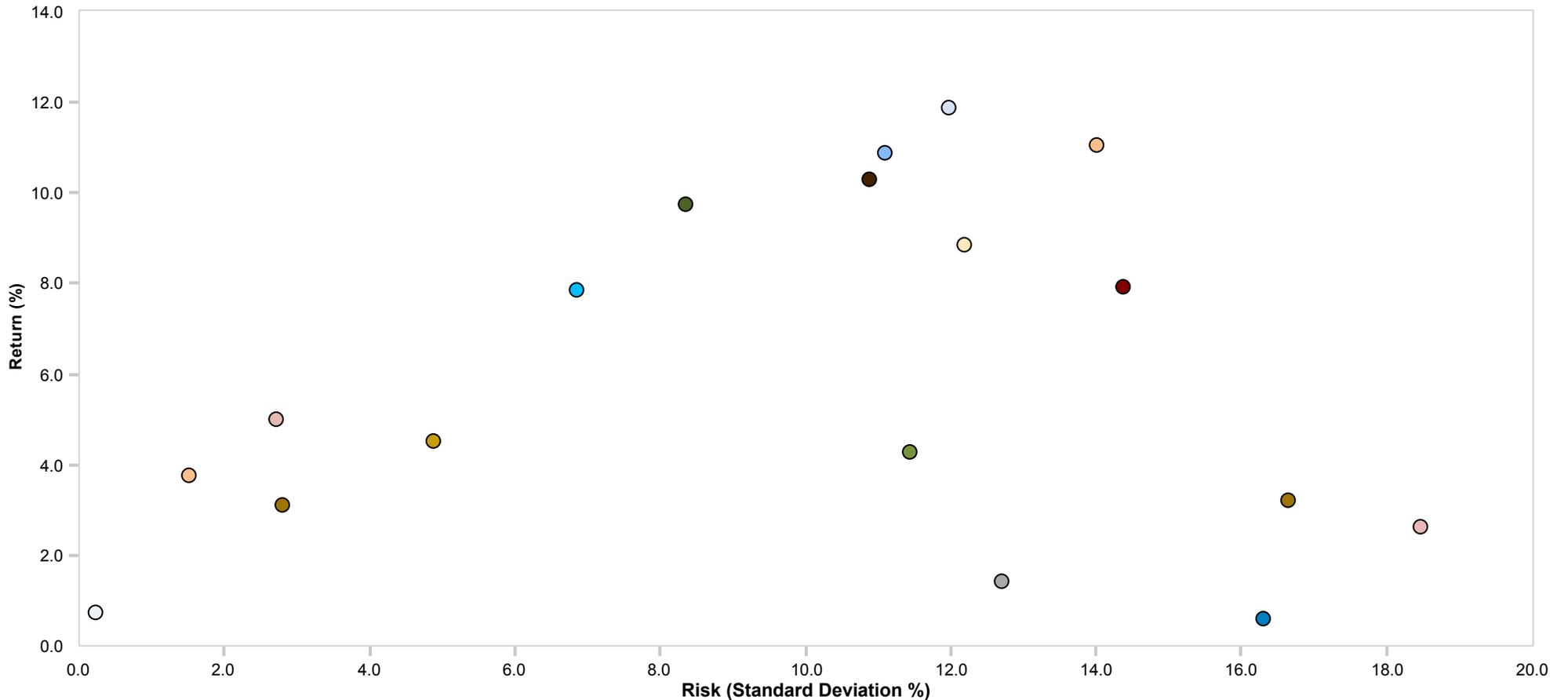
Comparative Performance
401(a) Calendar Returns
As of March 31, 2019

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009	
WCAB 2025 Retirement	-5.66	(59)	14.73	(53)	N/A															
The WCAB 2025 Retirement Portfolio Policy	-3.53	(7)	14.49	(57)	N/A															
IM Mixed-Asset Target 2025 (MF) Median	-5.26		14.95		6.87		-1.37		5.19		15.85		13.00		-2.03		13.42		28.95	
WCAB 2020 Retirement	-4.73	(55)	13.52	(30)	9.56	(1)	-0.71	(24)	6.09	(12)	14.86	(27)	12.96	(28)	-0.23	(46)	13.65	(24)	25.92	(51)
The WCAB 2020 Retirement Portfolio Policy	-2.99	(7)	12.81	(48)	7.02	(29)	0.07	(4)	7.07	(1)	14.96	(26)	10.45	(72)	1.18	(21)	10.65	(82)	18.43	(93)
IM Mixed-Asset Target 2020 (MF) Median	-4.52		12.69		6.36		-1.44		4.72		11.84		11.53		-0.43		12.31		26.02	
WCAB 2015 Retirement	-3.49	(36)	11.81	(38)	N/A															
The WCAB 2015 Retirement Portfolio Policy	-2.06	(1)	10.98	(62)	N/A															
IM Mixed-Asset Target 2015 (MF) Median	-3.90		11.40		6.40		-1.29		4.47		10.42		10.81		-0.11		11.49		25.34	
WCAB Income Retirement	-2.54	(18)	10.22	(28)	7.81	(6)	0.10	(3)	6.27	(2)	10.99	(2)	11.15	(8)	1.66	(75)	11.58	(9)	21.97	(28)
The WCAB Income Retirement Portfolio Policy	-1.36	(5)	9.06	(47)	5.19	(47)	0.26	(1)	6.08	(4)	10.51	(5)	8.08	(66)	2.13	(68)	8.66	(67)	13.73	(83)
IM Mixed-Asset Target Today (MF) Median	-3.60		8.85		5.07		-1.42		3.87		5.29		8.84		2.78		9.39		18.26	
Fixed Income																				
PIMCO High Yield (PHIYX)	-2.49	(36)	7.02	(38)	12.68	(65)	-1.88	(24)	3.31	(12)	5.77	(70)	14.57	(53)	4.00	(37)	14.28	(45)	44.09	(64)
ICE BofAML High Yield Master II	-2.27	(32)	7.48	(25)	17.49	(5)	-4.64	(64)	2.50	(22)	7.42	(30)	15.58	(33)	4.38	(27)	15.19	(28)	57.51	(11)
IM U.S. High Yield Bonds (MF) Median	-2.91		6.65		13.52		-3.85		1.48		6.61		14.72		3.32		14.04		47.59	
PIMCO Foreign Bond USD-Hedged (PFORX)	2.63	(7)	3.53	(69)	7.03	(7)	0.40	(9)	11.16	(3)	0.90	(17)	11.19	(22)	6.77	(8)	9.19	(30)	19.04	(17)
Bloomberg Barclays Global Aggregate	-1.19	(46)	7.39	(59)	2.09	(61)	-3.15	(24)	0.59	(52)	-2.60	(37)	4.32	(79)	5.64	(17)	5.54	(69)	6.93	(66)
IM International Fixed Income (MF) Median	-2.68		9.80		3.34		-5.82		0.63		-3.74		7.43		2.56		7.26		10.01	
Hartford Total Return Bond (HIABX)	-0.81	(60)	5.16	(4)	4.49	(8)	-0.59	(75)	5.89	(32)	-1.36	(26)	7.54	(20)	6.99	(37)	7.51	(42)	15.01	(32)
Blmbg. Barc. U.S. Aggregate Index	0.01	(18)	3.54	(53)	2.65	(61)	0.55	(20)	5.97	(26)	-2.02	(53)	4.21	(81)	7.84	(11)	6.54	(69)	5.93	(90)
IM U.S. Broad Market Core Fixed Income (MF) Median	-0.63		3.58		2.86		0.09		5.55		-1.98		5.99		6.65		7.25		12.12	
Cash																				
MassMutual Guaranteed Interest Account	3.38	(1)	3.67	(1)	3.94	(1)	4.00	(1)	4.00	(1)	4.00	(1)	4.00	(3)	4.00	(6)	N/A		N/A	
Ryan 3 Yr GIC Master Index	1.96	(86)	1.60	(94)	1.39	(93)	1.16	(94)	1.03	(95)	1.06	(92)	1.48	(99)	2.44	(60)	3.53	(41)	4.49	(12)
IM U.S. GIC/Stable Value (SA+CF) Median	2.17		1.83		1.83		1.81		1.63		1.66		2.36		2.91		3.39		3.67	

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.



Risk and Return



- Lazard Emerging Markets Equity (LZOEX)
- Wells Fargo Small Co Growth (WSCRX)
- Hartford Mid Cap (HIMCX)
- American Funds Growth Fund of America (RGAGX)
- American Century Equity Income (AEUDX)
- PIMCO Foreign Bond USD-Hedged (PFORX)
- 90 Day U.S. Treasury Bill
- DFA International Small Cap Value (DISVX)
- Vanguard Small Cap Index (VSMAX)
- Vanguard Mid Cap Index (VIMAX)
- Wells Fargo Disciplined US Core (EVSIX)
- American Funds American Balanced (RLBGX)
- Hartford Total Return Bond (HIABX)
- American Funds EuroPacific Growth (RERGX)
- AMG Managers Skyline Special Equities (SKSEX)
- Hotchkis & Wiley Mid Cap Value (HWMIX)
- Vanguard Institutional Index (VINIX)
- PIMCO High Yield (PHIYX)
- MassMutual Guaranteed Interest Account

Calculation based on monthly periodicity.



Age Based Strategy Model Allocation by Broad Asset Class

Investment Name	Stocks	Bonds	Cash	Other	Total
Washoe County Age Based Strategy Model 2060	85.1%	12.2%	1.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2055	85.3%	12.2%	1.3%	1.2%	100.0%
Washoe County Age Based Strategy Model 2050	84.3%	13.1%	1.3%	1.3%	100.0%
Washoe County Age Based Strategy Model 2045	83.3%	13.1%	2.3%	1.3%	100.0%
Washoe County Age Based Strategy Model 2040	79.4%	14.4%	4.9%	1.3%	100.0%
Washoe County Age Based Strategy Model 2035	74.7%	15.2%	8.8%	1.3%	100.0%
Washoe County Age Based Strategy Model 2030	67.9%	18.4%	12.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2025	60.1%	21.6%	16.9%	1.4%	100.0%
Washoe County Age Based Strategy Model 2020	52.4%	22.7%	23.4%	1.4%	100.0%
Washoe County Age Based Strategy Model 2015	44.5%	26.2%	27.7%	1.6%	100.0%
Washoe County Age Based Strategy Model Income 2010	34.0%	42.3%	21.9%	1.8%	100.0%



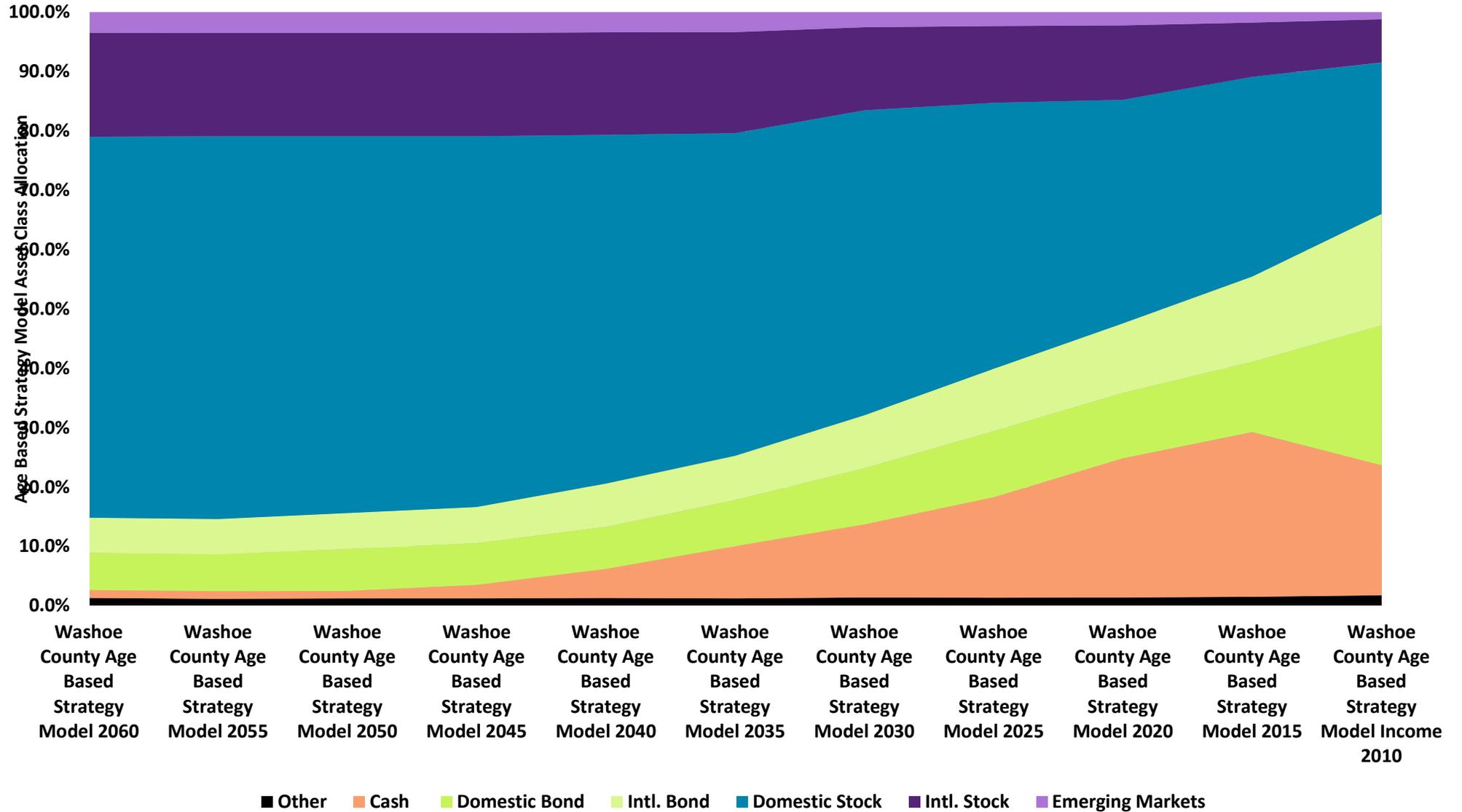
Washoe County Age Based Strategy Models
Age Based Strategy Model Asset Allocation
As of December 31, 2018

Age Based Strategy Model Allocation by Sub Asset Class

Investment Name	Emerging Markets	Intl. Stock	Domestic Stock	Intl. Bond	Domestic Bond	Cash	Other	Total
Washoe County Age Based Strategy Model 2060	3.5%	17.5%	64.2%	5.9%	6.2%	1.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2055	3.5%	17.4%	64.4%	5.9%	6.2%	1.3%	1.2%	100.0%
Washoe County Age Based Strategy Model 2050	3.5%	17.4%	63.4%	6.1%	7.1%	1.3%	1.3%	100.0%
Washoe County Age Based Strategy Model 2045	3.5%	17.4%	62.4%	6.1%	7.1%	2.3%	1.3%	100.0%
Washoe County Age Based Strategy Model 2040	3.4%	17.3%	58.7%	7.3%	7.0%	4.9%	1.3%	100.0%
Washoe County Age Based Strategy Model 2035	3.4%	17.0%	54.3%	7.5%	7.8%	8.8%	1.3%	100.0%
Washoe County Age Based Strategy Model 2030	2.5%	14.0%	51.4%	9.0%	9.4%	12.3%	1.4%	100.0%
Washoe County Age Based Strategy Model 2025	2.4%	12.9%	44.8%	10.5%	11.1%	16.9%	1.4%	100.0%
Washoe County Age Based Strategy Model 2020	2.2%	12.5%	37.6%	11.7%	11.0%	23.4%	1.4%	100.0%
Washoe County Age Based Strategy Model 2015	1.7%	9.1%	33.6%	14.4%	11.8%	27.7%	1.6%	100.0%
Washoe County Age Based Strategy Model Income 2010	1.2%	7.3%	25.5%	18.8%	23.5%	21.9%	1.8%	100.0%



Age Based Strategy Model Allocation Graph by Sub Asset Class



Age Based Strategy Model Equity Glide Path Ranges



Fee and Expense Summary

Mass Mutual requires 0.08% in revenue from the plan assets annually, 0.02% per quarter.
AndCo Consulting bills quarterly. The fee structure is \$60,000 per annum, paid in quarterly cash payments.

Plan Demographics

Total Assets*	\$173,944,516
Number of Participants with a Balance (active and terminated)	2,526

Expense Type Estimates (annual)

Percent of Assets

Dollar Cost

% Cost

MassMutual Recordkeeping fees	0.08%	\$139,156	0.08%
AndCo Consulting fees		\$60,000	0.03%

Total plan expenses

\$ 199,156

0.11%

Revenue Sharing Estimates (annual)

Revenue from participant annual fee	0.13%	\$226,128
-------------------------------------	-------	-----------

Net plan fee surplus (annual)

\$26,972

0.02%

Annual average total plan recordkeeping and administrative cost per participant (gross)**

\$89.52

*Does not include outstanding loan values

**All revenue sharing monies are reimbursed to the participant accounts that utilize those funds. This policy was implemented on 1/1/18.



Weighted Fee and Revenue Sharing Evaluation

	Market Value	Expense Ratio	Expense Ratio Weighted Fee	Revenue Sharing	*Revenue Sharing \$
Lazard Emerging Markets Equity (LZOEX)	\$1,397,781	1.34%	\$18,730	0.40%	\$5,591
DFA International Small Cap Value (DISVX)	\$1,542,634	0.68%	\$10,490	0.00%	\$0
American Funds EuroPacific Growth (RERGX)	\$5,073,640	0.49%	\$24,861	0.00%	\$0
Wells Fargo Small Co Growth (WSCRX)	\$3,258,250	0.89%	\$28,998	0.00%	\$0
Vanguard Small Cap Index (VSMAX)	\$3,098,963	0.05%	\$1,549	0.00%	\$0
AMG Managers Skyline Special Equities (SKSEX)	\$2,519,264	1.17%	\$29,475	0.25%	\$6,298
Hartford Mid Cap (HIMCX)	\$10,334,275	0.69%	\$71,306	0.25%	\$25,836
Vanguard Mid Cap Index (VIMAX)	\$3,129,015	0.05%	\$1,565	0.00%	\$0
Hotchkis & Wiley Mid Cap Value (HWMIX)	\$2,985,531	0.99%	\$29,557	0.40%	\$11,942
AF Growth Fund of America (RGAGX)	\$15,420,345	0.32%	\$49,345	0.00%	\$0
Wells Fargo Disciplined US Core (EVSIX)	\$13,139,831	0.48%	\$63,071	0.15%	\$19,710
Vanguard Institutional Index (VINIX)	\$13,192,588	0.04%	\$5,277	0.00%	\$0
American Century Equity Income (AEUDX)	\$7,444,573	0.56%	\$41,690	0.00%	\$0
American Funds American Balanced (RLBGX)	\$6,339,548	0.28%	\$17,751	0.00%	\$0
PIMCO High Yield (PHIYX)	\$2,185,158	0.57%	\$12,455	0.00%	\$0
PIMCO Foreign Bond USD-Hedged (PFORX)	\$1,079,492	0.56%	\$6,045	0.00%	\$0
Hartford Total Return Bond (HIABX)	\$3,771,975	0.51%	\$19,237	0.25%	\$9,430
MassMutual Guaranteed Interest Account	\$78,031,653	0.00%	\$0	0.00%	\$0
TOTAL	\$173,944,516	0.25%	\$431,403	0.05%	\$78,807

*All revenue sharing monies are reimbursed to the participant accounts that utilize those funds. This policy was implemented on 1/1/18.



Cybercrime Statistics

- According to the FBI, every American citizen should expect that all of their personal data has been stolen and is now on the Dark Web.¹
- More than 90% of successful hacks and data breaches stem from phishing scams.²
- According to a University of Maryland study, hacker attacks occur every 39 seconds on average, affecting one in three Americans every year.³
- 41% of Americans have encountered fraudulent charges on their credit cards.⁴
- The 5 most cyber-attacked industries over the past 5 years are healthcare, manufacturing, financial services, government, and transportation.²

¹ Source: [“Thieves Can Now Nab Your Data in a Few Minutes for a Few Bucks”](#), Wall Street Journal, December 9, 2018

² Source: [2019 Cybersecurity Almanac](#)

³ Source: <https://eng.umd.edu/news/story/study-hackers-attack-every-39-seconds>

⁴ Source: [Americans and Cybersecurity](#), Pew Research Center



Cybersecurity & Recordkeeping – For Participants

“It is not an overstatement to say that cybersecurity is one of the defining issues of our time.” – former SEC Commissioner Luis A. Aguilar*

Cybersecurity refers to the processes used to protect the integrity of computers, mobile devices, networks, programs and data from attack, damage or unauthorized access attempts such as Ransomware, Malware, Social Engineering, and Phishing.

A few of the top cybersecurity risks facing participants are:

- Activating unregistered accounts
- Unauthorized loan applicants
- Multiple users on one account
- Post mortem claims
- Changes to Distribution option
 - ACH to Wire
 - Change of mailing address
 - Change of banking institution

*Source: [“A Threefold Cord – Working Together to Meet the Pervasive Challenge of Cyber-Crime”](#), SINET Innovation Summit speech, June 25, 2015



Preventative Measures – For Participants

Ten suggestions from the Department of Homeland Security to help individuals protect themselves from cyber attacks.*

1. Never click on links in emails
2. Never open the attachments
3. Do not give out personal information
4. Set secure passwords and don't share them with anyone
5. Keep your operating system, browser, anti-virus and other critical software up to date
6. Verify the authenticity of requests from companies or individuals by contacting them directly
7. Pay close attention to website URLs
8. For e-mail, turn off the option to automatically download attachments
9. Be suspicious of unknown links or requests sent through email or text message
10. Use multifactor authentication when possible

*Source: "[Protect Myself from Cyber Attacks](#)"; US Department of Homeland Security

Next Quarter's Module Topic: Cybersecurity, Part 2



2019 Fiduciary Documentation

Quarterly	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Review of plan investments and compliance with investment policy statement	✓	✓	✓	✓
Follow required procedures, including documentation of all meetings and decisions	✓	✓	✓	✓
Review performance of providers	✓	✓	✓	✓
Annually				
Review QDIA selection	✓			
Allocation fund (Target Date or Risk-based) analysis	✓	✓	✓	✓
Investment policy statement review				✓
Employee education review	✓	✓	✓	✓
Plan recordkeeping & administration services review	✓	✓	✓	✓
Fee analysis	✓	✓	✓	✓
Other Projects				
Record-keeping Implementation	✓	✓		



Manager Profile
Lazard Emerging Markets Equity (LZOEX)
As of March 31, 2019

Fund Information

Portfolio Manager : Team Managed Ticker : LZOEX
PM Tenure : Inception Date : 01/08/1997
Fund Assets : \$1,103 Million Portfolio Turnover : 16%

Fund Investment Policy

The Fund seeks long term capital appreciation by investing primarily in equity securities, principally common stocks of non -U.S. companies whose principal activities are located in emerging market countries and that Lazard believes are undervalued based on their earning, cash flow or asset values.

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
Lazard Emerging Markets Equity (LZOEX)	7.44 (84)	7.44 (84)	-13.91 (86)	7.44 (72)	0.60 (85)	0.78 (87)	7.95 (70)
MSCI Emerging Markets (Net) Index	9.93 (59)	9.93 (59)	-7.41 (33)	10.68 (31)	3.68 (33)	2.69 (45)	8.95 (46)
IM Emerging Markets Equity (MF) 1st Quartile	12.63	12.63	-6.49	11.03	4.02	3.88	9.78
IM Emerging Markets Equity (MF) Median	10.38	10.38	-9.38	9.40	3.08	2.41	8.77
IM Emerging Markets Equity (MF) 3rd Quartile	8.35	8.35	-12.23	7.10	1.39	1.36	7.80

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
Lazard Emerging Markets Equity (LZOEX)	-18.32 (68)	27.73 (82)	20.17 (6)	-20.33 (93)	-4.39 (69)	-1.14 (48)	22.03 (18)
MSCI Emerging Markets (Net) Index	-14.58 (30)	37.28 (42)	11.19 (30)	-14.92 (63)	-2.19 (43)	-2.60 (58)	18.23 (56)
IM Emerging Markets Equity (MF) 1st Quartile	-14.02	40.40	11.80	-9.95	-0.22	2.73	20.70
IM Emerging Markets Equity (MF) Median	-16.41	35.37	8.35	-13.66	-2.92	-1.42	18.78
IM Emerging Markets Equity (MF) 3rd Quartile	-19.04	29.42	4.00	-16.19	-5.04	-4.73	15.35

Comparative Performance - Quarterly

	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017	Jun-2017
Lazard Emerging Markets Equity (LZOEX)	-5.58 (23)	-1.70 (39)	-13.67 (98)	1.94 (51)	6.20 (53)	6.80 (65)	2.04 (94)
MSCI Emerging Markets (Net) Index	-7.47 (48)	-1.09 (25)	-7.96 (32)	1.42 (62)	7.44 (22)	7.89 (49)	6.27 (41)
IM Emerging Markets Equity (MF) 1st Quartile	-5.83	-1.13	-7.48	3.01	7.31	9.33	7.09
IM Emerging Markets Equity (MF) Median	-7.62	-2.43	-9.06	1.97	6.36	7.84	5.97
IM Emerging Markets Equity (MF) 3rd Quartile	-9.01	-4.56	-10.26	0.74	5.21	5.70	4.68

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	17.09	14.15	16.31
Downside Risk	12.39	8.61	10.81
vs. MSCI Emerging Markets (Net) Index			
Alpha	-6.38	-3.00	-2.89
Beta	1.04	1.02	1.02
Down Market Capture	121.16	114.77	113.64
Information Ratio	-0.91	-0.53	-0.53
Tracking Error	7.54	5.36	5.35
Up Market Capture	87.27	95.96	98.43
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.91	0.49	0.07

Ranking vs. IM Emerging Markets Equity (MF) 4 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	7 (25%)	4 (14%)	8 (29%)	9 (32%)
MSCI Emerging Markets (Net) Index	28	1 (4%)	18 (64%)	9 (32%)	0 (0%)

Ranking vs. IM Emerging Markets Equity (MF) 12 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	4 (14%)	8 (29%)	11 (39%)	5 (18%)
MSCI Emerging Markets (Net) Index	28	2 (7%)	13 (46%)	13 (46%)	0 (0%)

Ranking vs. IM Emerging Markets Equity (MF) 20 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Lazard Emerging Markets Equity (LZOEX)	28	6 (21%)	8 (29%)	9 (32%)	5 (18%)
MSCI Emerging Markets (Net) Index	28	0 (0%)	19 (68%)	9 (32%)	0 (0%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	45,674,311,209	85,403,055,362
Median Mkt. Cap (\$)	12,074,239,674	5,466,905,568
Price/Earnings ratio	9.4	12.8
Price/Book ratio	2.2	2.2
5 Yr. EPS Growth Rate (%)	7.3	14.2
Current Yield (%)	4.2	2.9
Beta (5 Years, Monthly)	1.02	1.00
Number of Stocks	75	1,136

Top Ten Equity Holdings

	Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
China Construction Bank Corp	4.9	1.6	3.9	0.2
Sberbank of Russia OJSC	4.0	0.7	22.0	0.9
Taiwan Semiconductor	3.7	3.7	8.0	0.3
Banco Do Brasil SA Bb Brasil	3.7	0.2	3.1	0.1
SK Hynix Inc	3.2	0.7	20.1	0.7
Netease Inc	3.0	0.4	2.8	0.1
China Mobile Ltd	2.9	1.2	6.2	0.2
Uti Bank Ltd	2.6	0.4	26.0	0.7
Oil Co LUKOIL PJSC	2.2	0.8	24.6	0.5
Weichai Power Co Ltd	2.2	0.1	39.8	0.9

Buy and Hold Sector Attribution - 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total
Communication Services	14.9	13.4	2.23	9.11	0.03	-0.99	-0.96
Consumer Discretionary	7.4	11.5	0.08	20.75	-0.38	-1.52	-1.90
Consumer Staples	7.2	6.6	3.36	5.27	-0.02	-0.15	-0.17
Energy	10.5	8.0	14.21	12.20	0.06	0.18	0.23
Financials	30.1	24.7	6.16	6.67	-0.15	-0.09	-0.25
Health Care	0.8	2.8	1.47	3.45	0.12	-0.02	0.10
Industrials	5.9	5.5	12.41	4.58	-0.02	0.39	0.37
Information Technology	16.1	14.4	10.18	12.35	0.05	-0.35	-0.30
Materials	6.1	7.5	14.11	6.91	0.05	0.41	0.47
Real Estate	0.0	3.0	0.00	15.48	-0.17	0.00	-0.17
Utilities	1.1	2.6	10.13	4.18	0.08	0.06	0.15
Total	100.0	100.0	7.20	9.63	-0.36	-2.08	-2.44

Ten Best Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
Weichai Power Co Ltd	2.2	0.1	39.8	0.9
Grupo Mexico S.A.B. de C.V.	0.8	0.2	37.9	0.3
China Merchants Bank Co Ltd	0.5	0.4	32.6	0.2
UPL Ltd	0.1	0.1	27.0	0.0
Uti Bank Ltd	2.6	0.4	26.0	0.7
COWAY Co Ltd	1.5	0.1	25.9	0.4
Anhui Conch Cement Co Ltd	1.5	0.1	25.9	0.4
Oil Co LUKOIL PJSC	2.2	0.8	24.6	0.5
PT Semen Gresik	1.1	0.1	22.7	0.3
Pakistan Petroleum Ltd	0.9	0.0	22.7	0.2

Buy and Hold Region Attribution- 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Region	Total
EM Asia	47.9	55.9	8.30	8.41	-0.05	0.09	0.05
EM Europe	15.2	6.2	13.04	7.80	0.78	-0.20	0.58
EM Latin America	13.7	12.0	4.58	7.04	-0.29	-0.07	-0.37
EM Mid East+Africa	10.6	8.1	-6.11	2.92	-1.01	-0.15	-1.16
Europe ex UK	0.0	0.4	0.00	6.96	0.00	0.01	0.01
Frontier Markets	3.1	0.0	10.51	9.28	0.04	-0.03	0.02
North America	0.0	0.1	0.00	17.48	0.00	-0.01	-0.01
Pacific ex Japan	8.7	17.1	11.60	19.62	-0.67	-0.80	-1.48
United Kingdom	0.0	0.1	0.00	7.14	0.00	0.00	0.00
Other	0.8	0.1	0.44	9.85	-0.09	0.01	-0.08
Total	100.0	100.0	7.20	9.63	-1.29	-1.15	-2.44

Ten Worst Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
PPC Ltd	0.2	0.0	-20.5	0.0
Shoptite Holdings Ltd (Shp)	1.2	0.1	-16.0	-0.2
Hero MotoCrop Ltd	1.3	0.0	-15.8	-0.2
Vodacom Group Ltd	1.0	0.1	-15.8	-0.2
Woolworths Holdings	0.6	0.1	-14.1	-0.1
KB Financial Group Inc	1.0	0.3	-11.9	-0.1
Imperial Logistics Ltd	0.3	0.0	-10.2	0.0
PT Astra International TBK	1.3	0.2	-9.9	-0.1
Nedbank Group Ltd	0.9	0.1	-8.7	-0.1
Sanlam Ltd	1.0	0.2	-7.8	-0.1



Manager Profile
DFA International Small Cap Value (DISVX)
As of March 31, 2019

Fund Information

Portfolio Manager : Team Managed Ticker : DISVX
PM Tenure : Inception Date : 12/30/1994
Fund Assets : \$13,315 Million Portfolio Turnover : 23%

Fund Investment Policy

The Fund seeks long-term capital appreciation by investing in the stocks of small non-US companies that have a high book-to-market ratio. Periodic assessments of its book-to-market ratio will be implemented and adjustments of these standards revised as deemed necessary. Invests in value stocks.

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
DFA International Small Cap Value (DISVX)	8.65 (74)	8.65 (74)	-14.75 (87)	5.11 (75)	1.41 (68)	6.73 (40)	11.18 (59)
MSCI AC World ex USA Small Cap (Net)	10.26 (23)	10.26 (23)	-9.49 (37)	7.01 (37)	3.26 (29)	6.05 (52)	11.86 (49)
IM International SMID Cap Core Equity (MF) 1st Quartile	10.06	10.06	-8.17	7.29	3.37	7.39	12.63
IM International SMID Cap Core Equity (MF) Median	9.60	9.60	-10.77	6.33	2.74	6.22	11.84
IM International SMID Cap Core Equity (MF) 3rd Quartile	8.64	8.64	-13.92	4.63	0.57	4.31	9.64

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
DFA International Small Cap Value (DISVX)	-23.31 (92)	27.98 (86)	8.00 (12)	3.99 (51)	-4.99 (30)	32.39 (12)	22.26 (25)
MSCI AC World ex USA Small Cap (Net)	-18.20 (41)	31.65 (53)	3.91 (38)	2.60 (54)	-4.03 (25)	19.73 (84)	18.52 (71)
IM International SMID Cap Core Equity (MF) 1st Quartile	-16.63	33.73	6.39	6.15	-4.19	28.79	22.19
IM International SMID Cap Core Equity (MF) Median	-18.83	32.11	-0.41	4.19	-6.07	24.27	20.14
IM International SMID Cap Core Equity (MF) 3rd Quartile	-22.04	28.34	-2.58	1.16	-9.23	22.31	17.67

Comparative Performance - Quarterly

	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017	Jun-2017
DFA International Small Cap Value (DISVX)	-17.91 (88)	-0.97 (33)	-3.47 (79)	-2.26 (85)	3.83 (81)	7.60 (44)	6.33 (82)
MSCI AC World ex USA Small Cap (Net)	-14.43 (38)	-1.51 (54)	-2.60 (49)	-0.35 (36)	6.56 (8)	6.90 (67)	6.24 (84)
IM International SMID Cap Core Equity (MF) 1st Quartile	-14.15	-0.35	-0.99	0.30	6.10	7.95	7.98
IM International SMID Cap Core Equity (MF) Median	-14.84	-1.45	-2.76	-1.12	5.45	7.48	7.03
IM International SMID Cap Core Equity (MF) 3rd Quartile	-16.73	-2.09	-3.35	-1.67	4.05	6.38	6.50

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	15.21	12.54	12.71
Downside Risk	13.38	8.92	8.83
vs. MSCI AC World ex USA Small Cap (Net)			
Alpha	-5.27	-2.00	-1.75
Beta	1.04	1.05	1.01
Down Market Capture	118.34	109.13	106.49
Information Ratio	-1.29	-0.39	-0.46
Tracking Error	4.46	4.22	3.75
Up Market Capture	84.64	97.07	95.41
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-1.10	0.37	0.12

Ranking vs. IM International SMID Cap Core Equity (MF) 4 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	10 (36%)	6 (21%)	6 (21%)	6 (21%)
MSCI AC World ex USA Small Cap (Net)	28	2 (7%)	11 (39%)	10 (36%)	5 (18%)

Ranking vs. IM International SMID Cap Core Equity (MF) 12 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	11 (39%)	10 (36%)	5 (18%)	2 (7%)
MSCI AC World ex USA Small Cap (Net)	28	1 (4%)	12 (43%)	12 (43%)	3 (11%)

Ranking vs. IM International SMID Cap Core Equity (MF) 20 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
DFA International Small Cap Value (DISVX)	28	9 (32%)	14 (50%)	5 (18%)	0 (0%)
MSCI AC World ex USA Small Cap (Net)	28	3 (11%)	9 (32%)	16 (57%)	0 (0%)



Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	1,930,851,005	2,337,746,054
Median Mkt. Cap (\$)	393,997,338	863,294,341
Price/Earnings ratio	11.6	14.0
Price/Book ratio	1.5	2.2
5 Yr. EPS Growth Rate (%)	7.4	12.4
Current Yield (%)	3.1	2.7
Beta (5 Years, Monthly)	1.01	1.00
Number of Stocks	2,093	4,116

Top Ten Equity Holdings

	Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Fidelity Federal Bancorp	4.0	0.0	0.1	0.0
Bellway PLC	0.9	0.2	23.7	0.2
Hiscox Ltd	0.8	0.2	-1.7	0.0
Kesko OYJ	0.8	0.1	12.9	0.1
SBM Offshore NV	0.8	0.1	28.6	0.2
Phoenix Group Holdings	0.7	0.2	27.1	0.2
Acciona SA, Madrid	0.7	0.1	31.7	0.2
Helvetia Holding AG	0.7	0.1	4.6	0.0
Rheinmetall AG, Duesseldorf	0.6	0.1	18.0	0.1
Rexel SA	0.6	0.0	6.0	0.0

Buy and Hold Sector Attribution - 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Sector	Stock	Total
Communication Services	2.5	4.5	7.91	10.35	0.00	-0.06	-0.06
Consumer Discretionary	12.8	13.0	4.78	9.55	0.00	-0.62	-0.62
Consumer Staples	4.9	6.5	5.91	5.27	0.09	0.02	0.11
Energy	6.0	3.3	16.30	15.92	0.13	0.01	0.15
Financials	23.9	11.1	3.11	6.33	-0.49	-0.79	-1.28
Health Care	2.0	7.5	7.86	10.36	-0.01	-0.05	-0.06
Industrials	21.7	19.4	9.43	9.77	-0.01	-0.07	-0.08
Information Technology	5.1	10.0	19.40	17.32	-0.33	0.14	-0.20
Materials	16.1	10.4	6.66	7.77	-0.13	-0.18	-0.31
Real Estate	3.1	11.2	9.83	12.16	-0.16	-0.07	-0.23
Utilities	1.9	3.3	21.25	9.39	0.01	0.23	0.24
Total	100.0	100.0	7.76	10.11	-0.90	-1.44	-2.34

Ten Best Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
IRC Limited	0.0	0.0	188.7	0.0
Kosaido Co Ltd	0.0	0.0	108.1	0.0
Kas-Bank NV	0.0	0.0	103.0	0.0
Paragon AG, Delbrueck	0.0	0.0	101.9	0.0
Nordex SE	0.1	0.0	88.4	0.1
Ramelius Resources Ltd	0.0	0.0	83.2	0.0
Pulse Seismic Inc	0.0	0.0	82.1	0.0
TransAlta Corp	0.4	0.1	79.0	0.3
RHT Health Trust	0.0	0.0	77.2	0.0
Mount Gibson Iron Ltd	0.0	0.0	75.1	0.0

Buy and Hold Region Attribution- 1 Qtr

	Allocation		Performance		Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Region	Total
EM Asia	0.0	13.5	27.97	6.79	0.00	0.46	0.46
EM Europe	0.0	0.9	0.00	7.01	0.00	0.03	0.03
EM Latin America	0.0	2.5	0.00	8.41	0.00	0.04	0.04
EM Mid East+Africa	0.0	1.6	-0.35	3.54	0.00	0.10	0.10
Europe ex UK	32.0	26.5	8.67	10.75	-0.73	0.02	-0.70
Frontier Markets	0.0	0.2	0.00	3.96	0.00	0.01	0.01
Japan	30.4	22.4	1.93	7.08	-1.59	-0.34	-1.93
Middle East	0.8	1.3	9.36	12.62	-0.03	-0.01	-0.04
North America	12.4	6.9	11.86	14.39	-0.32	0.27	-0.05
Pacific ex Japan	11.1	10.6	13.32	12.70	0.05	0.02	0.07
United Kingdom	12.9	13.1	12.62	14.56	-0.25	-0.04	-0.29
Other	0.5	0.6	5.89	10.23	-0.03	0.00	-0.03

Ten Worst Performers

	Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn
Flybe Group PLC	0.0	0.0	-94.1	0.0
Gerry Weber International AG	0.0	0.0	-87.0	0.0
Sonde Resources Corp	0.0	0.0	-85.7	0.0
Eclipx Group Ltd	0.0	0.0	-73.5	0.0
Carlo PLC, West Yorkshire	0.0	0.0	-58.6	0.0
Norwegian Air Shuttle ASA	0.0	0.0	-55.6	0.0
Ovato Ltd	0.0	0.0	-53.2	0.0
Sino Grandness Food Industry Group Ltd	0.0	0.0	-50.9	0.0
Leopalace21 Corp	0.0	0.0	-49.8	0.0
Petra Diamonds Ltd, Hamilton	0.0	0.0	-47.9	0.0



Manager Profile
Hotchkis & Wiley Mid Cap Value (HWMIX)
As of March 31, 2019

Fund Information

Portfolio Manager : Majcher/Davis, Jr./Miles Ticker : HWMIX
PM Tenure : 1997--1997--1997 Inception Date : 01/02/1997
Fund Assets : \$1,122 Million Portfolio Turnover : 32%

Fund Investment Policy

The Fund seeks capital appreciation by normally investing at least 80% of its net assets plus borrowings for investment purposes in common stocks of mid capitalization U.S. companies. The Advisor currently considers mid-cap companies to be those with market capitalizations like those found in the Russell Midcap Index.

Comparative Performance - Trailing

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
Hotchkis & Wiley Mid Cap Value (HWMIX)	16.12 (1)	16.12 (1)	-4.31 (77)	6.46 (71)	2.61 (92)	8.98 (65)	16.67 (3)
Russell Midcap Value Index	14.37 (26)	14.37 (26)	2.89 (16)	9.50 (19)	7.22 (6)	11.30 (9)	16.39 (6)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	14.44	14.44	1.04	9.12	6.32	10.26	15.52
IM U.S. Mid Cap Value Equity (MF) Median	13.37	13.37	-1.14	7.96	5.05	9.38	14.77
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	12.44	12.44	-3.76	6.22	4.38	8.59	13.31

Comparative Performance - Calendar

	2018	2017	2016	2015	2014	2013	2012
Hotchkis & Wiley Mid Cap Value (HWMIX)	-19.29 (81)	7.78 (88)	21.00 (22)	-12.53 (95)	12.18 (23)	42.55 (3)	31.09 (1)
Russell Midcap Value Index	-12.29 (25)	13.34 (48)	20.00 (31)	-4.78 (54)	14.75 (10)	33.46 (72)	18.51 (30)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	-12.30	15.95	20.69	-3.25	12.04	37.43	18.79
IM U.S. Mid Cap Value Equity (MF) Median	-14.14	13.10	17.12	-4.39	9.91	35.31	16.68
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	-17.62	10.79	14.86	-6.91	7.65	32.99	15.16

Comparative Performance - Quarterly

	Dec-2018	Sep-2018	Jun-2018	Mar-2018	Dec-2017	Sep-2017	Jun-2017
Hotchkis & Wiley Mid Cap Value (HWMIX)	-25.79 (98)	3.00 (39)	7.80 (1)	-2.05 (54)	4.58 (69)	3.53 (31)	-1.33 (96)
Russell Midcap Value Index	-14.95 (27)	3.30 (24)	2.41 (33)	-2.50 (69)	5.50 (40)	2.14 (68)	1.37 (49)
IM U.S. Mid Cap Value Equity (MF) 1st Quartile	-14.95	3.24	2.82	-1.34	6.12	3.66	1.98
IM U.S. Mid Cap Value Equity (MF) Median	-17.20	2.81	1.97	-1.90	4.99	2.77	1.33
IM U.S. Mid Cap Value Equity (MF) 3rd Quartile	-17.84	1.66	0.85	-2.84	4.40	1.86	0.00

MPT Stats

	1 YR	3 YR	5 YR
Standard Deviation	27.03	19.54	18.47
Downside Risk	19.49	12.67	12.07
vs. Russell Midcap Value Index			
Alpha	-6.90	-6.24	-6.30
Beta	1.47	1.49	1.40
Down Market Capture	142.96	137.51	141.76
Information Ratio	-0.40	-0.16	-0.37
Tracking Error	12.57	10.39	9.23
Up Market Capture	112.54	110.19	107.27
vs. 90 Day U.S. Treasury Bill			
Sharpe Ratio	-0.10	0.36	0.19

Ranking vs. IM U.S. Mid Cap Value Equity (MF) 4 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	15 (54%)	2 (7%)	0 (0%)	11 (39%)
Russell Midcap Value Index	28	10 (36%)	10 (36%)	8 (29%)	0 (0%)

Ranking vs. IM U.S. Mid Cap Value Equity (MF) 12 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	14 (50%)	1 (4%)	4 (14%)	9 (32%)
Russell Midcap Value Index	28	22 (79%)	6 (21%)	0 (0%)	0 (0%)

Ranking vs. IM U.S. Mid Cap Value Equity (MF) 20 Quarters Rolling Periods

	Periods	5-25	25-Median	Median-75	75-95
Hotchkis & Wiley Mid Cap Value (HWMIX)	28	15 (54%)	5 (18%)	3 (11%)	5 (18%)
Russell Midcap Value Index	28	20 (71%)	7 (25%)	1 (4%)	0 (0%)



Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Port. Wt	Bench. Wt	Qtr Rtrn	Contr. Rtrn
Wtd. Avg. Mkt. Cap (\$)	7,931,903,395	14,901,190,530	Whiting Petroleum Corp	4.8	0.1	15.2	0.7
Median Mkt. Cap (\$)	5,079,232,790	7,365,897,390	Hewlett Packard Enterprise Co	4.5	0.0	17.7	0.8
Price/Earnings ratio	11.5	17.7	Citizens Financial Group Inc	4.1	0.4	10.3	0.4
Price/Book ratio	1.7	2.1	Kosmos Energy Ltd	3.9	0.0	54.2	2.1
5 Yr. EPS Growth Rate (%)	3.0	9.5	CIT Group Inc	3.9	0.1	26.0	1.0
Current Yield (%)	2.1	2.4	Office Depot Inc	3.4	0.0	41.7	1.4
Beta (5 Years, Monthly)	1.40	1.00	Popular Inc	3.3	0.1	11.0	0.4
Number of Stocks	60	589	Avnet Inc	3.1	0.1	20.7	0.6
			Discovery Inc	2.9	0.2	10.1	0.3
			Ophir Energy PLC	2.7	0.0	62.9	1.7

Buy and Hold Sector Attribution - 1 Qtr								Ten Best Performers				
	Allocation		Performance		Sector	Attribution		Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn	
	Portfolio	Benchmark	Portfolio	Benchmark		Stock	Total					
Communication Services	4.9	3.2	9.37	6.76	-0.13	0.14	0.02	Ophir Energy PLC	2.7	0.0	62.9	1.7
Consumer Discretionary	12.3	8.8	15.90	13.48	-0.03	0.32	0.29	Avis Budget Group Inc	1.0	0.0	55.1	0.5
Consumer Staples	1.6	5.0	0.26	9.92	0.14	-0.17	-0.03	Kosmos Energy Ltd	3.9	0.0	54.2	2.1
Energy	21.2	5.9	28.42	21.38	1.04	1.33	2.37	Bed Bath & Beyond Inc.	1.8	0.0	51.7	0.9
Financials	25.3	17.8	16.61	11.67	-0.19	1.28	1.09	Hess Corp	0.3	0.4	49.4	0.1
Health Care	2.0	6.8	33.22	16.48	-0.10	0.28	0.18	Office Depot Inc	3.4	0.0	41.7	1.4
Industrials	14.0	12.0	11.31	15.97	0.03	-0.66	-0.63	Superior Energy Services Inc.	1.4	0.0	39.4	0.6
Information Technology	13.7	8.6	15.14	21.10	0.34	-0.81	-0.47	Mallinckrodt Plc	1.5	0.0	37.6	0.6
Materials	0.0	6.1	0.00	11.37	0.19	0.00	0.19	Synchrony Financial	2.2	0.4	36.9	0.8
Real Estate	3.0	14.2	3.75	16.04	-0.20	-0.35	-0.55	Apache Corp	1.5	0.3	33.1	0.5
Utilities	1.9	11.4	11.89	11.49	0.27	0.01	0.27					
Total	100.0	100.0	17.07	14.34	1.35	1.38	2.73					

Buy and Hold Style Attribution - 1 Qtr								Ten Worst Performers				
	Allocation		Performance		Style	Attribution		Port. Wt	Bench. Wt	Qtr. Rtrn	Contr. Rtrn	
	Portfolio	Benchmark	Portfolio	Benchmark		Stock	Total					
Large Growth	0.0	0.1	0.00	22.56	-0.01	0.00	-0.01	Embraer SA	1.6	0.0	-14.1	-0.2
Large Neutral	1.7	6.5	3.60	17.15	-0.35	-0.21	-0.56	Adient Plc	0.7	0.0	-13.9	-0.1
Large Value	0.5	3.8	5.09	14.95	-0.04	-0.05	-0.09	Royal Mail Holdings PLC	1.8	0.0	-10.5	-0.2
Mid Growth	1.7	2.5	8.60	9.94	-0.04	-0.03	-0.07	Goodyear Tire & Rubber Co	2.3	0.1	-10.4	-0.2
Mid Neutral	3.3	32.8	15.58	14.00	0.10	-0.01	0.09	Alleghany Corp	0.5	0.2	-1.8	0.0
Mid Value	55.2	48.4	12.25	13.50	-0.07	-0.42	-0.49	GEO Group Inc (The)	1.9	0.0	-0.5	0.0
Small Growth	0.3	0.0	-2.68	15.87	-0.03	0.00	-0.04	Bunge Ltd	1.5	0.2	0.3	0.0
Small Neutral	4.8	0.5	32.08	16.46	-0.23	0.78	0.54	Allison Transmission Inc.	0.5	0.0	2.6	0.0
Small Value	25.3	2.1	24.20	15.28	0.69	2.98	3.67	Interpublic Group	0.4	0.2	2.9	0.0
Unclassified	7.2	3.1	19.16	9.11	-0.07	-0.24	-0.30	ARRIS International plc	2.5	0.1	3.4	0.1
Total	100.0	100.0	17.07	14.34	-0.06	2.79	2.73					



Historical Activity

Jul-2017

The Hartford Small Company Fund (HIASX) was replaced by Wells Fargo Small Company Growth Fund (WSCRX).

Nov-2016

The Hartford Capital Appreciation Fund (HIACX) was replaced by the Wells Fargo Disciplined US Core Fund (EVSIX).

The Deutsche Real Assets Fund (AAAVX) was removed from the Plans. The remaining balances were mapped into the American Funds American Balanced Fund (RLBGX).

The Plan added WCAB Models 2015, 2025, 2035, 2045, 2055, and 2060. The 2010 Model was replaced by the Income Model.

Dec-2015

The Plan was converted to the Mass Mutual platform. The following funds were changed:

The SSGA Index Fund were replaced by Vanguard Index Funds.

The Hartford Balanced was replaced by American Funds Balanced.

American Century Equity Income shares changed from ACIX to AEUDX.

Deutsche Alternative Asset Allocation shares changed from AAAAX to AAAVX.

Sep-2014

Lord Abbett Mid Cap Value closes 9/3/14. Assets will map to the Hotchkis & Wiley Mid Cap Value Fund on September 5, 2014.

Oct-2013

Pimco Foreign Bond (US Hedged) (PFORZ) was added to the fund lineup.

Apr-2011

The LifePath Funds were removed from the fund line-up.

Mar-2011

The Barclays LifePath Target Date Funds will be mapped to the Hartford Advisors HLS Fund.

Oct-2010

The following funds were moved to new share classes as follows:

American Funds EuroPacific Growth to R6 shares

SSgA Russell Small Cap to A shares

Lord Abbett Mid Cap Value to I shares

SSgA S&P Mid Cap Index to A shares

American Funds Growth Fund of America to R6 shares

SSgA S&P 500 Index to A shares

Pimco High Yield to Institutional shares.

Dec-2009

The LifePath 2010 fund was wrapped in with the Life Path Retirement Fund.



Sep-2009

Barclays merged with BlackRock. The LifePath funds took the BlackRock name.

Feb-2009

The Following new investment choices were added to the Plans:

American Century Capital, DFA Intl. Small Cap Value, DWS Alternative Asset Allocation, Lazard Emerging Markets, Lord Abbett Mid Cap Value.

Sep-2007

The Hartford Index HLS was replaced by the SSgA S&P 500 Flagship fund in the third quarter 2007. The TCW Opportunity Fund was renamed to the TCW Relative Value Small Cap Fund.

Jun-2007

The American Century Ultra Fund was removed from the fund lineup during the second quarter 2007.

Mar-2005

Changes to the fund lineup started on March 1, 2005 and concluded on March 31, 2005. Below is a list of the funds that were retained and a list of funds that were added to the lineup.

Retained Funds:

Hartford Small Company HLS
Skyline Special Equities Portfolio, Hartford Mid-Cap HLS
American Century Ultra, Hartford Capital Appreciation
Hartford Index HLS
American Century Equity Income
Hartford Advisors HLS
Hartford Total Return Bond HLS
General "Declared Interest"

Introduced Funds:

American Funds EuroPacific
TCW Opportunity
Artisan Mid-Cap
Hotchkis & Wiley Mid-Cap Value
American Funds Growth Fund
PIMCO High Yield
General Account (Declared)
Barclays Global Investors LifePath.

Common Index Definitions

The S&P 500® Index is a broad based unmanaged index of 500 stocks, which is widely recognized as representative of the equity market in general.

The Russell 1000® Index measures the performance of those 1,000 largest companies in the Russell 3000® Index, which represents approximately 92% of the total market capitalization of the Russell 3000® Index.

The Russell 1000® Value Index measures the performance of those Russell 1000® Index companies with lower price-to-book ratios and lower forecasted growth values.

The Russell 1000® Growth Index measures the performance of those Russell 1000® Index companies with higher price-to-book ratios and higher forecasted growth values.

The Russell 2000® Index, an unmanaged index, measures the performance of the 2,000 smallest companies in the Russell 3000® Index.

The Russell 2000® Value Index measures the performance of those Russell 2000® Index companies with lower price-to-book ratios and lower forecasted growth values.

The Russell 2000® Growth Index measures the performance of those Russell 2000® Index companies higher price-to-book ratios and higher forecasted growth values.

The Russell 3000® Index includes the 3,000 largest U.S.-traded stocks.

The Russell 3000® Value Index includes stocks from the Russell 3000® Index with lower price-to-book ratios and lower expected growth rates.

The Russell 3000® Growth Index includes companies that display signs of above average growth. The index is used to provide a gauge of the performance of growth stocks in the U.S.

The Russell Midcap® Index, an unmanaged index, measures the performance of the 800 smallest companies in the Russell 1000® Index.

The Russell Midcap® Value Index measures the performance of those Russell Midcap® Index companies with lower price-to book value ratios and lower forecasted growth values.

The Russell Midcap® Growth Index measures the performance of those Russell Midcap® Index companies with higher price-to book ratios and higher forecasted growth values.

The Russell Developed® Index measures the performance of the investable securities in developed countries globally across all market capitalization ranges.

The Bloomberg Barclays Intermediate Treasury Index includes Treasuries with maturities between 1 and 10 years.

The Bloomberg Barclays Aggregate Bond Index, is a market capitalization-weighted intermediate term index, meaning the securities in the index are weighted according to the market size of each bond type. Most U.S. traded investment grade bonds are represented. Municipal bonds, and Treasury Inflation-Protected Securities are excluded, due to tax treatment issues. The index includes Treasury securities, Government agency bonds, Mortgage-backed bonds, Corporate bonds, and a small amount of foreign bonds traded in U.S. The Bloomberg Barclays US Aggregate Bond Index is an index.

The BofA Merrill Lynch U.S. High Yield Index tracks the performance of below investment grade, but not in default, US dollardenominated corporate bonds publicly issued in the US domestic market, and includes issues with a credit rating of BBB or below, as rated by Moody's and S&P.



Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



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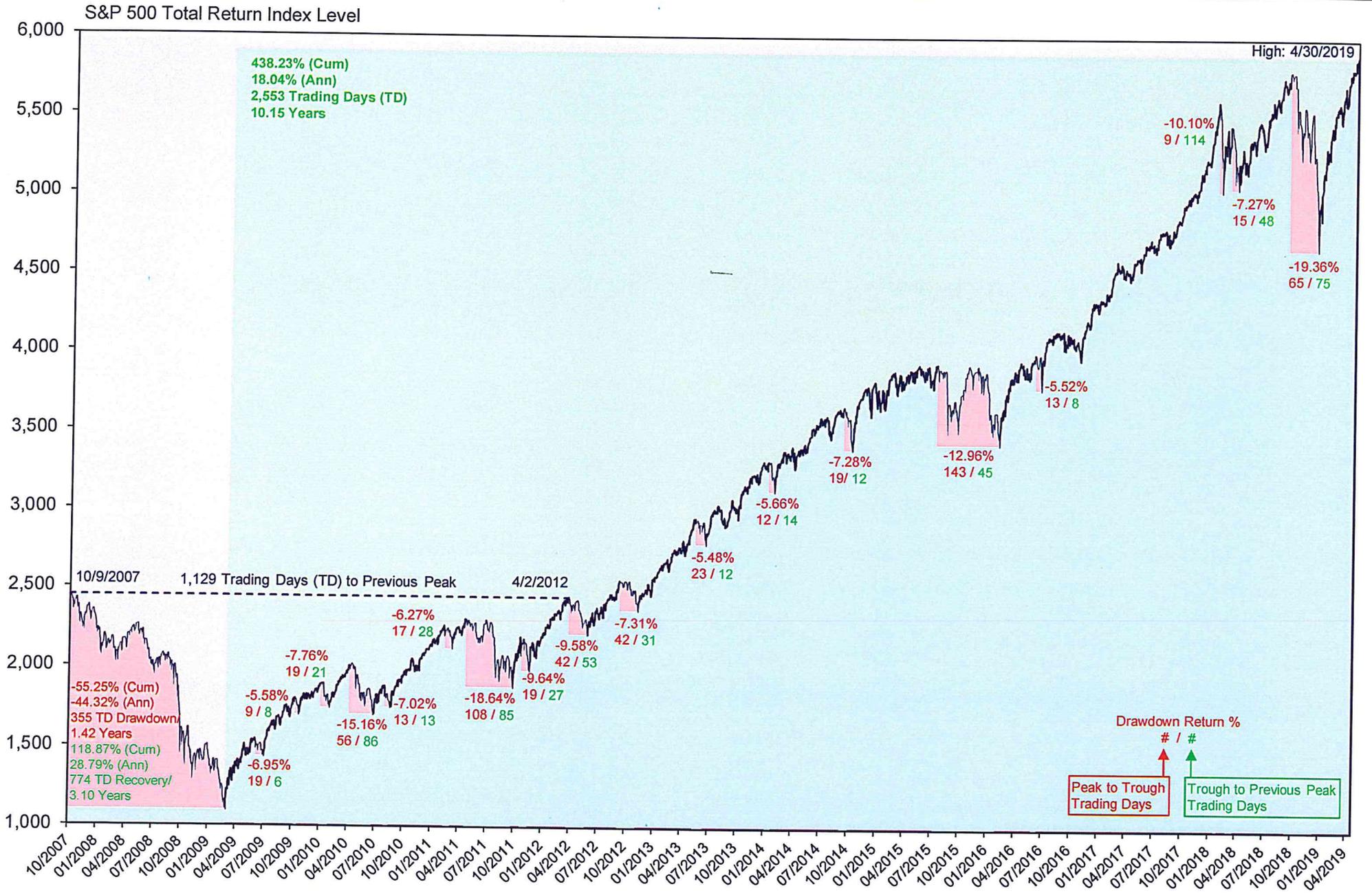
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S&P 500 Total Return Index History

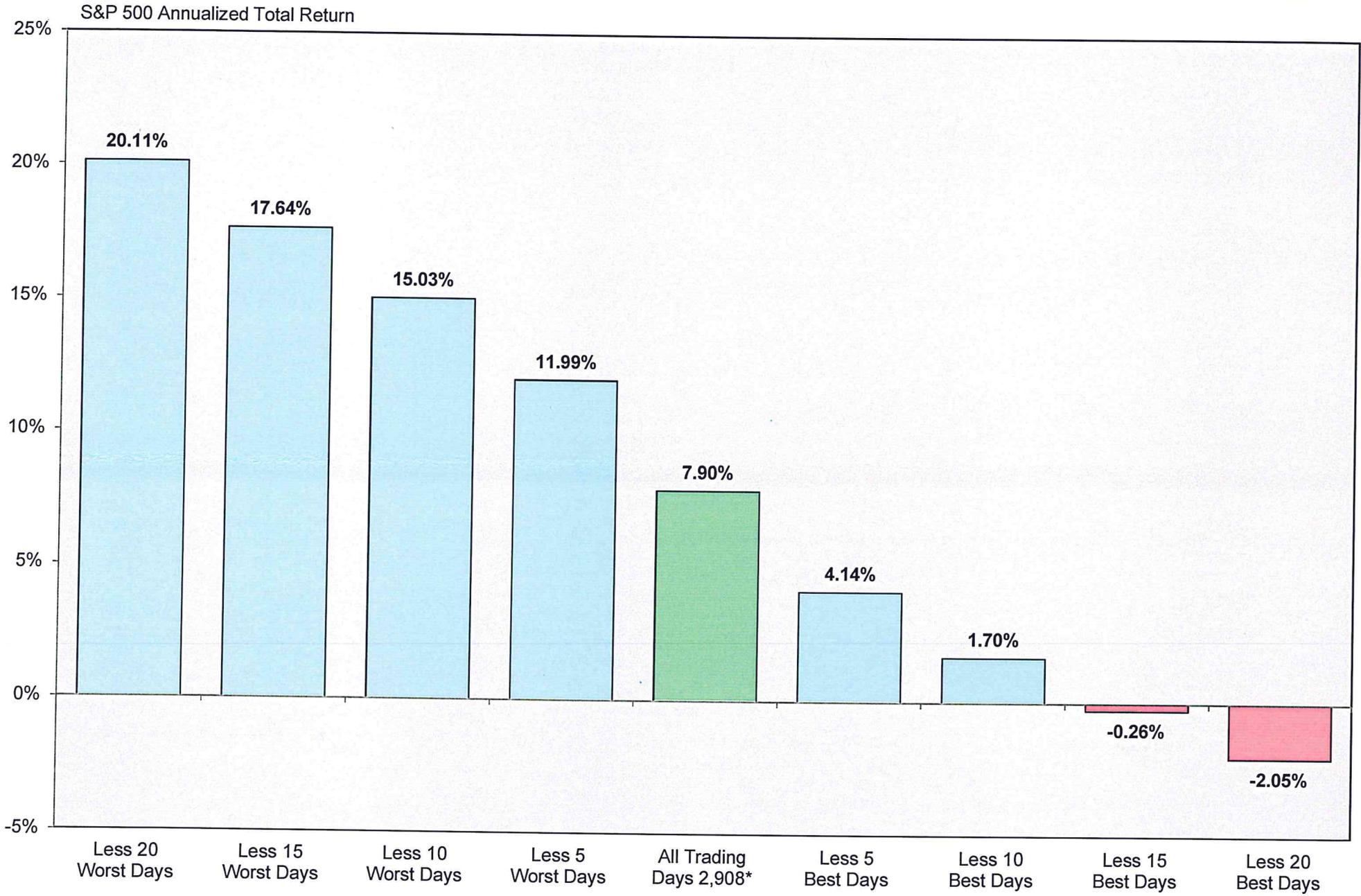
Drawdowns of Greater Than 5% Since Index Pre-Crisis Peak

10/9/2007 – 4/30/2019



Source: AndCo Consulting, using data and information derived from Bloomberg.





Source: AndCo Consulting, using data and information derived from Bloomberg.

*Excludes holidays, weekends and other non-trading days



S&P 500 Total Return Index History
Trading Day Drawdowns of Greater Than 5% (Mutually-Exclusive)

1/1/1990 – 4/30/2019

Drawdown Start	Drawdown Trading Days	Cumulative Drawdown Return	Drawdown Conclusion	Recovery Trading Days	Drawdown / Recovery Trading Days Ratio
1/3/1990	20	-10.04%	5/21/1990	77	3.9
7/17/1990	62	-19.18%	2/11/1991	84	1.4
4/18/1991	20	-5.29%	5/31/1991	11	0.6
11/14/1991	11	-5.46%	12/23/1991	16	1.5
1/16/1992	59	-5.58%	5/11/1992	22	0.4
9/15/1992	19	-5.14%	11/19/1992	29	1.5
2/3/1994	41	-8.47%	8/29/1994	102	2.5
8/31/1994	70	-5.69%	2/2/1995	38	0.5
6/6/1996	34	-7.41%	9/13/1996	36	1.1
2/19/1997	37	-9.38%	5/5/1997	16	0.4
8/7/1997	17	-6.21%	10/2/1997	23	1.4
10/8/1997	14	-10.75%	12/5/1997	28	2
12/8/1997	23	-5.56%	1/29/1998	13	0.6
7/20/1998	31	-19.19%	11/23/1998	59	1.9
4/13/1999	5	-5.08%	4/22/1999	3	0.6
5/14/1999	10	-6.25%	6/30/1999	23	2.3
7/19/1999	64	-11.80%	11/16/1999	22	0.3
1/3/2000	38	-9.09%	3/21/2000	17	0.4
3/27/2000	15	-11.14%	9/1/2000	97	6.5
9/5/2000	529	-47.41%	10/23/2006	1,017	1.9
2/21/2007	9	-5.77%	4/16/2007	29	3.2
7/20/2007	19	-9.27%	10/5/2007	36	1.9
10/10/2007	355	-55.25%	4/2/2012	774	2.2
4/3/2012	42	-9.58%	8/6/2012	53	1.3
9/17/2012	42	-7.31%	1/2/2013	31	0.7
5/22/2013	23	-5.58%	7/11/2013	12	0.5
1/6/2014	12	-5.72%	2/24/2014	14	1.2
9/19/2014	19	-7.28%	10/31/2014	12	0.6
7/21/2015	143	-12.96%	4/18/2016	45	0.3
6/9/2016	13	-5.52%	7/8/2016	8	0.6
1/26/2018	9	-10.10%	7/25/2018	114	12.7
9/21/2018	65	-19.36%	4/12/2019	75	1.2
Average	58	-11.49%	-	92	1.8

Source: AndCo Consulting, using data and information derived from Bloomberg.



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